

VOLUME III
MAPS

WHITES POINT QUARRY & MARINE TERMINAL

ENVIRONMENTAL
IMPACT
STATEMENT



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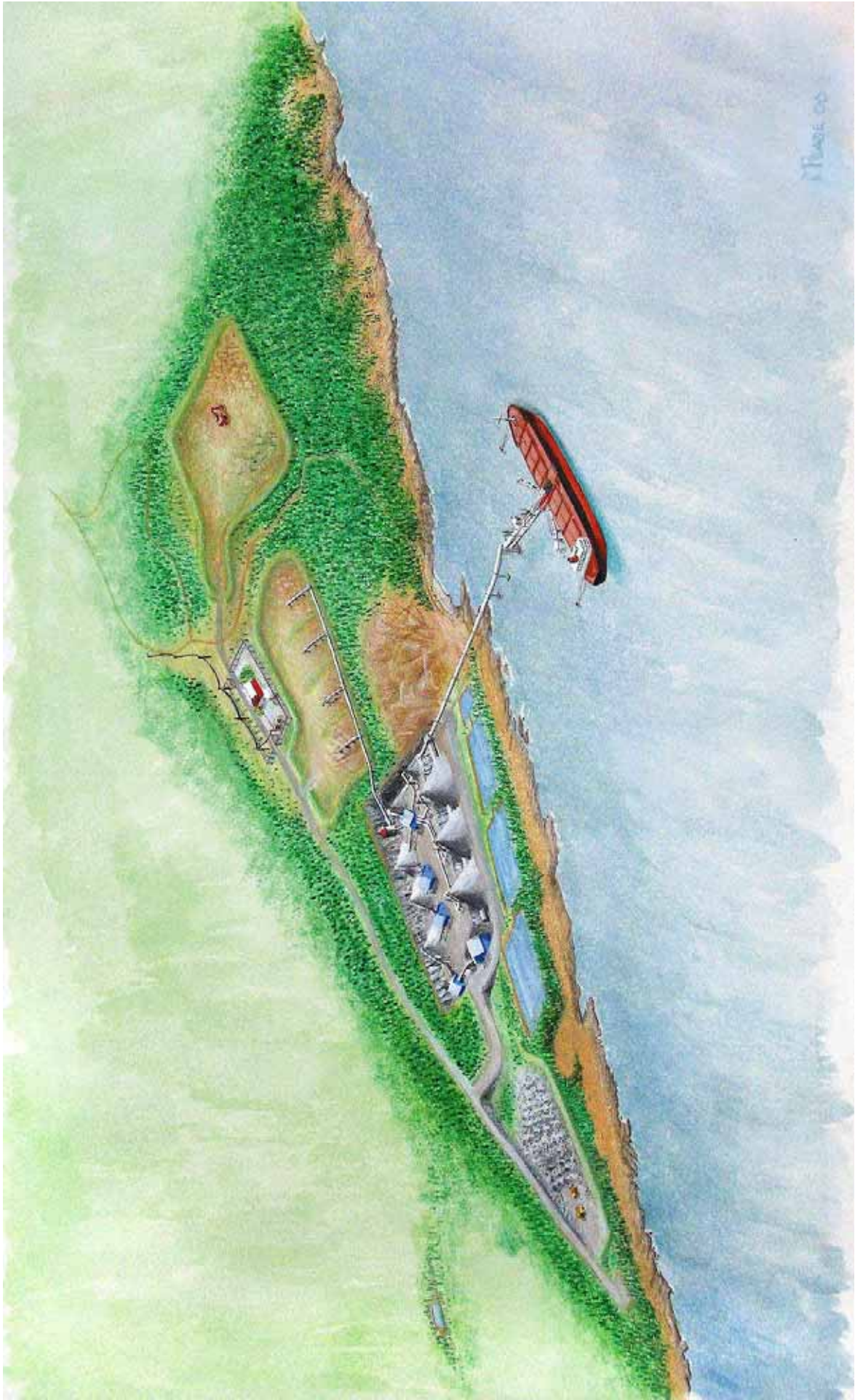
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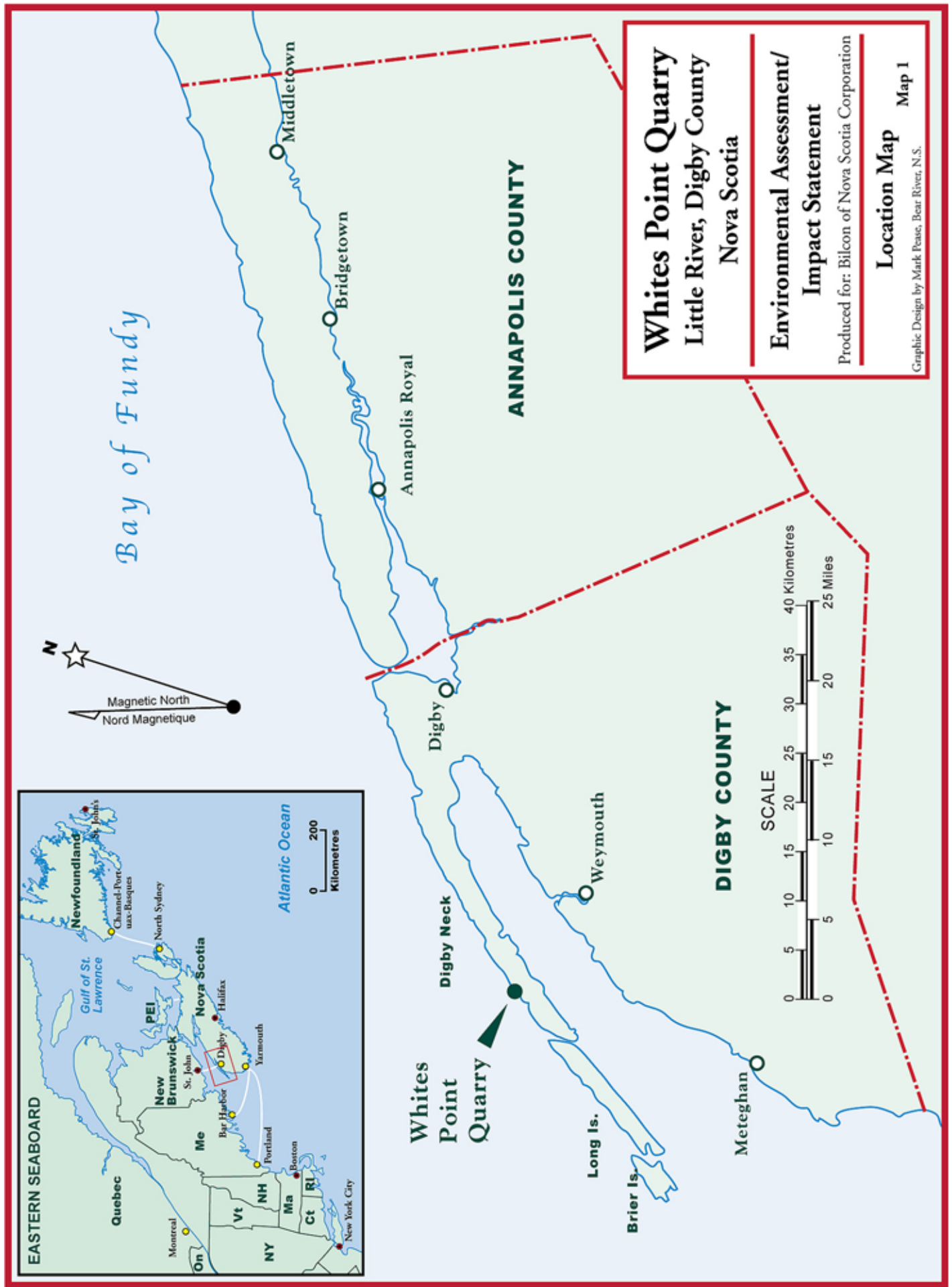
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Artist's Rendering of the Whites Point Quarry and Marine Terminal
by
Mark Pease



Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

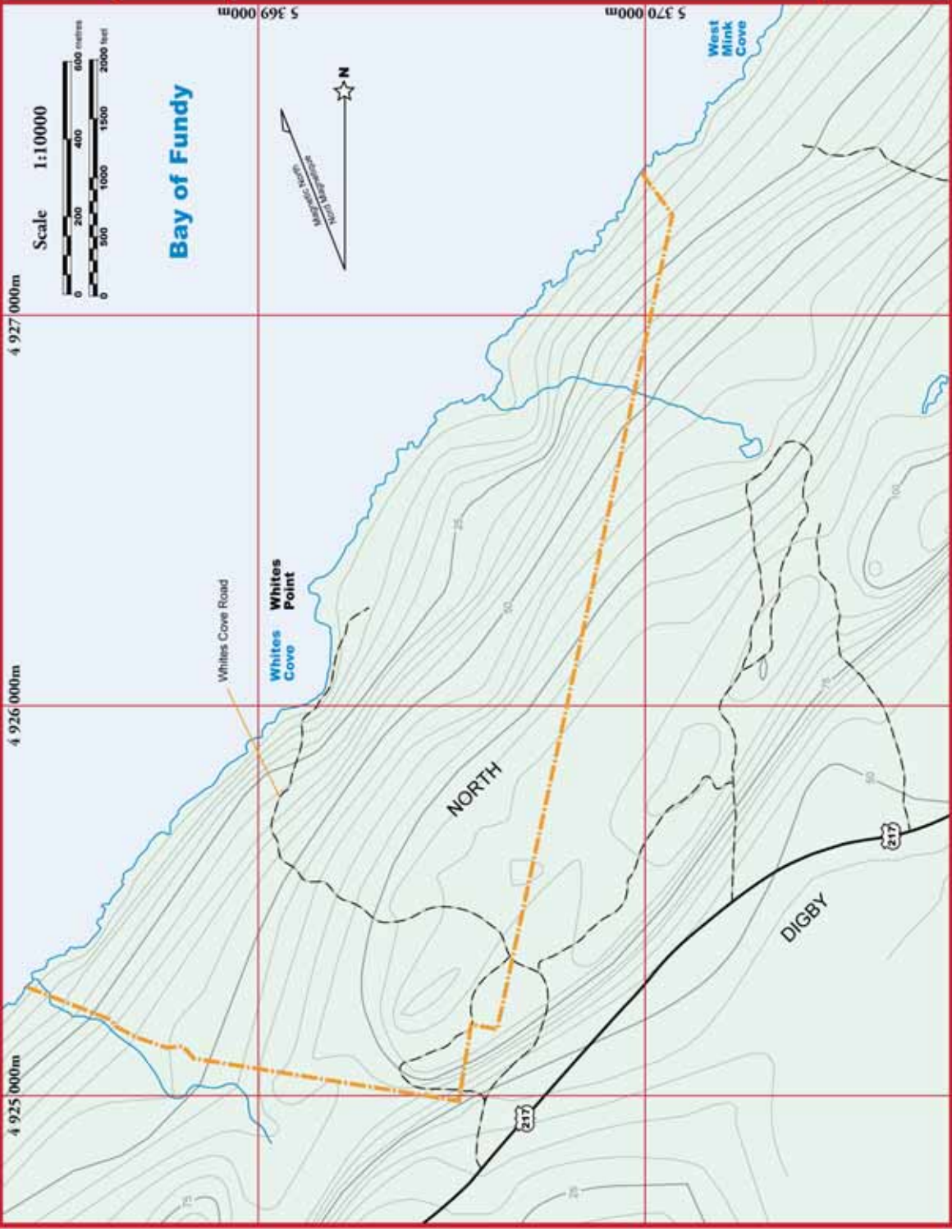
Legend

- Highway 217
- - - Gravel Road
- . - . Property Line

Produced for: Bilcom of Nova Scotia Corporation

Topographic

Map 1B



Graphic Design by Mark Pines, Bear River, N.S.

Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

- Property Line
- Intermittent Watercourse
- Surface/Groundwater Divide
- Inferred Groundwater Flow Direction
- Groundwater Monitoring Well
- Residence Reference Number
- Private Land
- 800 Meter Setback
- Proposed Blast Monitoring Location- Land
- Proposed Blast Monitoring Location- Water
- Environmental Preservation Zone
- Projected outcropping of geological contact between basalt upper flow unit and middle flow unit.
- Projected outcropping of geological contact between basalt middle flow unit and lower flow unit.

Source of Information:

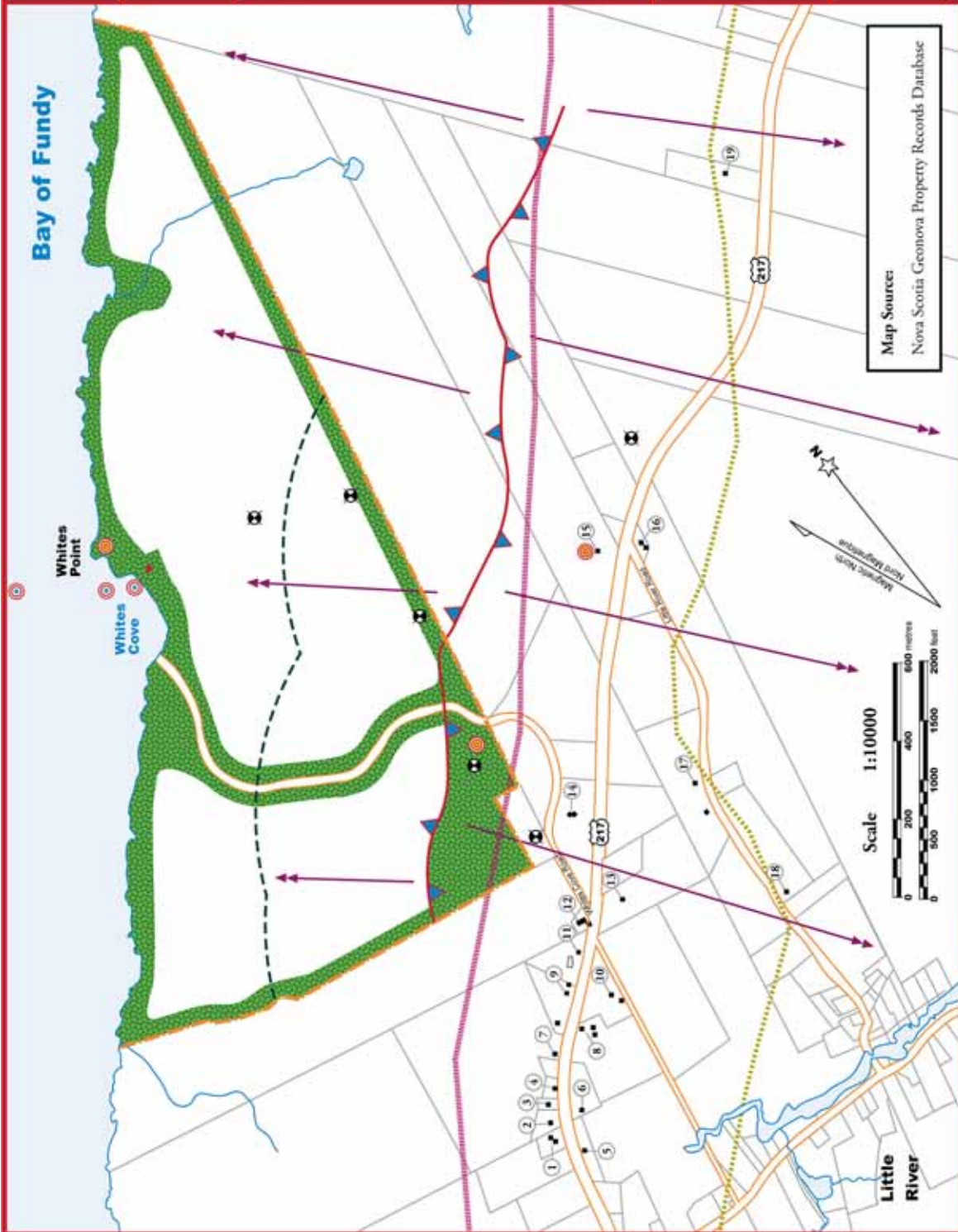
Jaque Whitford Environment Ltd. - Hogg, Dwayne, M.Sc., P. Eng. and MacFarlane, David, M.Sc., P. Geos. * Preliminary Hydrological Assessment, Proposed Quarry, Whites Cove, Digby Neck, Nova Scotia" Dec. 2002

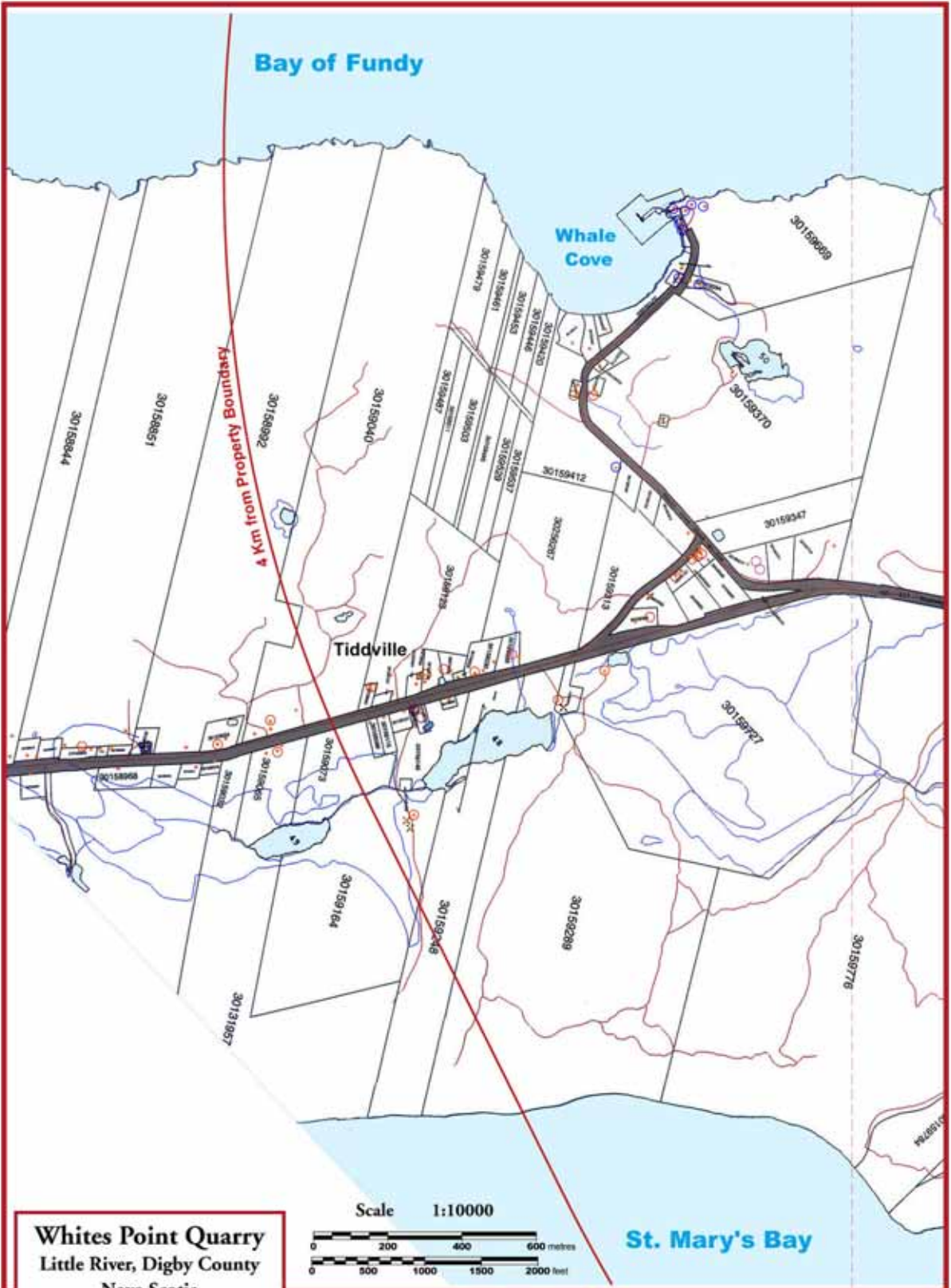
Produced for: Bilcon of Nova Scotia Corporation

Property Map

Map 2

Graphic: Design by Mark Thom, Deer River, N.S.





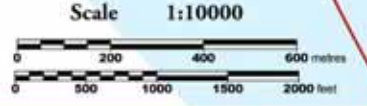
Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

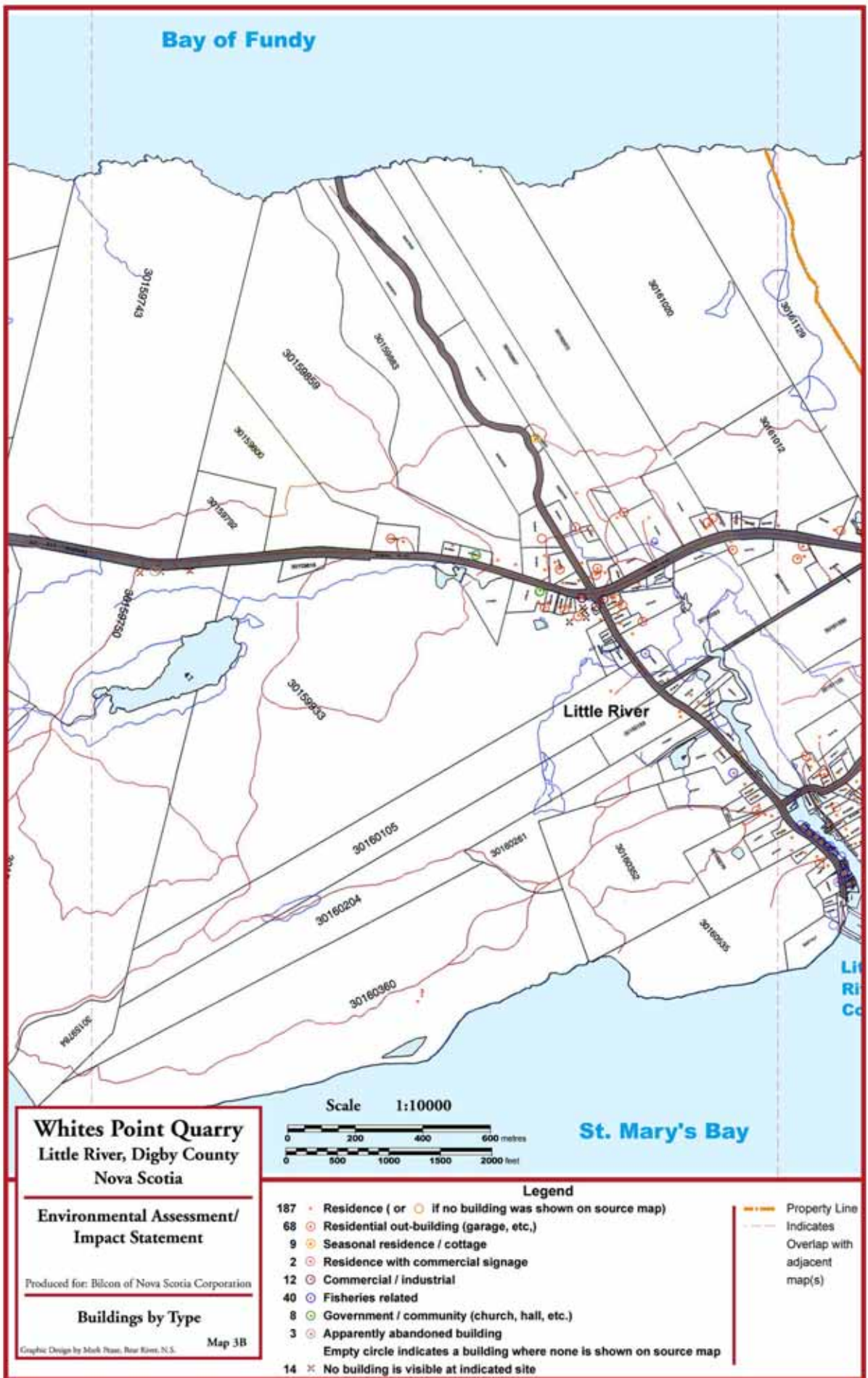
Produced for: Bilcon of Nova Scotia Corporation

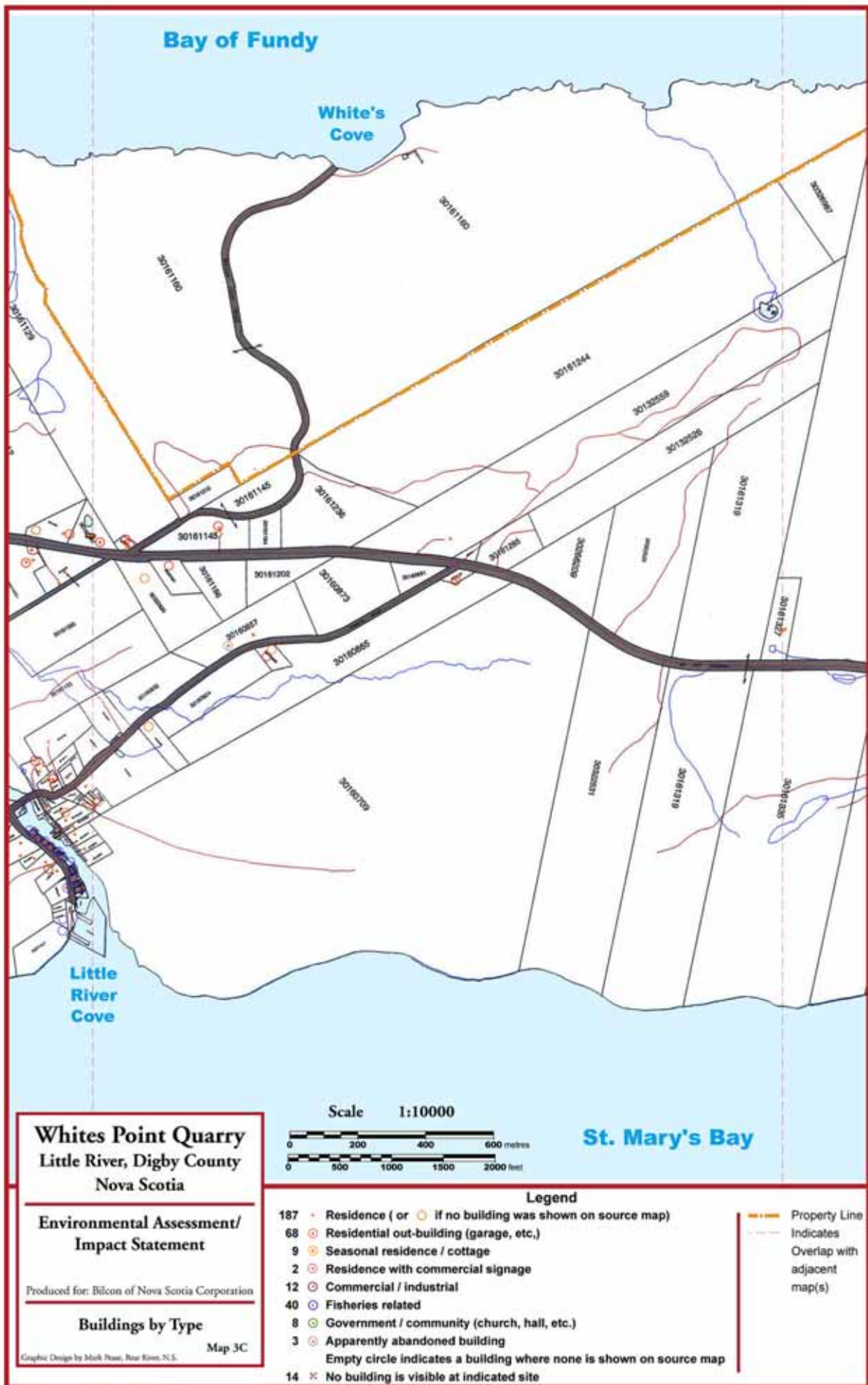
Buildings by Type

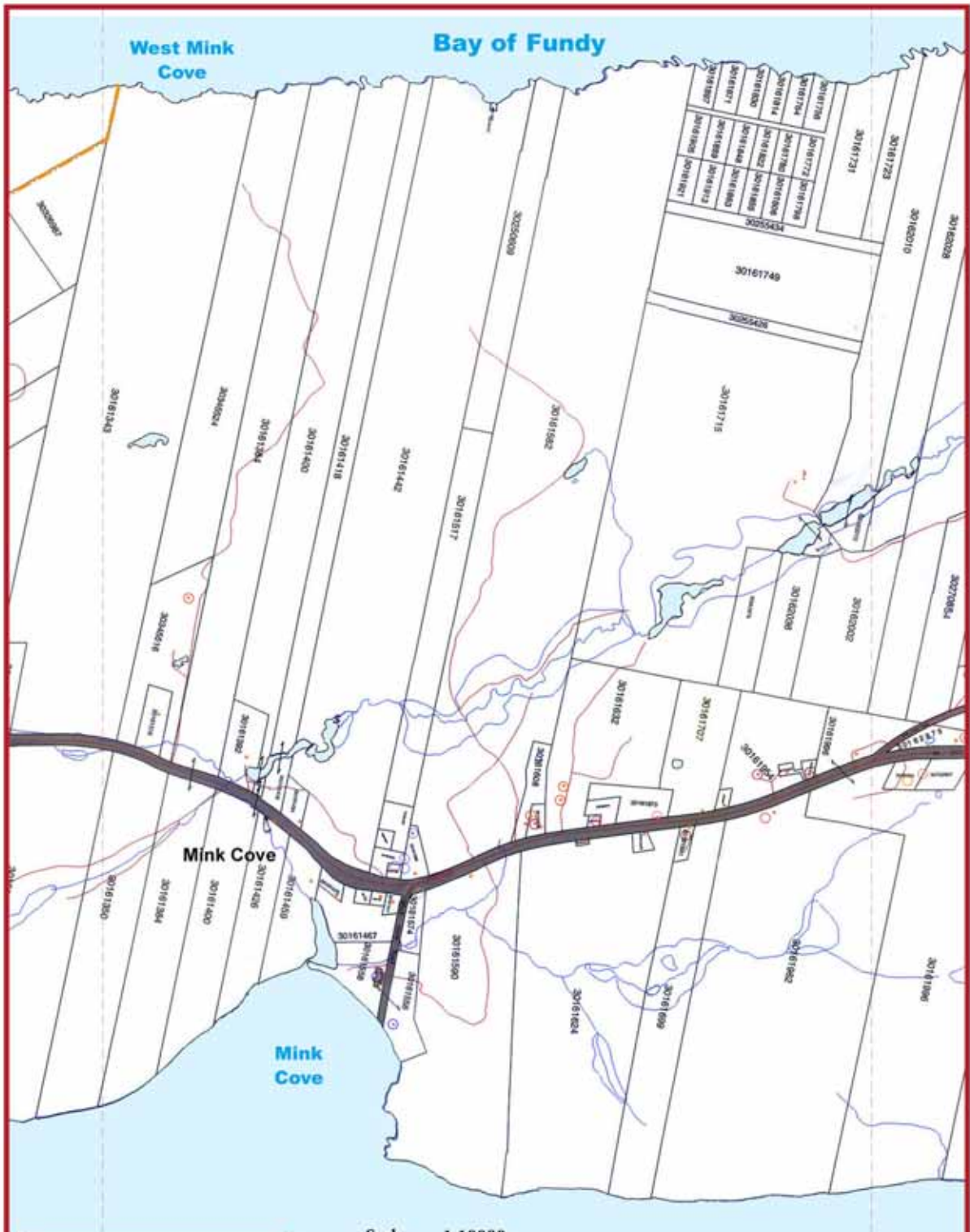
Map 3A
 Graphic Design by Mark Pease, Bear River, N.S.



- Legend**
- 187 • Residence (or ○ if no building was shown on source map)
 - 68 ○ Residential out-building (garage, etc.)
 - 9 ○ Seasonal residence / cottage
 - 2 ○ Residence with commercial signage
 - 12 ○ Commercial / industrial
 - 40 ○ Fisheries related
 - 8 ○ Government / community (church, hall, etc.)
 - 3 ○ Apparently abandoned building
 - Empty circle indicates a building where none is shown on source map
 - 14 × No building is visible at indicated site
- Property Line
 - - - Indicates
 - Overlap with adjacent map(s)







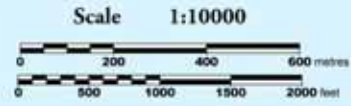
Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

Produced for: Bbleon of Nova Scotia Corporation

Buildings by Type
 Map 3D

Graphic Design by Mark Davis, Bear River, N.S.



- Legend**
- 187 • Residence (or ○ if no building was shown on source map)
 - 68 ○ Residential out-building (garage, etc.)
 - 9 ○ Seasonal residence / cottage
 - 2 ○ Residence with commercial signage
 - 12 ○ Commercial / industrial
 - 40 ○ Fisheries related
 - 8 ○ Government / community (church, hall, etc.)
 - 3 ○ Apparently abandoned building
 - 14 × No building is visible at indicated site
- Property Line
 - - - Indicates
 - Overlap with adjacent map(s)

Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

- Legend**
- Proposed Whites Point Marine Terminal
 - Proposed Shipping Route
 - Existing Shipping Lanes
 - New Shipping Lanes (2003)
 - Traffic Separation Zone
 - Right Whale Conservation Area
 - Popular Whale Watching Areas July and August 2002
 - Licensed Aquaculture Sites
 - Water Based
 - Land Based

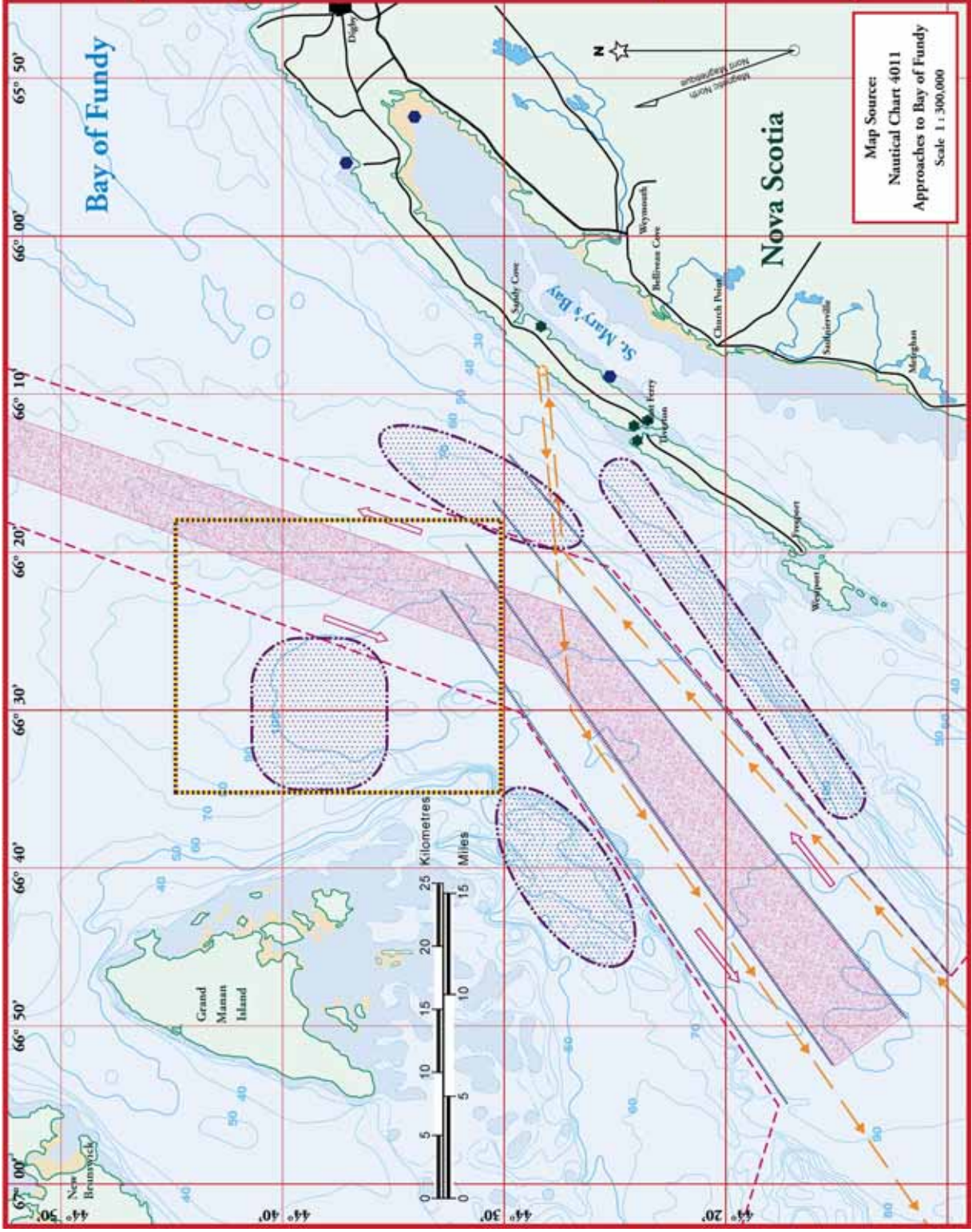
Source of Information:
 Nova Scotia Department of Aquaculture and Fisheries, Aquaculture Site Mapping, 2002
 Bay to Bay Adventurers Ltd., Popular Whale Watching Areas, July - August 2002
 Canadian Steamship Lines International Inc. 2002

Produced for: Bilcon of Nova Scotia Corporation

Proposed Shipping Route

Map 4

Graphic Design by Mark Pines, Bear River, N.S.






Map Source:
 Nautical Chart 4011
 Approaches to Bay of Fundy
 Scale 1 : 300,000

66° 00'

Bay of Fundy

Legend

-  Basalt (North Mountain Formation)
-  Lucastrine playa, sandflat, & deltaic clastic rocks, sandstone & conglomerate
-  Conglomerate, sandstone, siltstone, shale
-  Siltstone, sandstone, mudstone
-  Slate, schist
-  Mafic & felsic tuff, slate, siltstone, quartzite, rhyolite, basalt
-  Greywacke, slate, schist
-  Quartzite, conglomerate, siltstone & slate
-  Fine grained leucomonzogranite
-  Granodiorite
-  Muscovite biotite monzogranite
-  Diorite, gabbro, monzonite
-  Leucomonzogranite
-  Fault Line

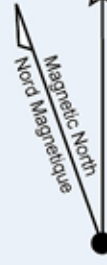
Source: Geological Map ME 2000-1

 Existing Basalt Rock Quarry

SCALE 1:500,000



N



Digby

Whites Point Quarry

Long Is.

Brier Is.

Meteghan

Nova Scotia

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

Produced for: Bilcon of Nova Scotia Corporation

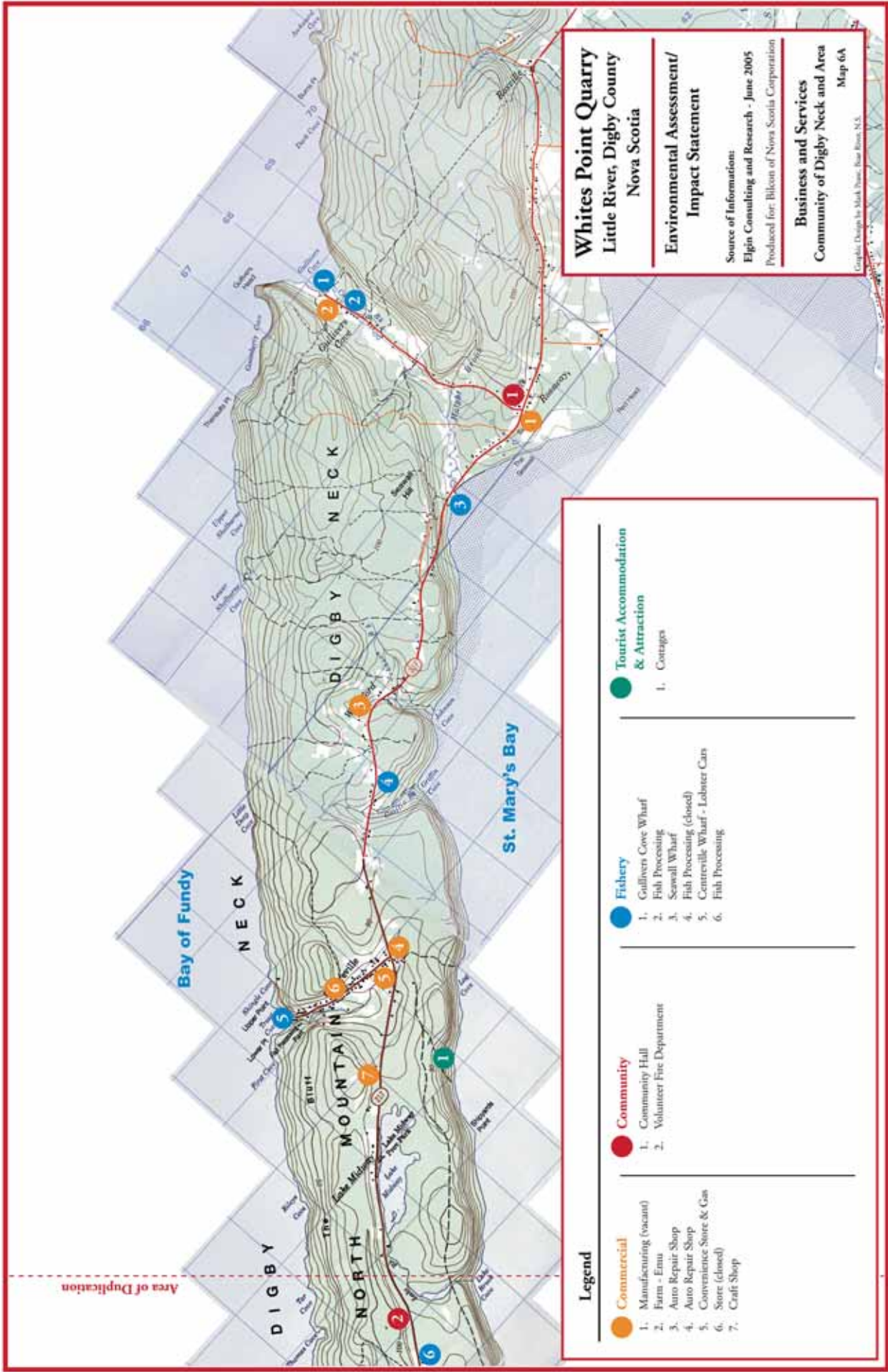
Regional Geology

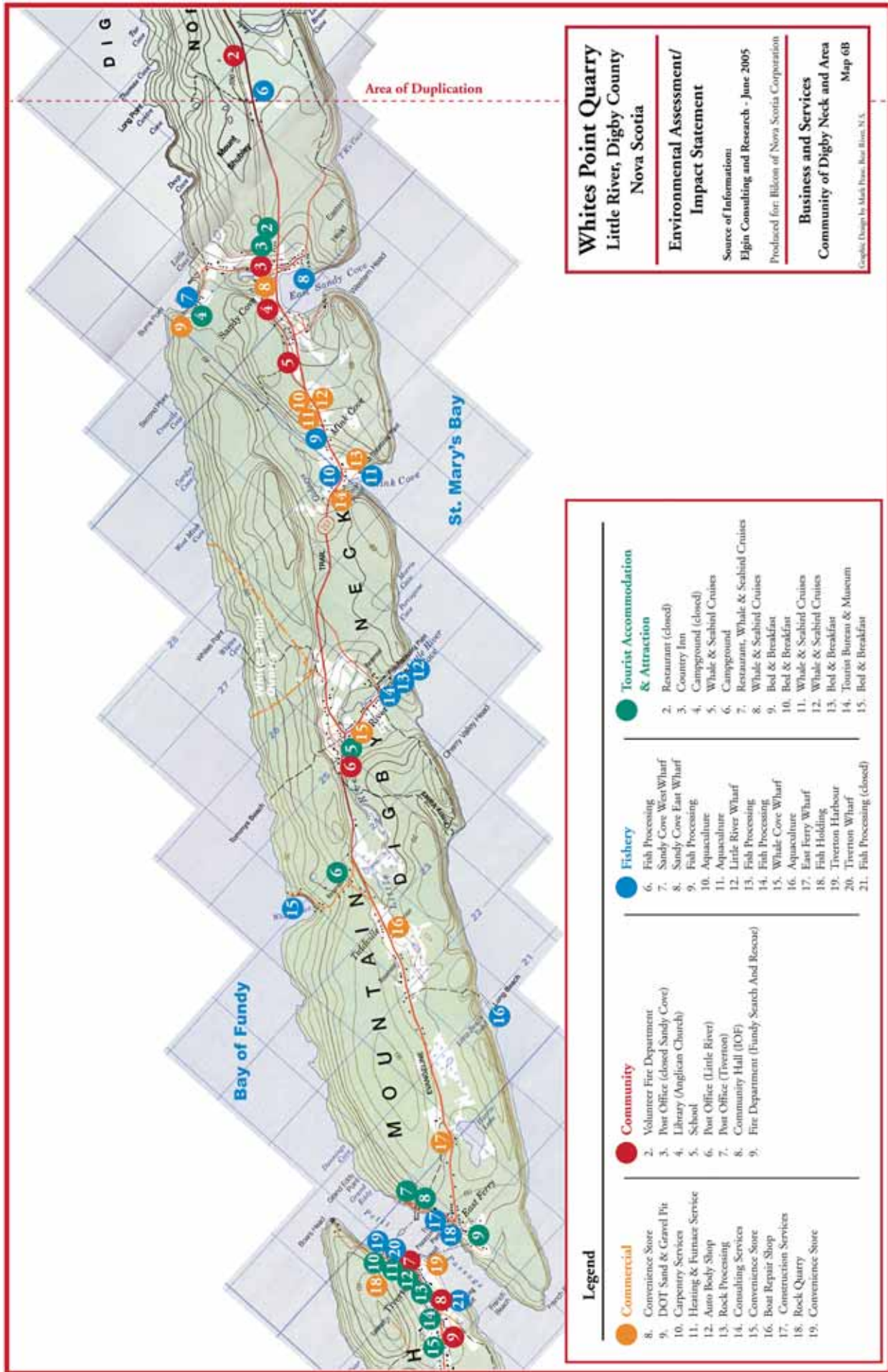
Graphic Design by Mark Pease, Bear River, N.S.

Map 5

45° 00'

44° 30'





Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

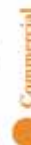
Source of Information:
 Edgin Consulting and Research - June 2005

Produced for: Bilcon of Nova Scotia Corporation

**Business and Services
 Community of Digby Neck and Area**
 Map 6B

Graphic Design by Mark Proulx, Peter Blais, N.S.

Legend



- 8. Convenience Store
- 9. DOT Sand & Gravel Pit
- 10. Carpentry Services
- 11. Heating & Furnace Service
- 12. Auto Body Shop
- 13. Rock Processing
- 14. Consulting Services
- 15. Convenience Store
- 16. Boat Repair Shop
- 17. Construction Services
- 18. Rock Quarry
- 19. Convenience Store



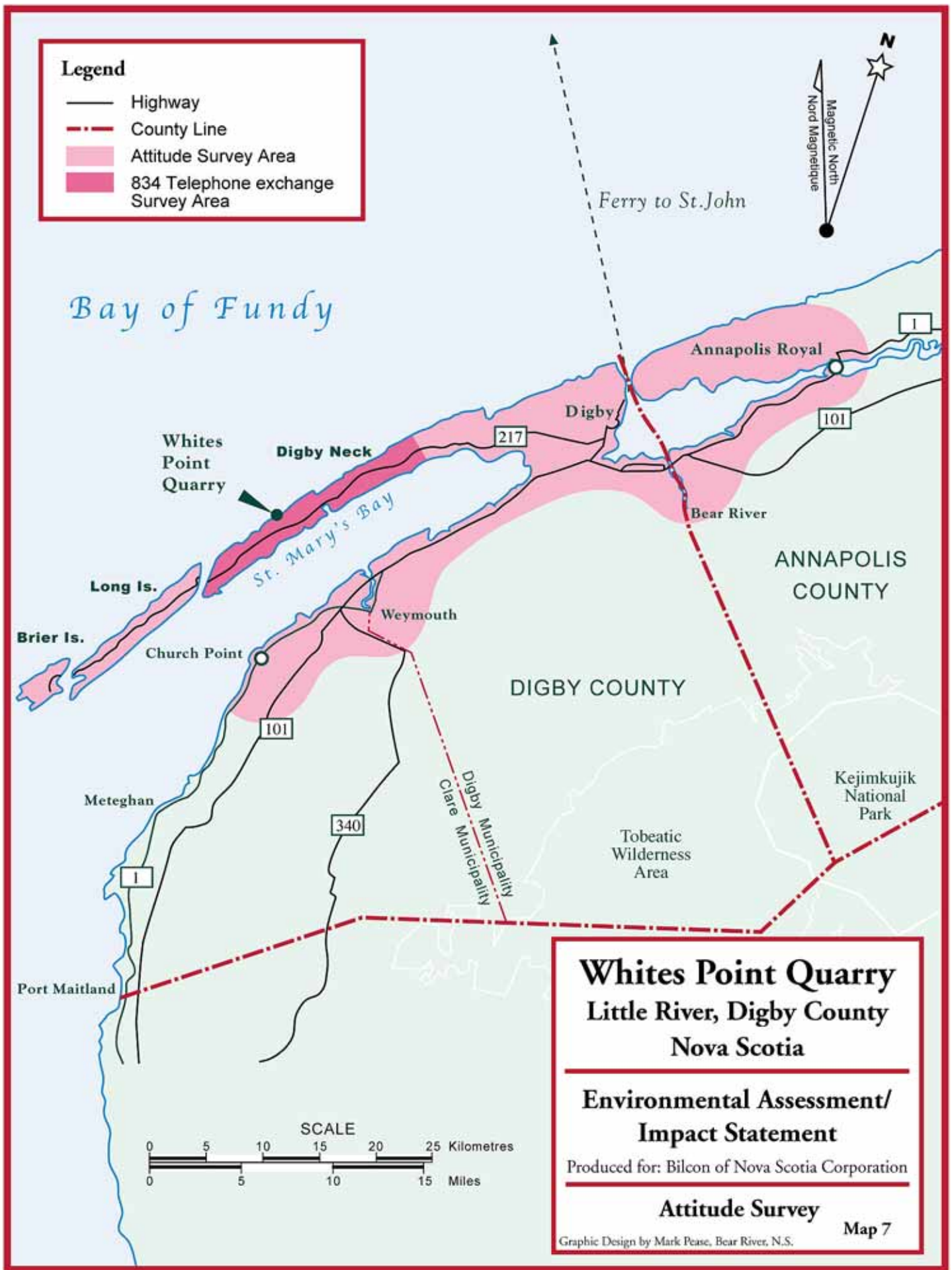
- 2. Volunteer Fire Department
- 3. Post Office (closed Sandy Cove)
- 4. Library (Anglican Church)
- 5. School
- 6. Post Office (Little River)
- 7. Post Office (Tiverton)
- 8. Community Hall (IOF)
- 9. Fire Department (Family Search And Rescue)



- 6. Fish Processing
- 7. Sandy Cove West Wharf
- 8. Sandy Cove East Wharf
- 9. Fish Processing
- 10. Aquaculture
- 11. Little River Wharf
- 12. Fish Processing
- 13. Fish Processing
- 14. Fish Processing
- 15. Whale Cove Wharf
- 16. Aquaculture
- 17. East Ferry Wharf
- 18. Fish Holding
- 19. Tiverton Harbour
- 20. Tiverton Wharf
- 21. Fish Processing (closed)













- 2. Restaurant (closed)
- 3. Country Inn
- 4. Campground (closed)
- 5. Whale & Seabird Cruises
- 6. Campground
- 7. Restaurant, Whale & Seabird Cruises
- 8. Whale & Seabird Cruises
- 9. Bed & Breakfast
- 10. Bed & Breakfast
- 11. Whale & Seabird Cruises
- 12. Whale & Seabird Cruises
- 13. Bed & Breakfast
- 14. Tourist Bureau & Museum
- 15. Bed & Breakfast



66° 00'

Bay of Fundy

Legend

-  Organic Deposits
-  Colluvial Deposits
-  Alluvial Deposits
-  Marine Deposits
-  Glaciolacustrine Deposits
-  Glaciomarine Deposits
- Glaciofluvial Deposits
 -  Outwash fans, deltas & valley train deposits
 -  Kame fields & esker systems
- Ground Moraine and Streamlined Drift
 -  Hummocky Ground Moraine
 -  Stony Till Plain & Drumlins
 -  Silty Till Plain & Drumlins

Source: Surficial Geology Map 92-3

45° 00'

N



SCALE 1:500,000



44° 30'

Digby Neck

Digby

Whites Point Quarry

Nova Scotia

Long Is.

Brier Is.

Meteghan

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**









Produced for: Bilcon of Nova Scotia Corporation

Surficial Geology

Map 8

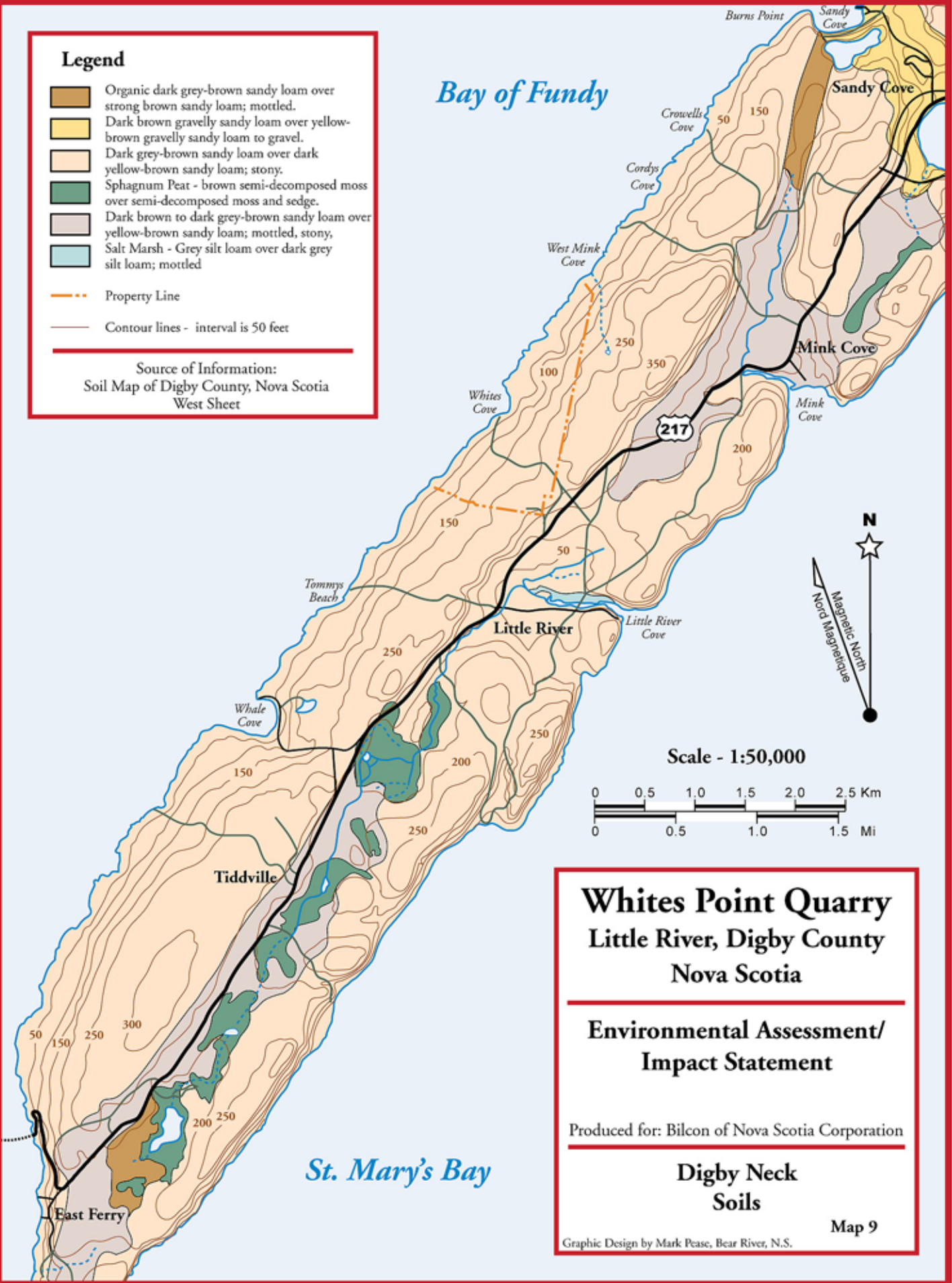
Graphic Design by Mark Pease, Bear River, N.S.

Legend

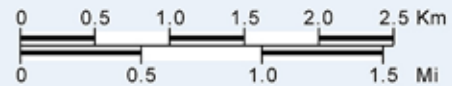
-  Organic dark grey-brown sandy loam over strong brown sandy loam; mottled.
 -  Dark brown gravelly sandy loam over yellow-brown gravelly sandy loam to gravel.
 -  Dark grey-brown sandy loam over dark yellow-brown sandy loam; stony.
 -  Sphagnum Peat - brown semi-decomposed moss over semi-decomposed moss and sedge.
 -  Dark brown to dark grey-brown sandy loam over yellow-brown sandy loam; mottled, stony.
 -  Salt Marsh - Grey silt loam over dark grey silt loam; mottled
-  Property Line
-  Contour lines - interval is 50 feet

Source of Information:
Soil Map of Digby County, Nova Scotia
West Sheet

Bay of Fundy



Scale - 1:50,000



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Produced for: Bilcon of Nova Scotia Corporation

Digby Neck Soils











Map 9

Graphic Design by Mark Pease, Bear River, N.S.

Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

-  Proposed Whites Point Marine Terminal
-  Proposed Shipping Route
-  Existing Shipping Lanes
-  New Shipping Lanes (2003)
-  Traffic Separation Zone
-  La Hare Clay: silty clay/clayey silt; silty sandy clay/clayey, sandy silt - grading locally to silty clayey sand (more than 20% sand).
-  Scottian Shelf Drift: glacial till; includes some stratified drift.
-  Subsurface deposits of La Hare Clay underlying uppermost Sambro Sand.
-  Occurs only in the Bay of Fundy.
-  Sambro Sand: Mainly silty and clayey sand with less than 10% gravel.

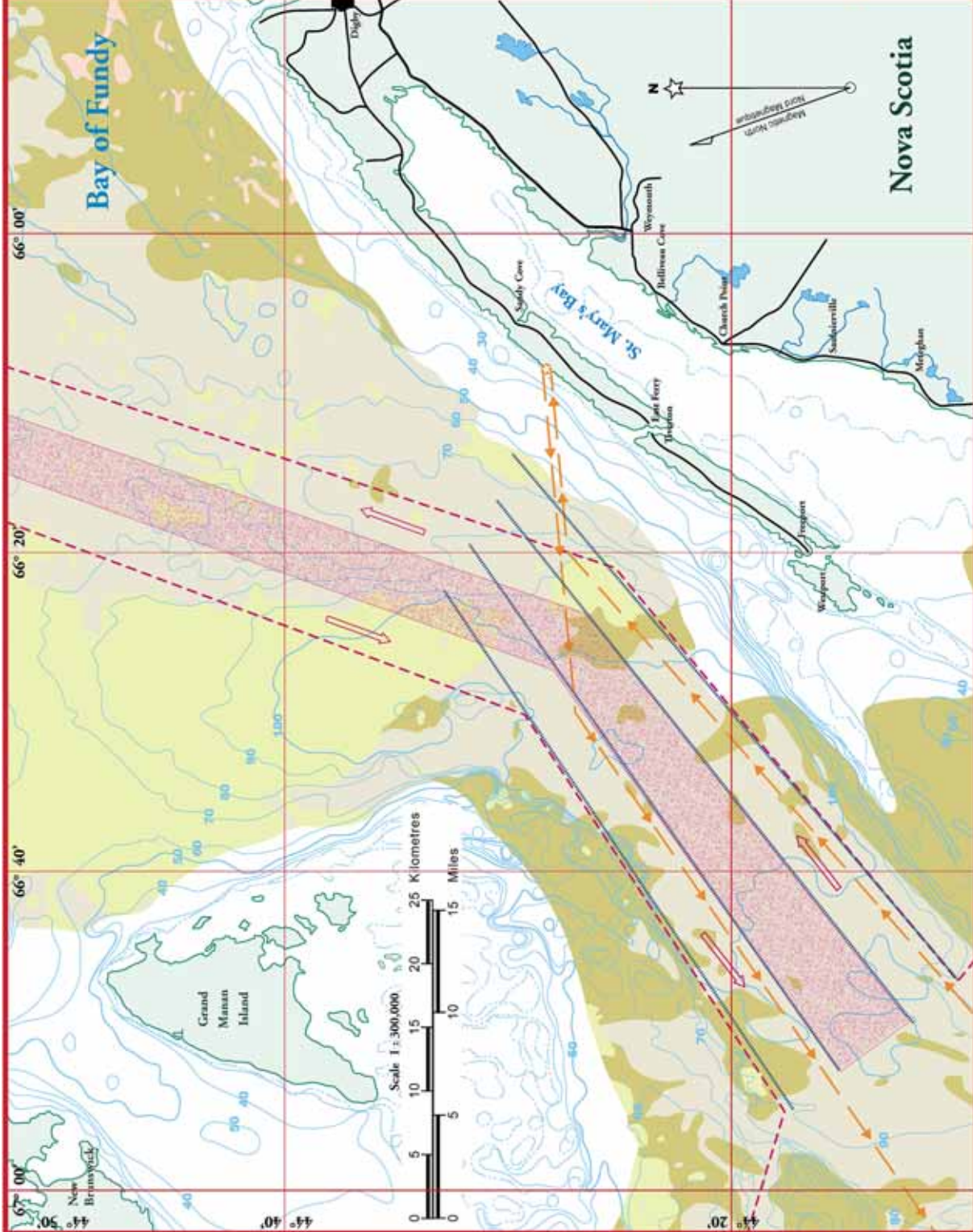
Source of Information:
Canadian Steamship Lines International Inc., 2002 & 2003

Map Sources
Surficial Geology 4011-G
Eastern Gulf of Maine & Bay of Fundy

Produced for: Bilcon of Nova Scotia Corporation

Surficial Geology: Bay of Fundy Map 10

Graphic Design by Mark Ponce, Rose River, N.S.



Whites Point Quarry
Little River, Digby County
Nova Scotia

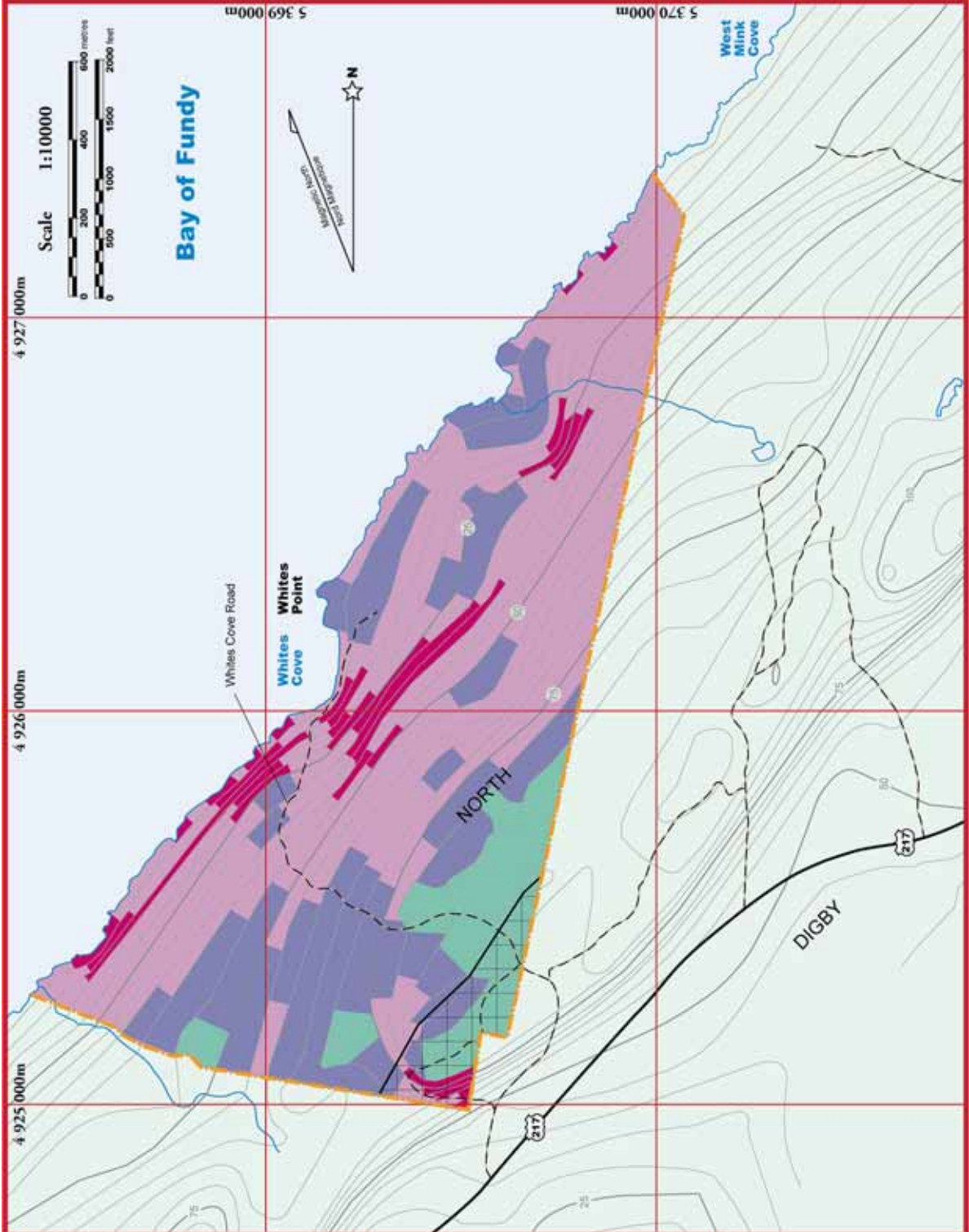
**Environmental Assessment/
Impact Statement**

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
- Slope**
- 0 - 5%
 - 5 - 10%
 - 10 - 25%
 - 25 - 50%
- Aspect**
- Southeast
 - Northwest

Produced for Bilcon of Nova Scotia Corporation

Terrain
Slope/Aspect
Map 11

Graphic Design by Mark Press, Bear River, N.S.



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

- Highway 217
- Gravel Road
- Property Line
- Coastal Bog
- Intermittent Watercourse
- W.W.P. # - Water Sample Station
- Intertidal Transects
- Watershed Divide
- S.W.P. - Soil Sample Location
- Bore Hole Location
- Near Shore Habitat & Surficial Geology
- Bedrock
- Thin Veneer of Sand Overlying Bedrock
- Concentrated Boulders
- Surficial Sediments
- Hydrogeology Section
- Hydrogeology Section
- Monitoring Well Location

Source of Information:

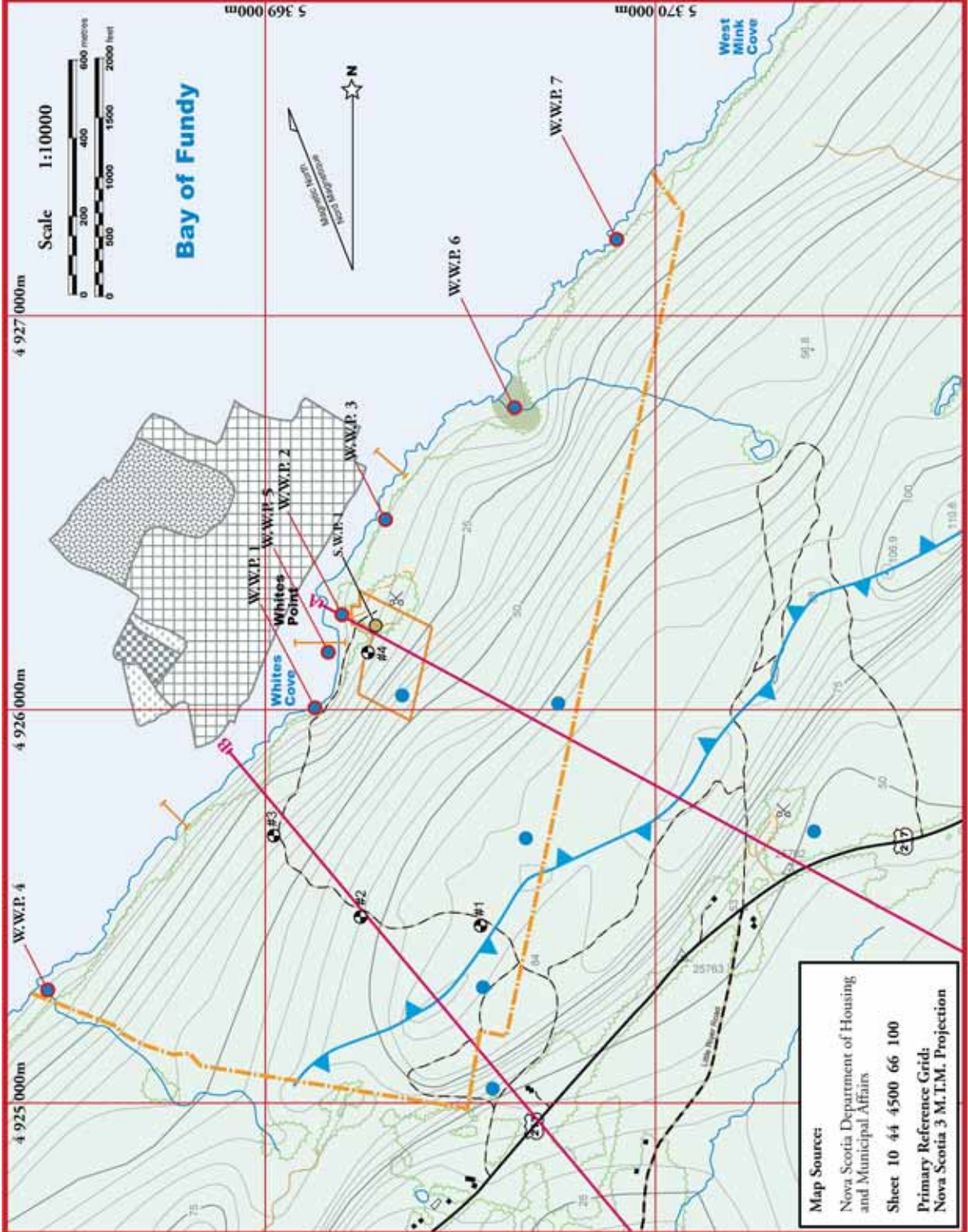
- Canadian Seabed Research Ltd. June 2002
- Lizak, John, B.Sc. Geo. Eng., M. Sc. Geo., "Whites Cove Geological Assessment" Dec. 2002
- Lizak, John, B.Sc. Geo. Eng., M. Sc. Geo., "Geology and Groundwater Assessment, Whites Point Quarry Site" Dec. 2005

Produced for: Bilcon of Nova Scotia Corporation

Physical Resources

Map 12

Graphic Design by Mark Thoms, Bear River, N.S.



Bay of Fundy

Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Produced for: Bilcon of Nova Scotia Corporation

Sediment and Water Sample Sites

Graphic Design by Mark Pease, Bear River, N.S.

Map 13

Approx. LLWLT Chart Datum

Check
Dams (3)

W.W.P. 8

Whites
Point

Sediment
Pond

7

1

5

2

W.W.P. 2

Ordinary High Water Mark

Whites
Cove

W.W.P. 1

Culvert

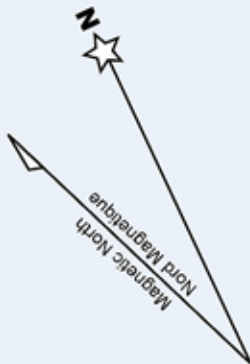
6

Whites Cove Road

Legend

- Water Sample Site
- Sediment Sample Site
- Drainage Channel


Scale: 1"=200'



50


Bay of Fundy

Legend

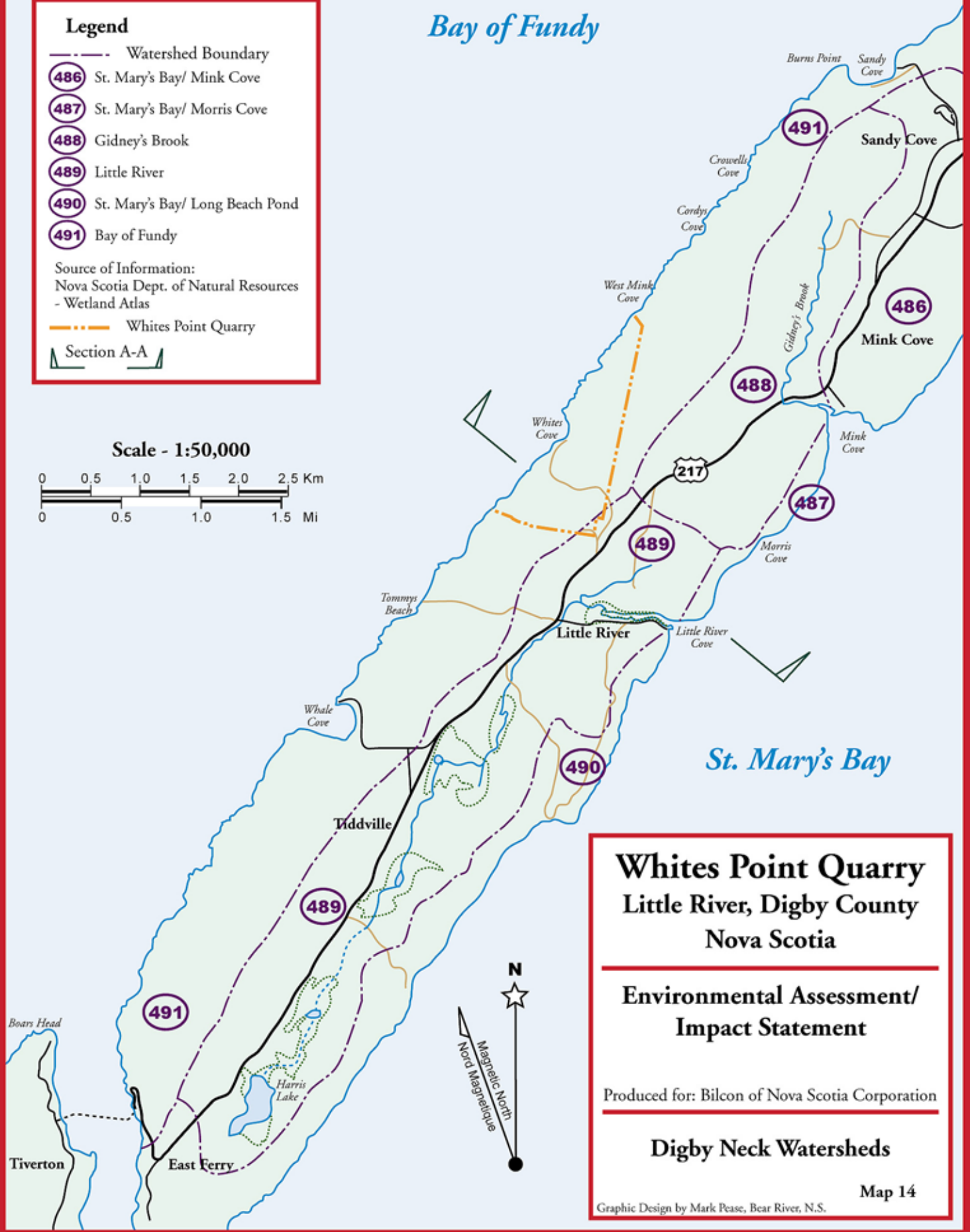
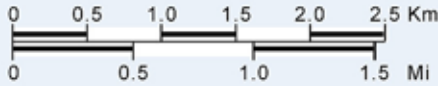
-  Watershed Boundary
-  486 St. Mary's Bay/ Mink Cove
-  487 St. Mary's Bay/ Morris Cove
-  488 Gidney's Brook
-  489 Little River
-  490 St. Mary's Bay/ Long Beach Pond
-  491 Bay of Fundy

Source of Information:
Nova Scotia Dept. of Natural Resources
- Wetland Atlas

 Whites Point Quarry

 Section A-A

Scale - 1:50,000



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Produced for: Bilcon of Nova Scotia Corporation



Digby Neck Watersheds

Map 14




Graphic Design by Mark Pease, Bear River, N.S.

Bay of Fundy

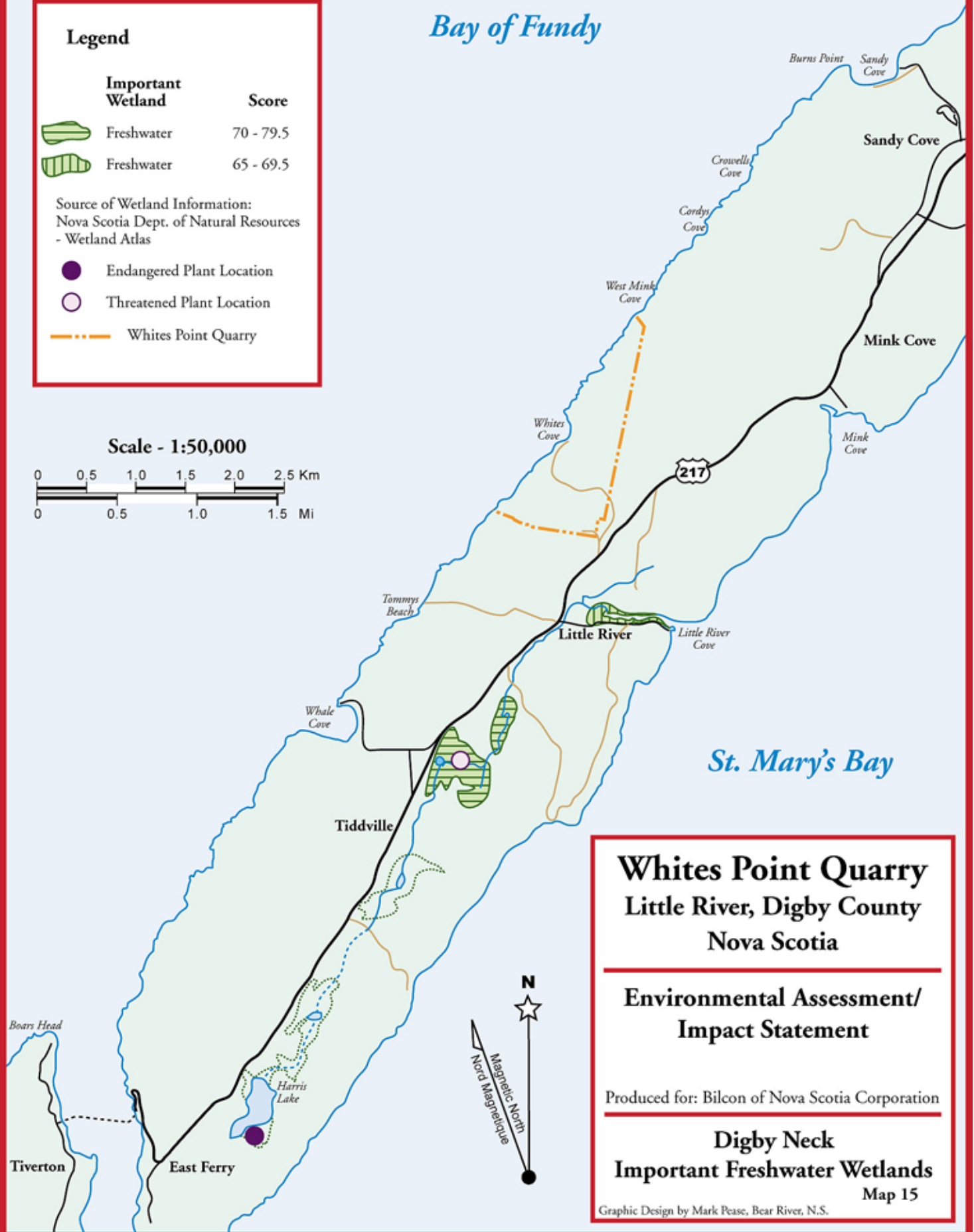
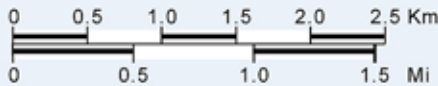
Legend

Important Wetland		Score
	Freshwater	70 - 79.5
	Freshwater	65 - 69.5

Source of Wetland Information:
Nova Scotia Dept. of Natural Resources
- Wetland Atlas

-  Endangered Plant Location
-  Threatened Plant Location
-  Whites Point Quarry

Scale - 1:50,000



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

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Digby Neck Important Freshwater Wetlands Map 15

Graphic Design by Mark Pease, Bear River, N.S.



Whites Point Quarry
 Little River, Digby County
 Nova Scotia

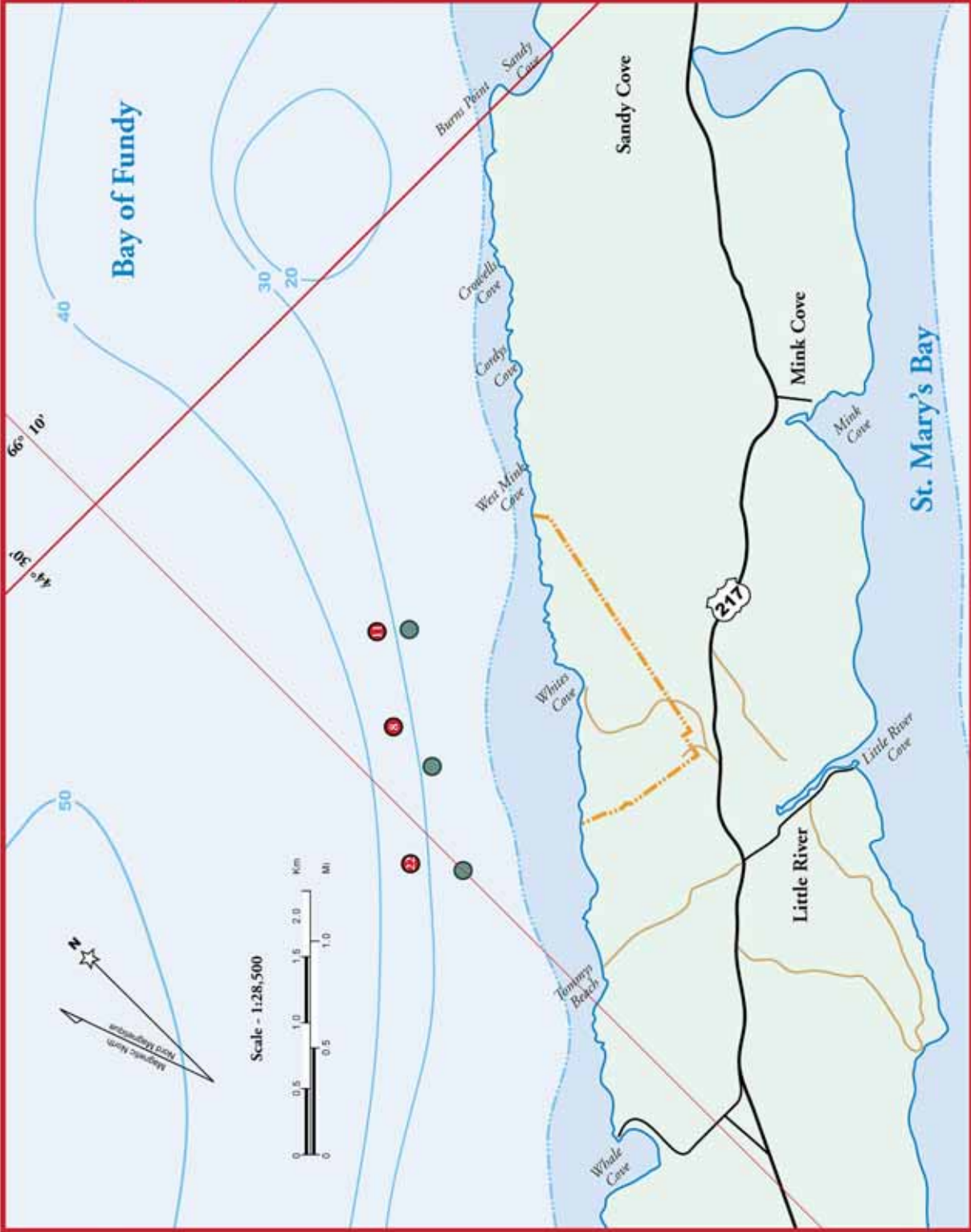
**Environmental Assessment/
 Impact Statement**

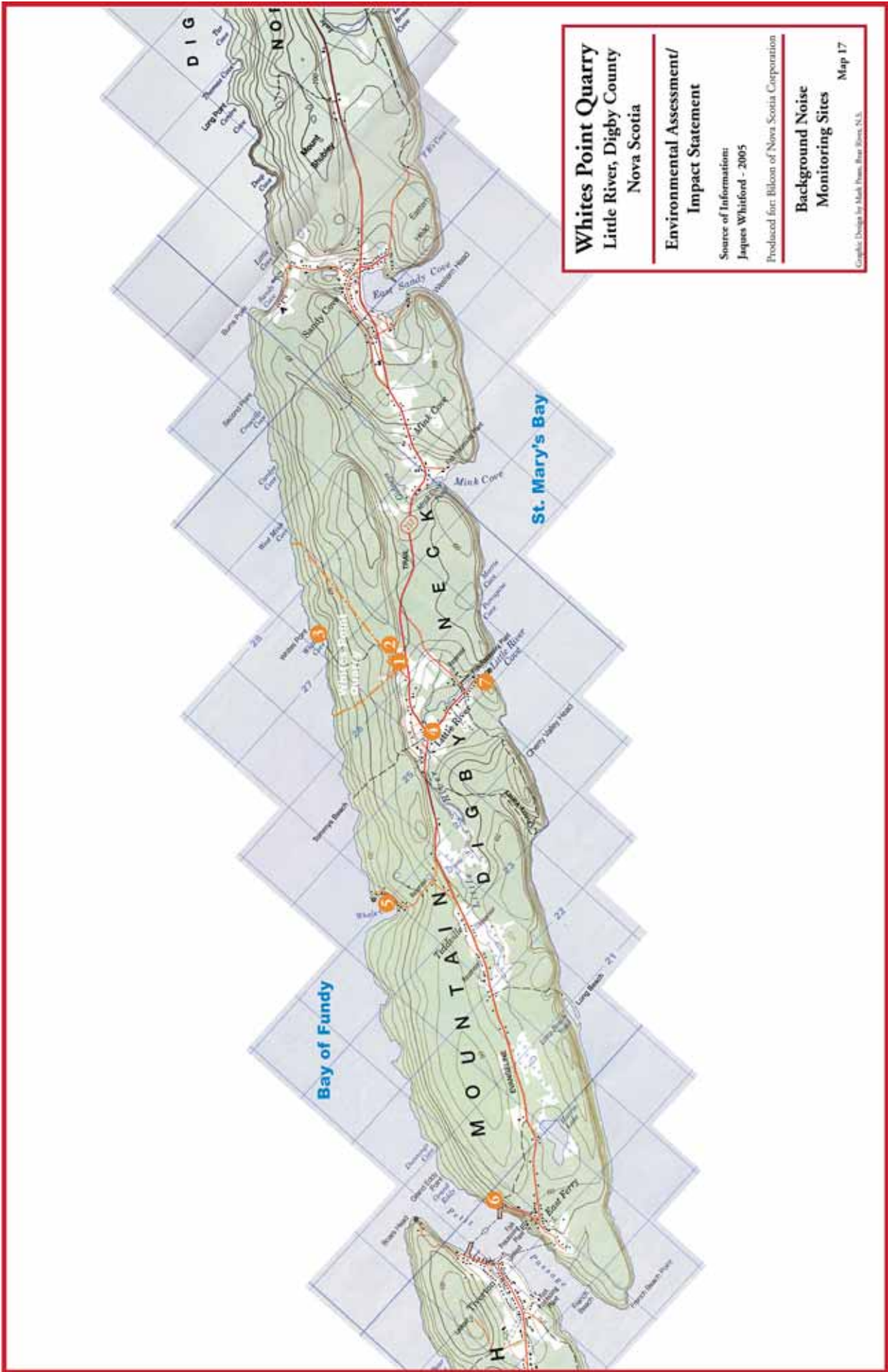
- Legend**
-  Quarry Property Line
 -  Phytoplankton and Zooplankton Sample Station Location
 -  Sediment Sample Station Location

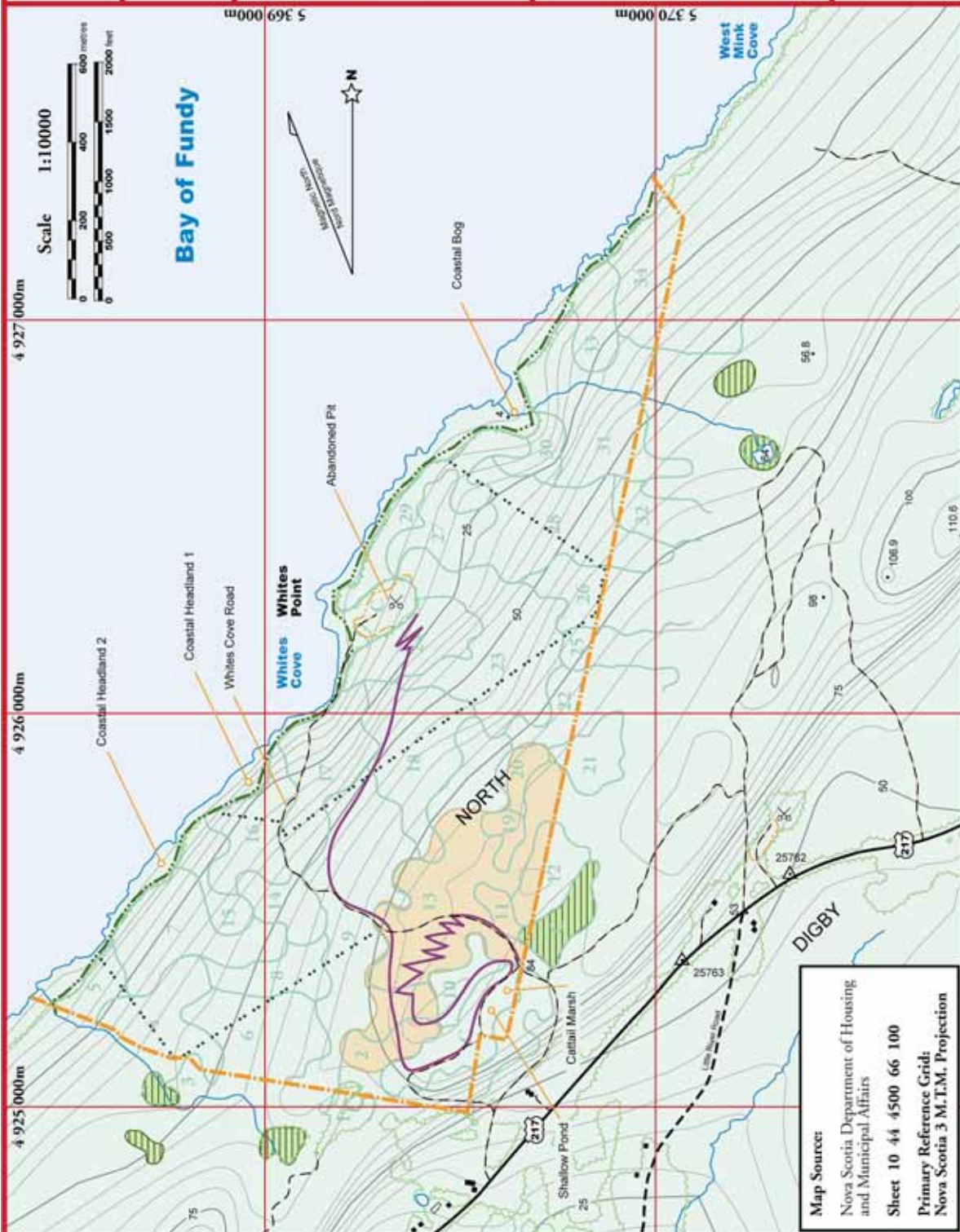
Produced for Bilcon of Nova Scotia Corporation

Oceanography Surveys
 Map 16

Graphic Design by Mark Thom, Blue River, N.S.







Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

- Legend**
- Highway 217
 - - - Gravel Road
 - - - Property Line
 - Stand Number
 - Clear Cut
 - Woodland Plant Transects - 2002
 - Coastal Plant Transects - 2002
 - Bog wetland
 - Rock Outcrop Plant Transects - 2005

Source of Information:
 Newell, Ruth E. B.Sc., M.Sc., "Plant Survey at Whites Cove Property, Digby Neck, Digby County, Nova Scotia" July 2002
 Department of Natural Resources - Forest Cover Type map May 1993
 Brylinsky & Kern - On-site investigations July 14, 2005
 Department of Natural Resources - Wetlands Data Base 2005
 Proulx, Gini - On-site investigations November 9, 2005

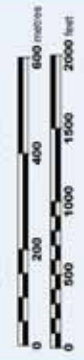
Produced for: Bilcon of Nova Scotia Corporation

Terrestrial Ecology Vegetative Cover & Plant Surveys

Map 18A

Graphic Design by Mark Davis, River Basin, N.S.

Scale 1:10000



Bay of Fundy



Map Source:
 Nova Scotia Department of Housing and Municipal Affairs
 Sheet 10 44 4500 66 100
Primary Reference Grid:
 Nova Scotia 3 M.T.M. Projection

Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

- 4 Hectare Quarry
- Highway 217
- Gravel Road
- Property Line
- Stand Number
- Clear Cut
- Coastal Faunal Survey - 2002
- Breeding Bird Survey - 2002 & 2004
- Nocturnal Bird Survey - 2002 & 2004
- Breeding Bird Survey - 2004
- Bog wetland
- Odonata Survey Location - 2005
- Lepidoptera Survey, August 2005

Source of Information:

Allison, W. George, Ph.D. "Faunal Analysis of the Proposed Whites Point Quarry Site, Digby Neck, Digby County, Nova Scotia", August 2002.
 "2004 Breeding Bird Surveys of the Proposed Whites Point Quarry Site, Digby Neck, Digby County, Nova Scotia", 6 December 2004
 Department of Natural Resources - Forest Cover Type map May 1993
 Brylinsky & Kern - On-site investigations July 14, 2005
 Department of Natural Resources - Wetlands Data Base, 2005
 Brunelle, Paul M. - Odonata Survey 2005
 Neil, Kenneth A. - Lepidoptera Survey 2005
 Produced for: Bilcon of Nova Scotia Corporation

Terrestrial Ecology Vegetative Cover & Faunal Surveys

Map 18B

Graphic Design by Mark Evans, Blue River, N.S.



Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

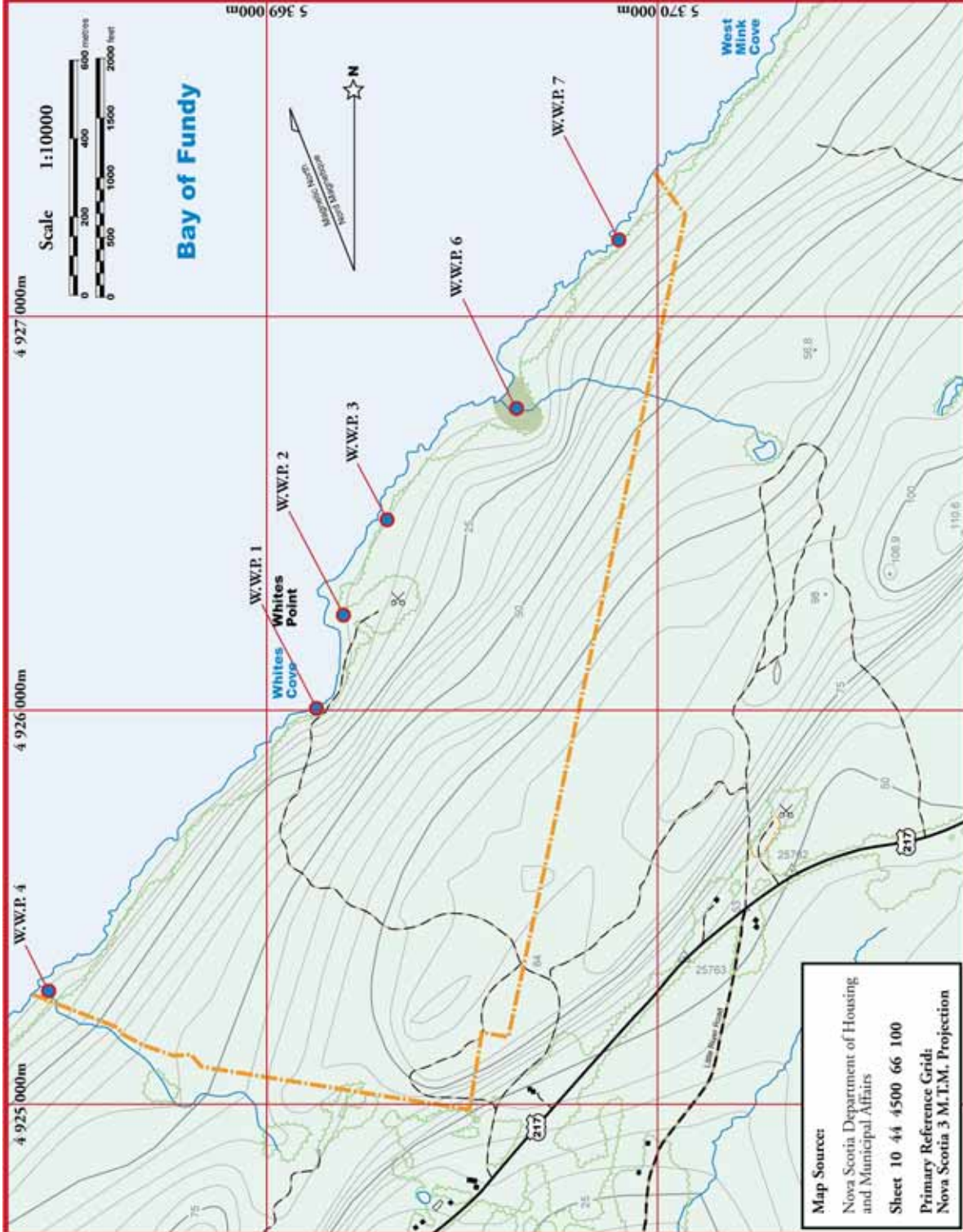
- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Coastal Bog
 - Intermittent Watercourse
 - W.W.P. # - Water Sample Station

Produced for: Bilcon of Nova Scotia Corporation

**Aquatic Ecology
 Fresh Water**

Map 19A

Graphic Design by Mark Press, Bear River, N.S.



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

- Highway 217
- Gravel Road
- Property Line
- Coastal Bog
- Intermittent Watercourse
- W.W.P. # - Water Sample Station
- Intertidal Transects
- Near Shore Habitat & Surficial Geology
- Bedrock
- Thin Veneer of Sand Overlying Bedrock
- Concentrated Boulders
- Surficial Sediments
- Bottom Grab Sample Location
- Video Transect

Source of Information:
Brylinsky, Michael, Ph.D. "Results of a Survey of
the Intertidal Marine Habitats and Communities
at a Proposed Quarry Site Located in the Vicinity
of Whites Cove, Digby Neck, Nova Scotia" 30
June 2002

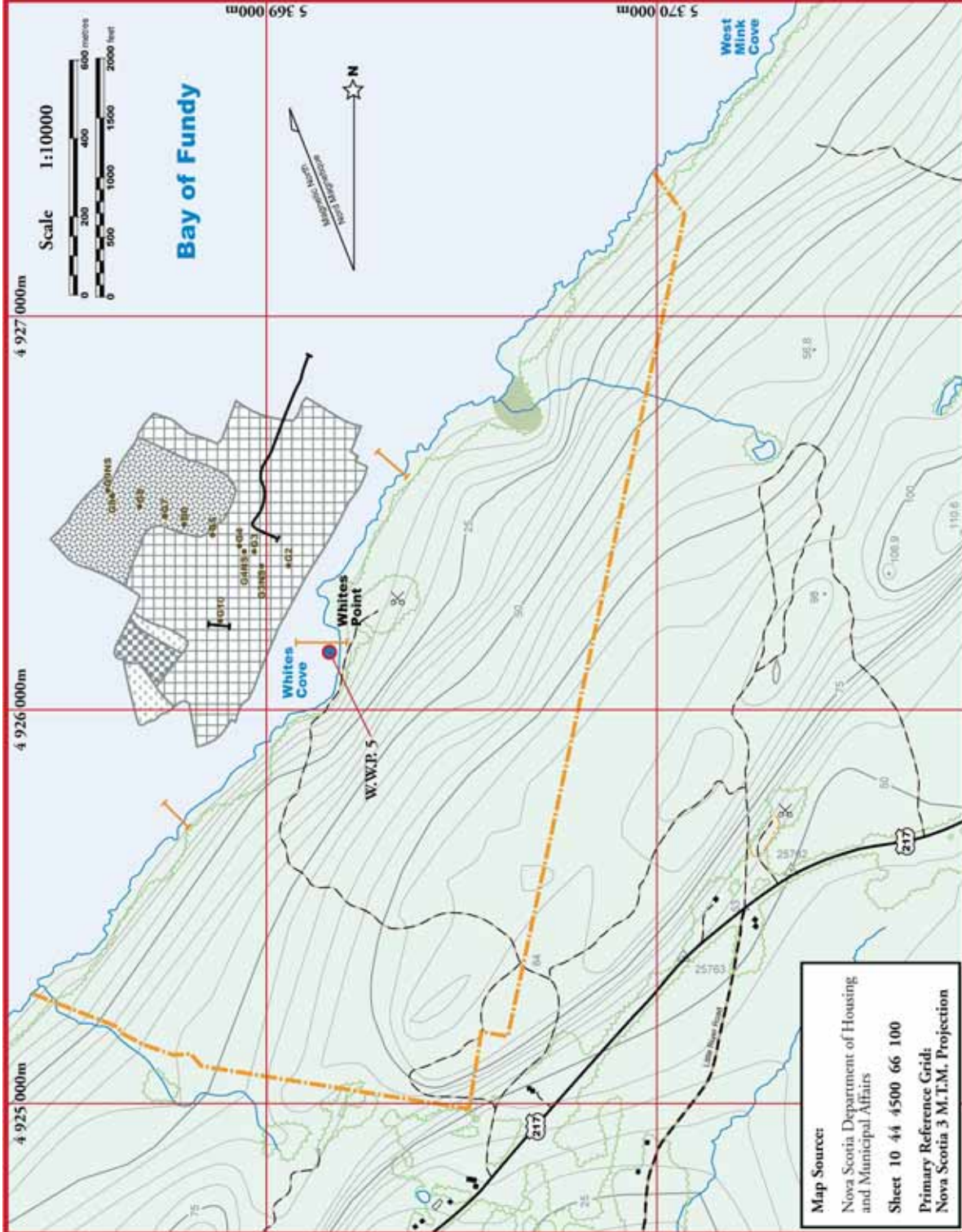
Canadian Seabeol Research Ltd. June 2002

Produced for: Blicom of Nova Scotia Corporation

Aquatic Ecology Marine

Map 19B

Creative Design by Mark Thom, East Brent, N.S.



Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

Legend

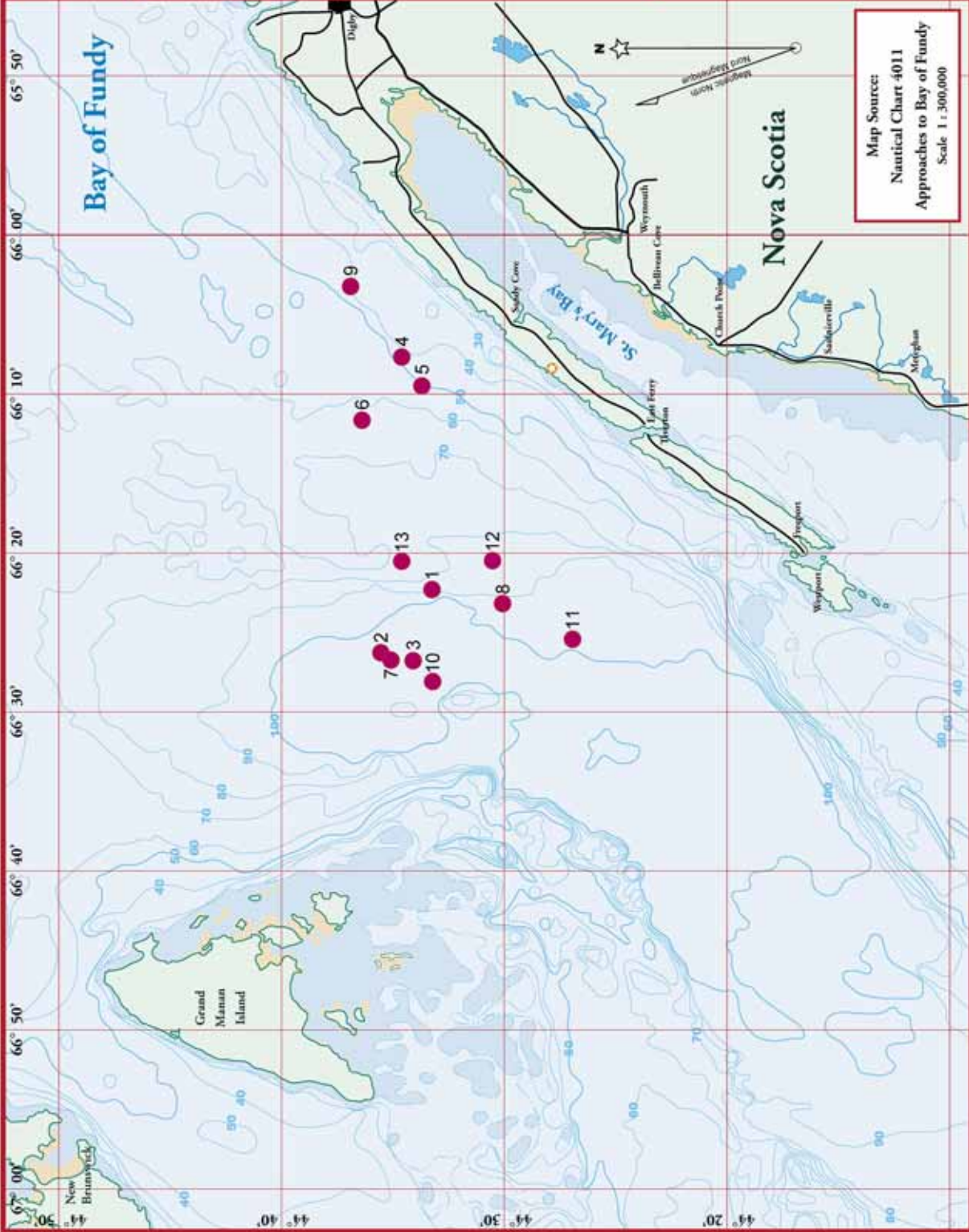
- Proposed Whites Point Quarry
- Sample Sites

Source of Information:
Department of Fisheries and Oceans BioChem
database

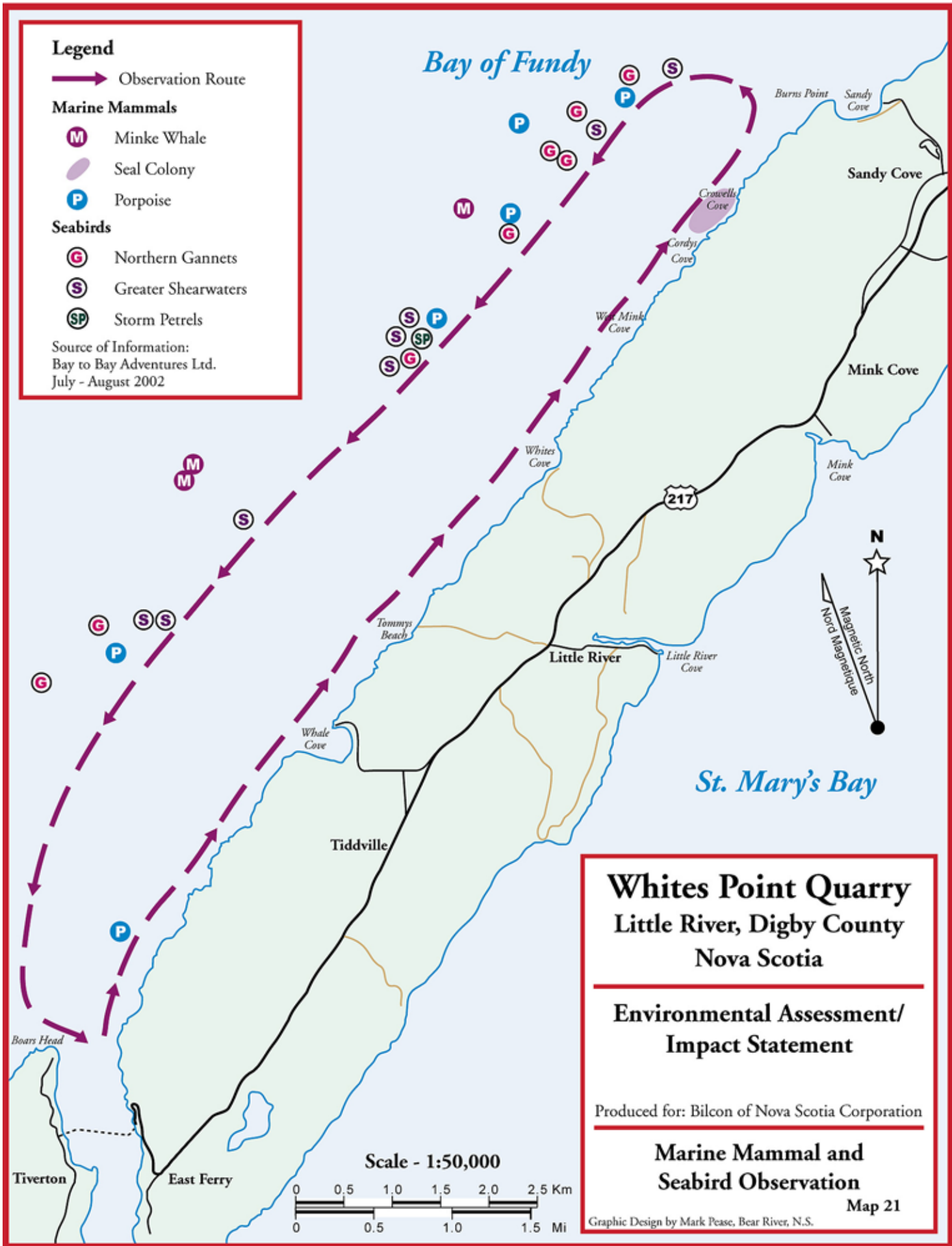
Produced for: Jillicorn of Nova Scotia Corporation

Bay of Fundy
Nutrient Sample Sites
Map 20

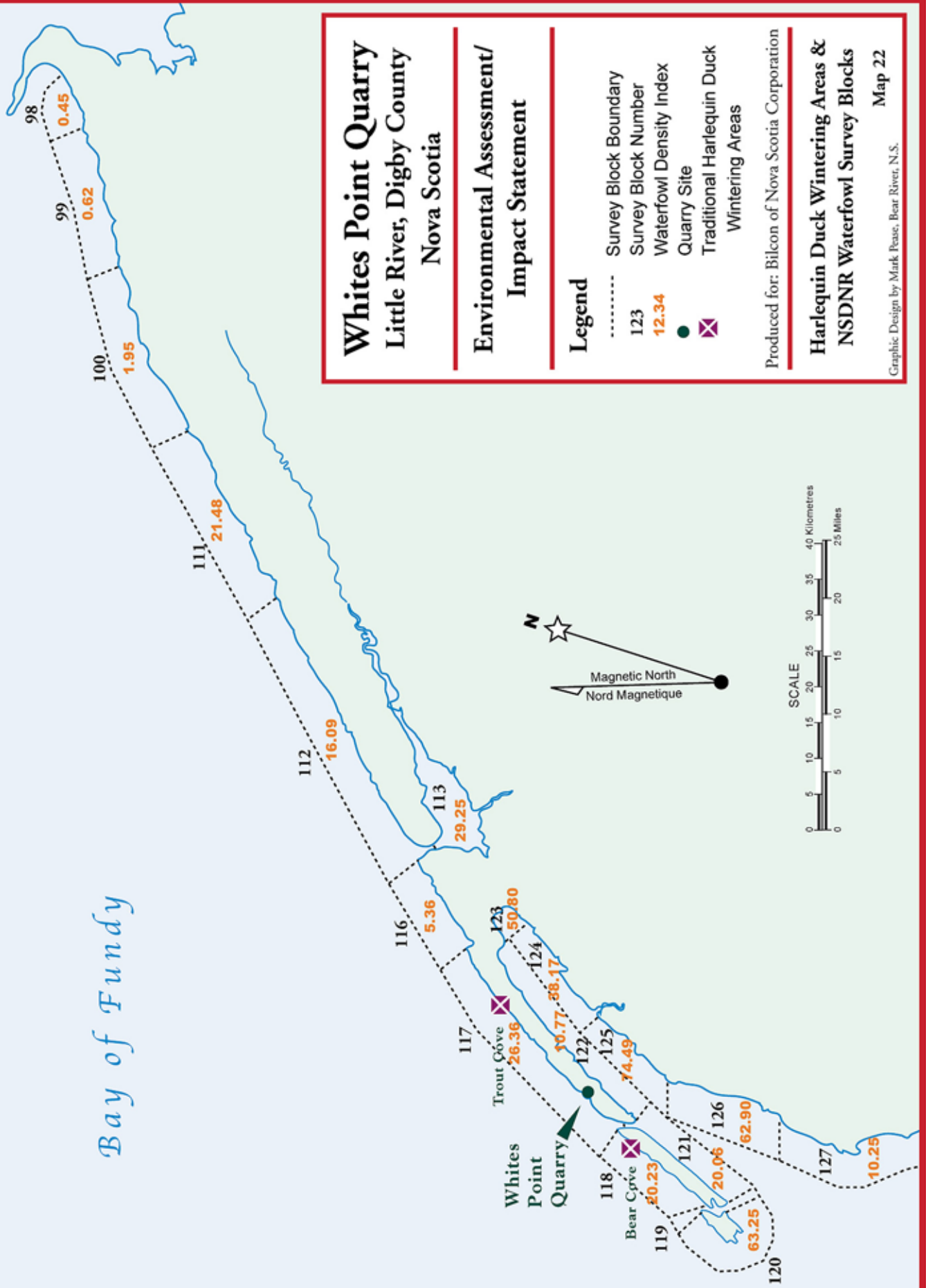
Graphic Design by Mark Phelan, Bear River, N.S.



Map Source:
Nautical Chart 4011
Approaches to Bay of Fundy
Scale 1 : 300,000



Bay of Fundy



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

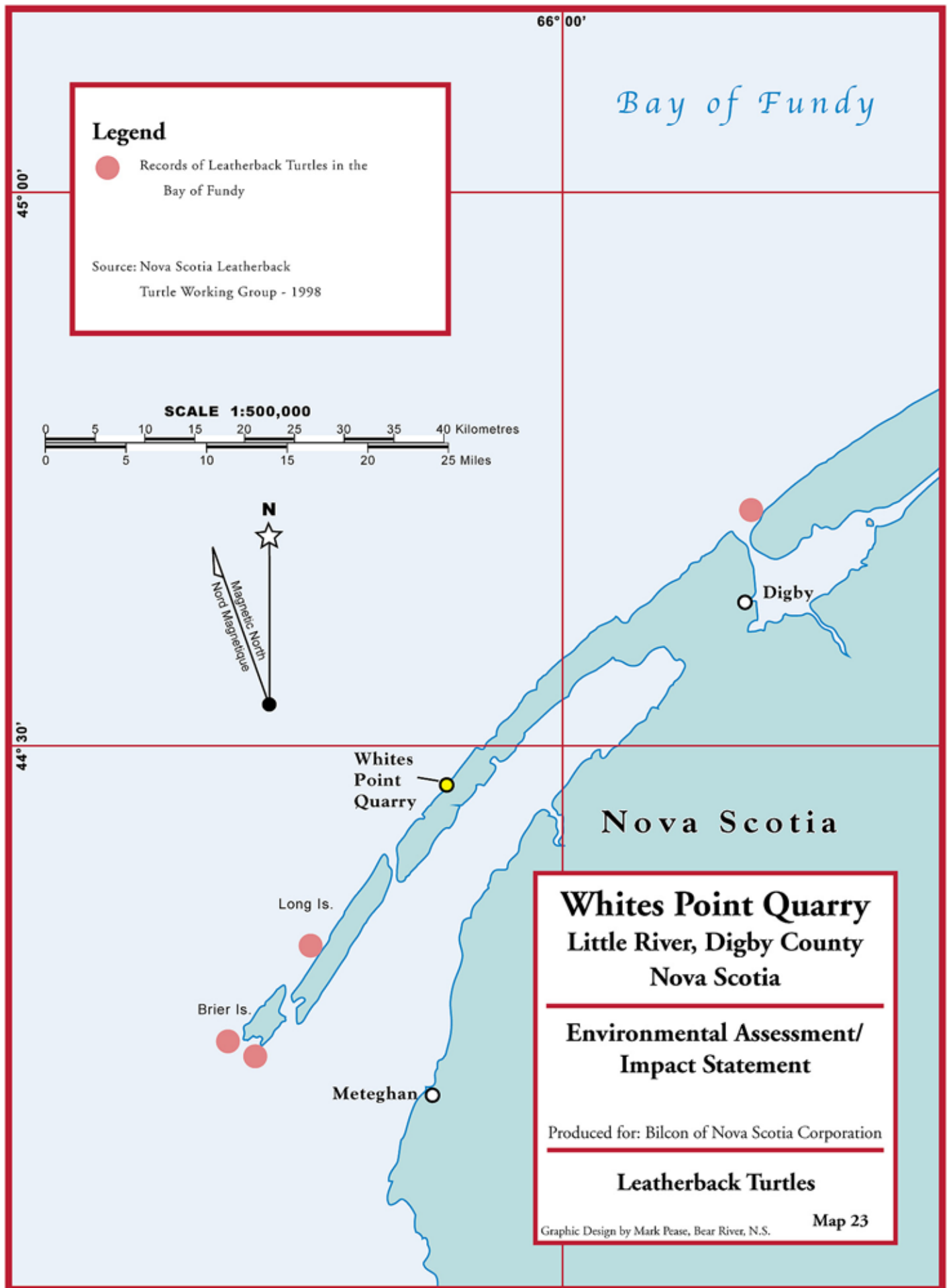
- Survey Block Boundary
- 123 Survey Block Number
- 12.34 Waterfowl Density Index
- Quarry Site
- Traditional Harlequin Duck Wintering Areas

Produced for: Bilcon of Nova Scotia Corporation

Harlequin Duck Wintering Areas & NSDNR Waterfowl Survey Blocks

Map 22

Graphic Design by Mark Pease, Bear River, N.S.





Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

Legend

- Proposed Whites Point Marine Terminal
- Proposed Shipping Route
- Existing Shipping Lanes
- New Shipping Lanes (2003)
- Traffic Separation Zone
- Right Whale Conservation Area

Sightings Per Unit Effort (SPUE) of Right Whales in the Bay of Fundy 1987 - 2000

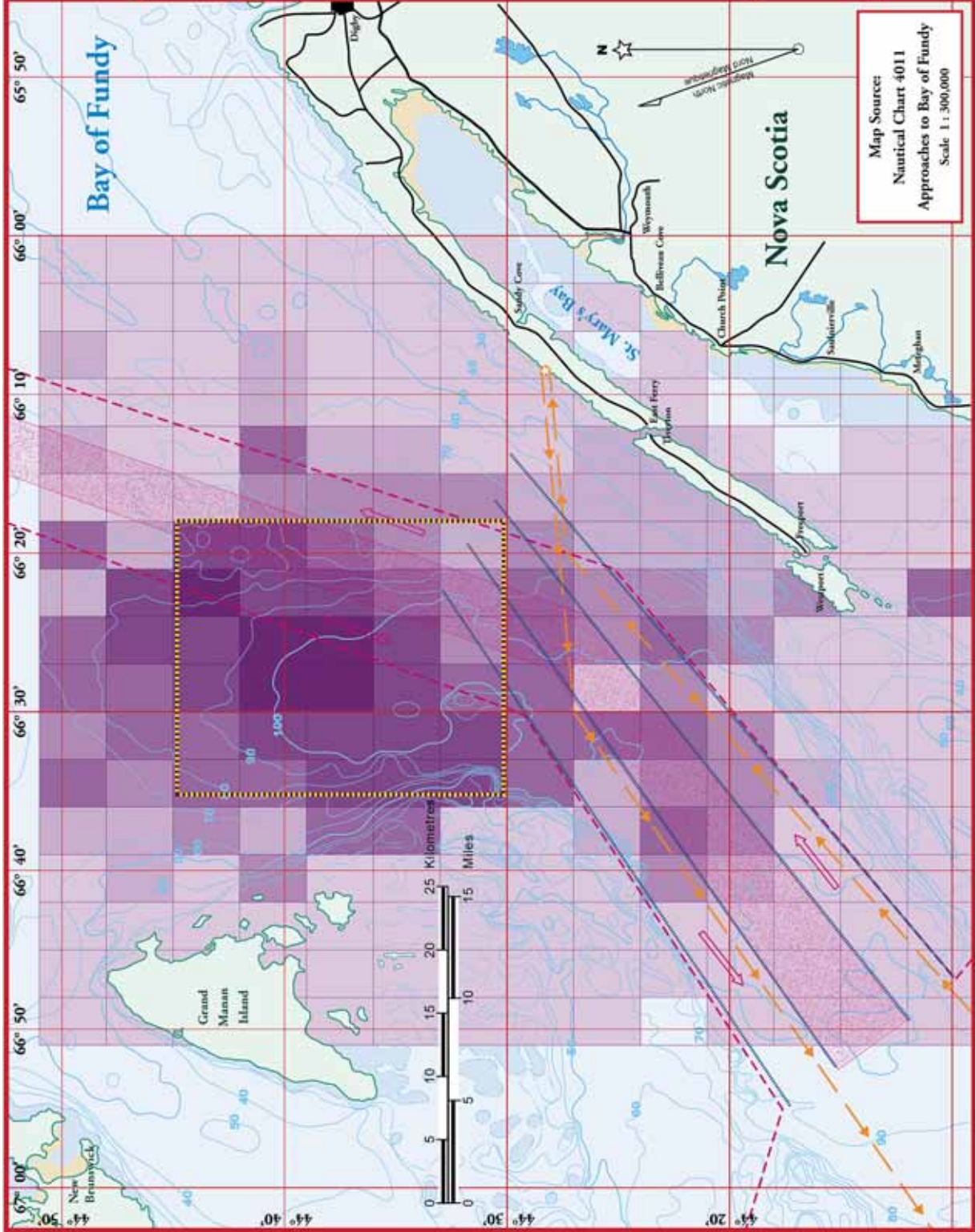
No Effort
Effort > 0 but SPUE = 0 whales / 1000 km
SPUE ≥ 0 but < 15,559
SPUE ≥ 15,559 but < 61,819
SPUE ≥ 61,819 but < 171,401
SPUE ≥ 171,401 but < 678,652
SPUE ≥ 678,652 but < 873,039

Source of Information:
Kenney, Robert D., Ph.D., University of Rhode Island, Effort and SPUE data, October 2001
Canadian Steamship Lines International Inc. 2002

Produced for: Bilcon of Nova Scotia Corporation

**Density
Right Whales**

Map 25



Graphics Design by Mark Proulx, River River, N.S.

Whites Point Quarry Little River, Digby County Nova Scotia

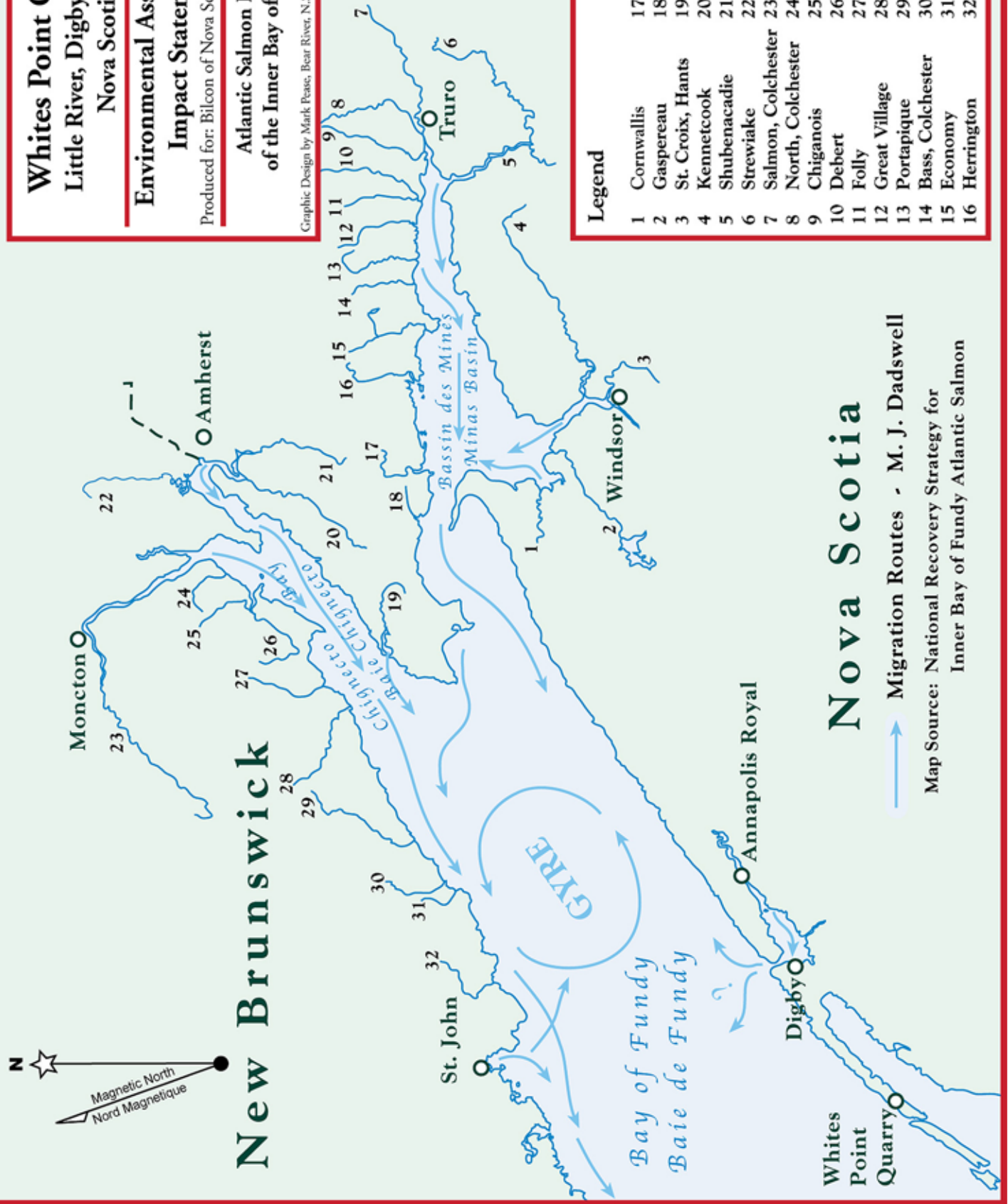
Environmental Assessment/ Impact Statement

Atlantic Salmon Rivers of the Inner Bay of Fundy

Produced for: Bilcon of Nova Scotia Corporation

Map 26

Graphic Design by Mark Pease, Bear River, N.S.



Nova Scotia
 Migration Routes - M. J. Dadswell
 Map Source: National Recovery Strategy for
 Inner Bay of Fundy Atlantic Salmon

Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

Legend

- Highway 217
- Gravel Road
- Property Line
- Intermittent Watercourse
- Bottom Survey Area

Artifacts

- 1 Skidway Remains
- 2 Shipwreck - S.S. Newfield - 1900
- 3 Foundation Remains
- 4 Hydrographic Monument No. 7084
- 5 Household Remains

Onsite Investigations

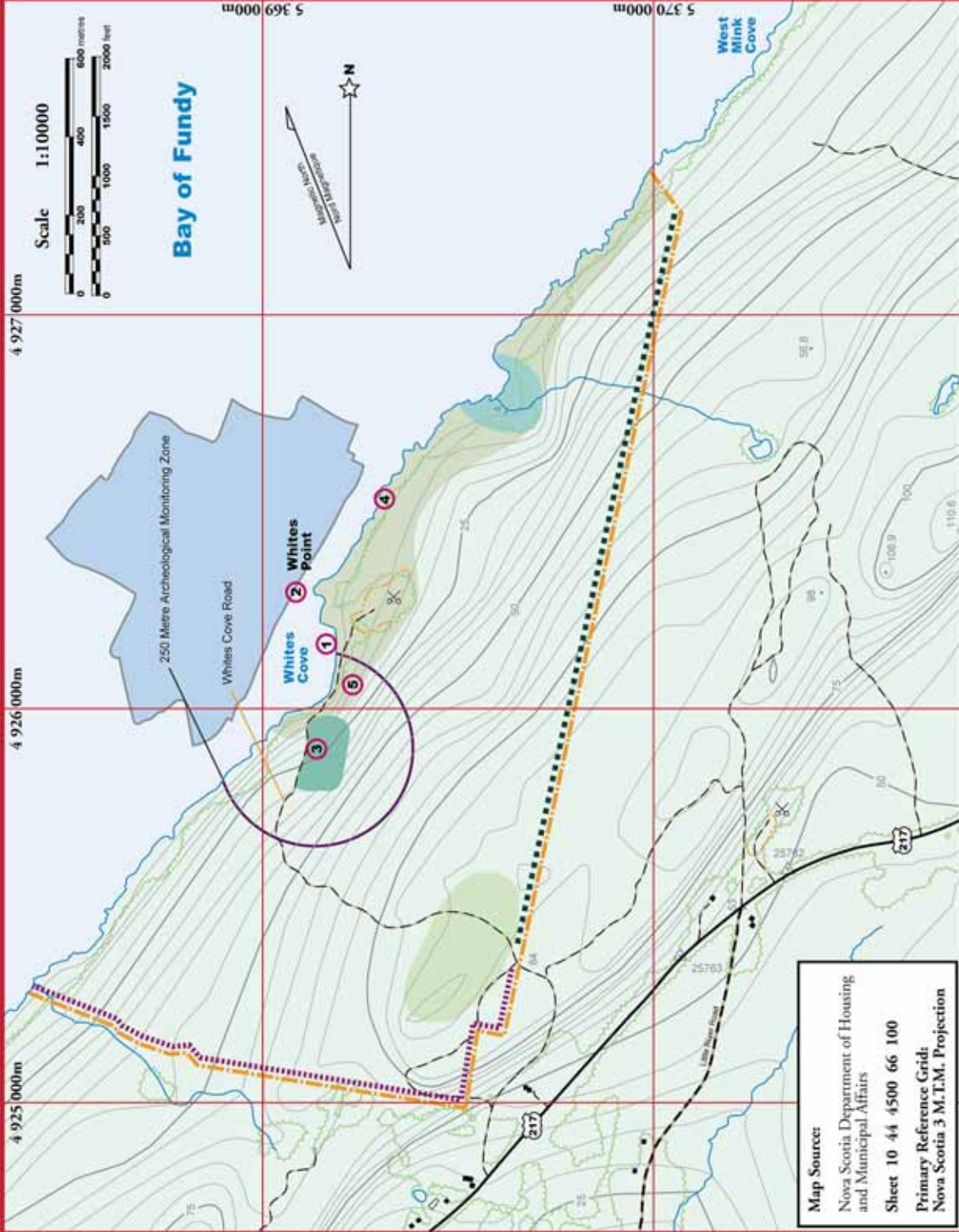
- Study Zone 1
- Study Zone 2
- Study Zone 3
- Study Zone 4
- Study Zone 5
- Study Zone 6

Produced for: Bilcon of Nova Scotia Corporation

Cultural Resources

Map 27

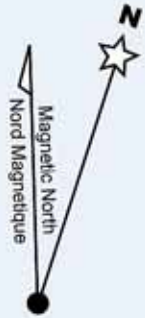
Graphic Design by Mark Pease, Pease & Pease, N.S.



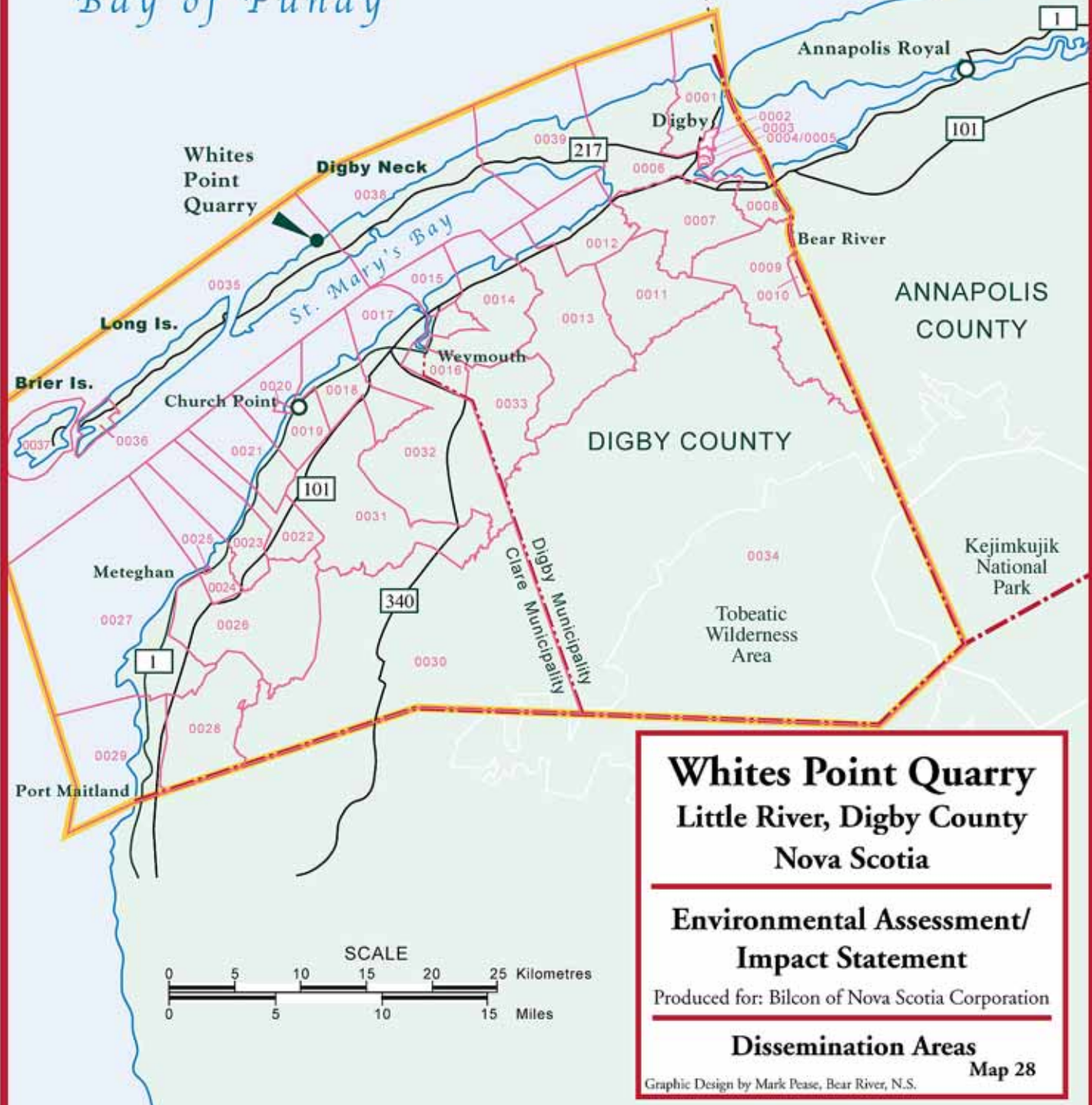
Legend

- Highway
- · - · County Line
- Census Division
- 0000 Dissemination Area

Ferry to St. John



Bay of Fundy



ANNAPOLIS COUNTY

DIGBY COUNTY

Kejimikujik National Park

Tobeatic Wilderness Area

**Whites Point Quarry
Little River, Digby County
Nova Scotia**

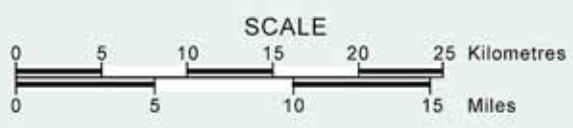
**Environmental Assessment/
Impact Statement**

Produced for: Bilcon of Nova Scotia Corporation

Dissemination Areas

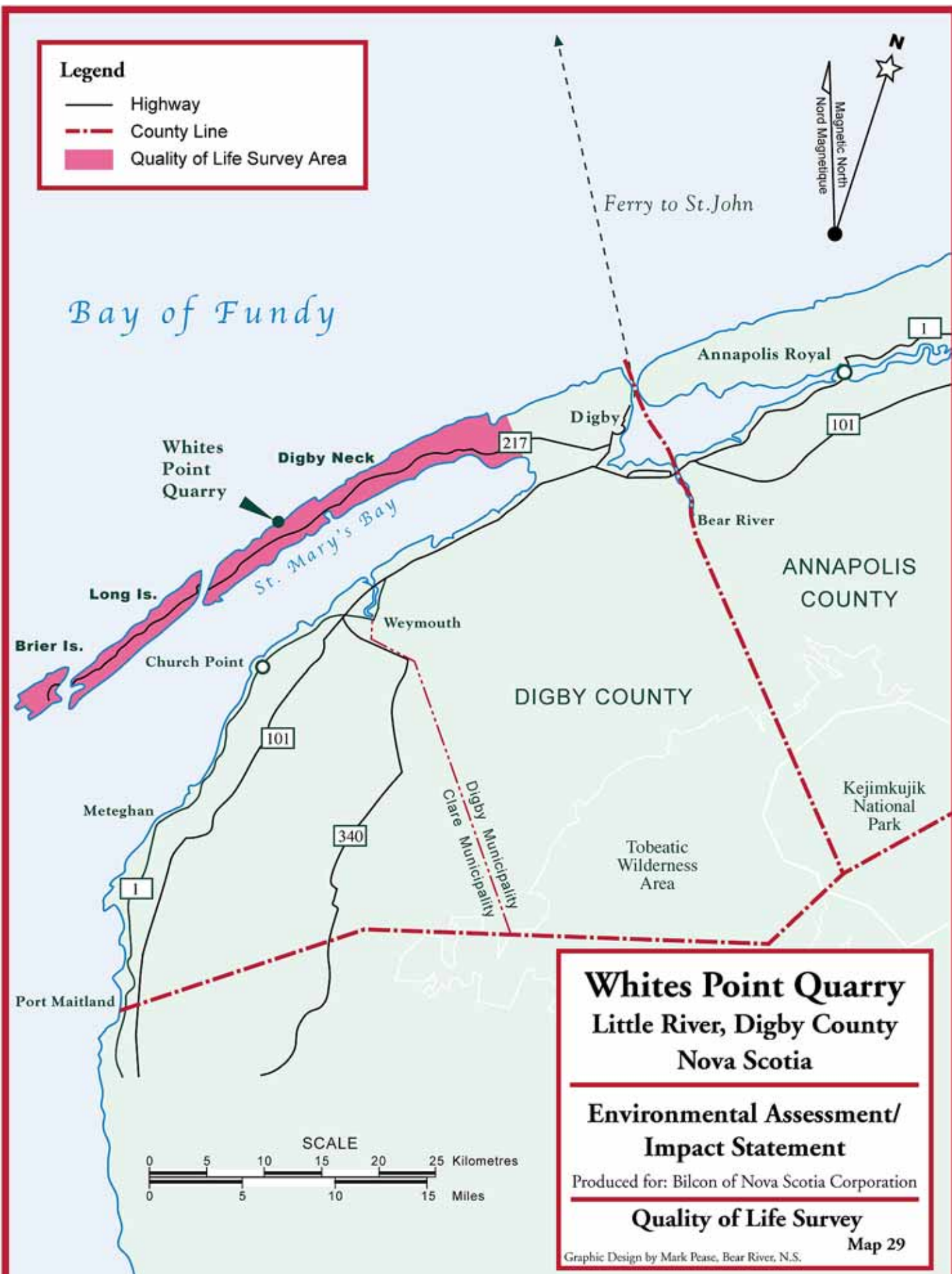
Map 28

Graphic Design by Mark Pease, Bear River, N.S.



Legend

- Highway
- - - County Line
- Quality of Life Survey Area



**Whites Point Quarry
Little River, Digby County
Nova Scotia**

**Environmental Assessment/
Impact Statement**

Produced for: Bilcon of Nova Scotia Corporation

Quality of Life Survey

Map 29

Graphic Design by Mark Pease, Bear River, N.S.

Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

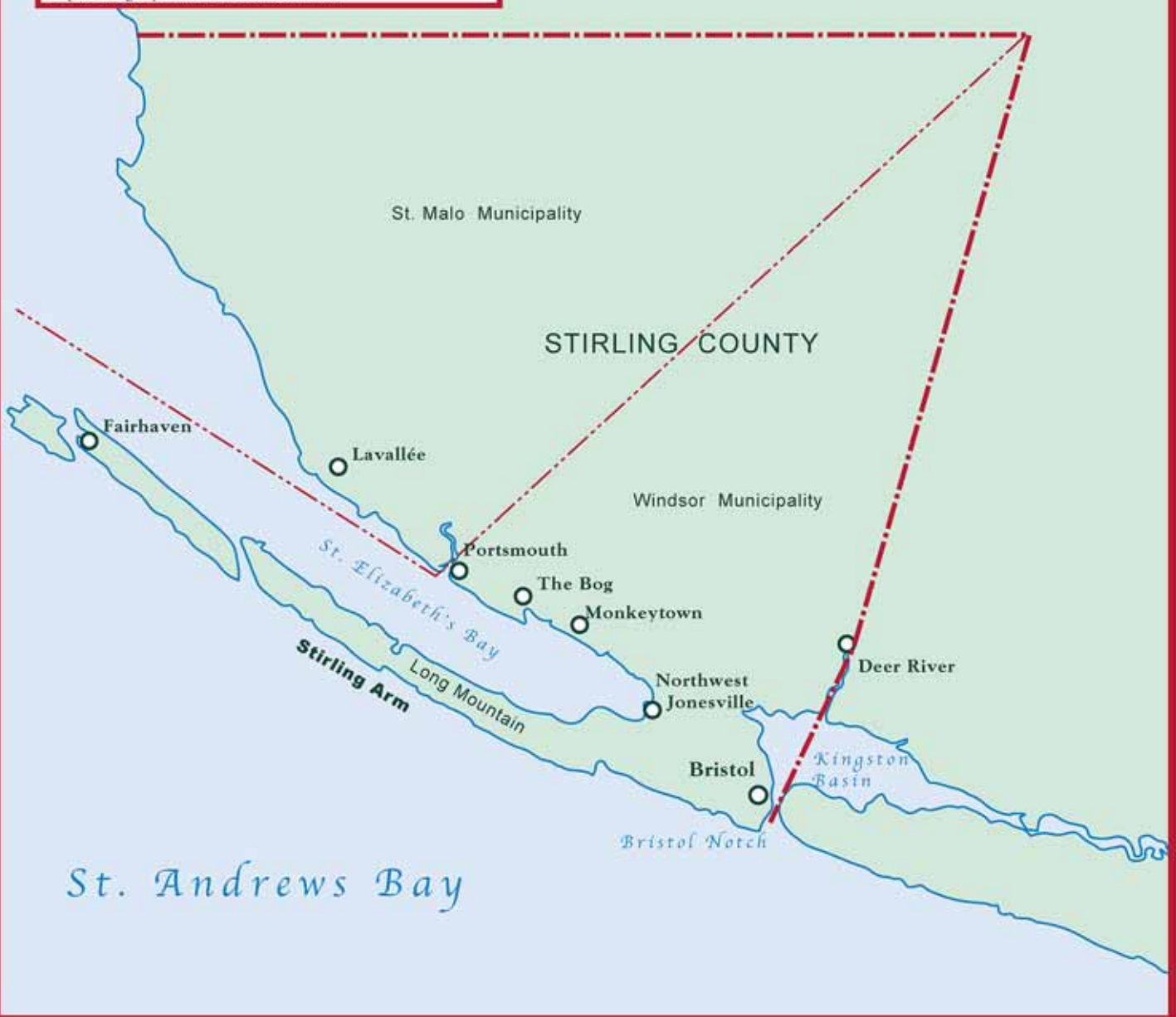
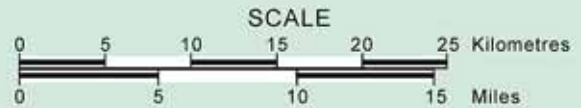
Source of Information:
People of Cove and Woodlot, 1960

Produced for: Bilcon of Nova Scotia Corporation

“Stirling County”

Map 30

Graphic Design by Mark Pease, Bear River, N.S.



Whites Point Quarry Little River, Digby County Nova Scotia

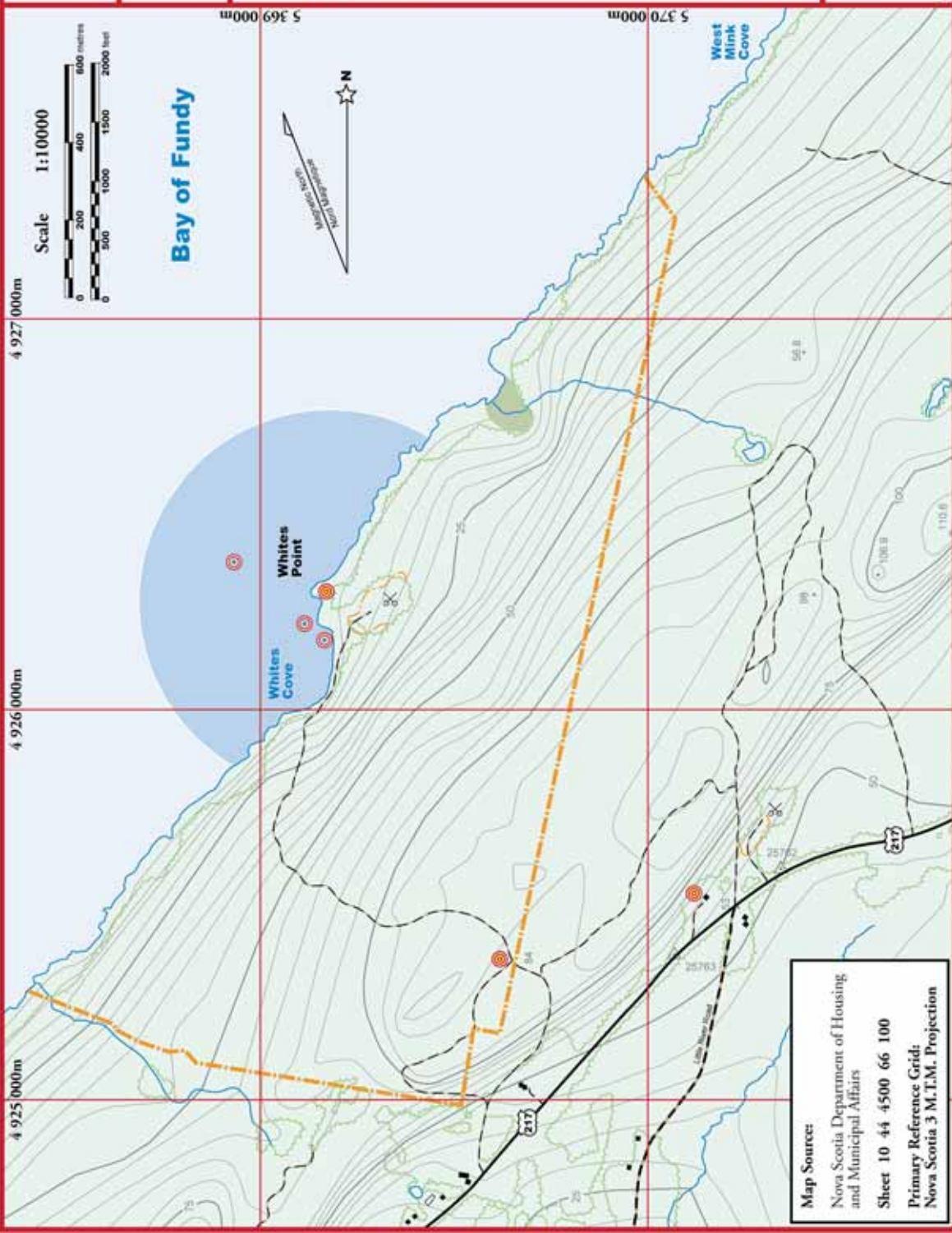
Environmental Assessment/ Impact Statement

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Coastal Bog
 - Intermittent Watercourse
 - Proposed Blast Monitoring Location- Land
 - Proposed Blast Monitoring Location- Water
 - 500 Meter Marine Mammal Observation Area

Produced for: Bilcom of Nova Scotia Corporation

Blast Monitoring and Observation Area Map 31

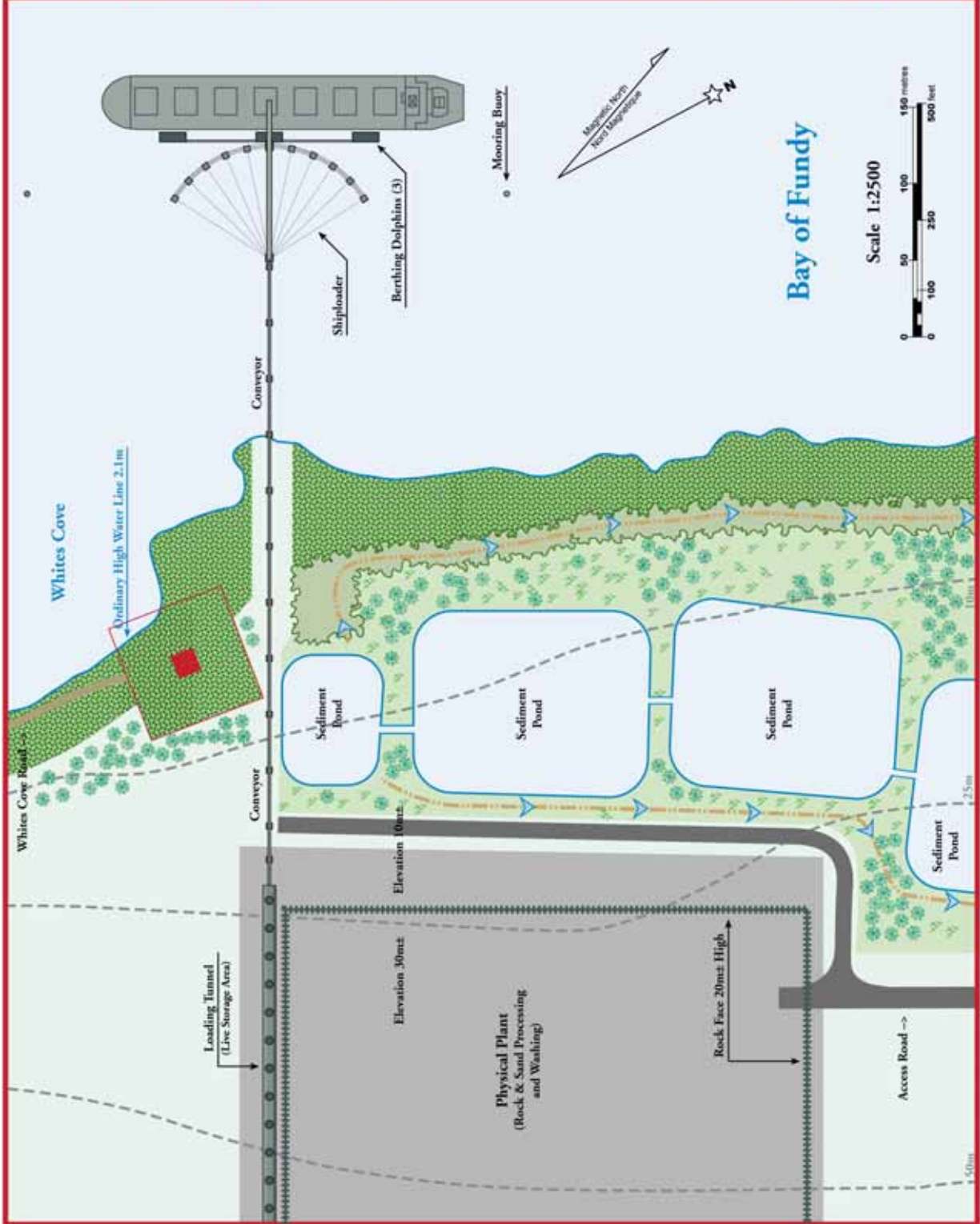
Graphic Design by Mark Truss, Bear River, N.S.



Whites Point Quarry Little River, Digby County Nova Scotia

Environmental Assessment/ Impact Statement

- Legend**
- Environmental Preservation Zone
 - Existing Contour Lines
 - Drainage Channel
 - Constructed Wetland
 - Reforestation - Wildlife Plantings
 - Grass - Legumes
 - Private Land



Produced for: Bilcon of Nova Scotia Corporation

Quarry Infrastructure Plan

Figure 1

Graphic Design by Mark Proulx, River Street, N.S.

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

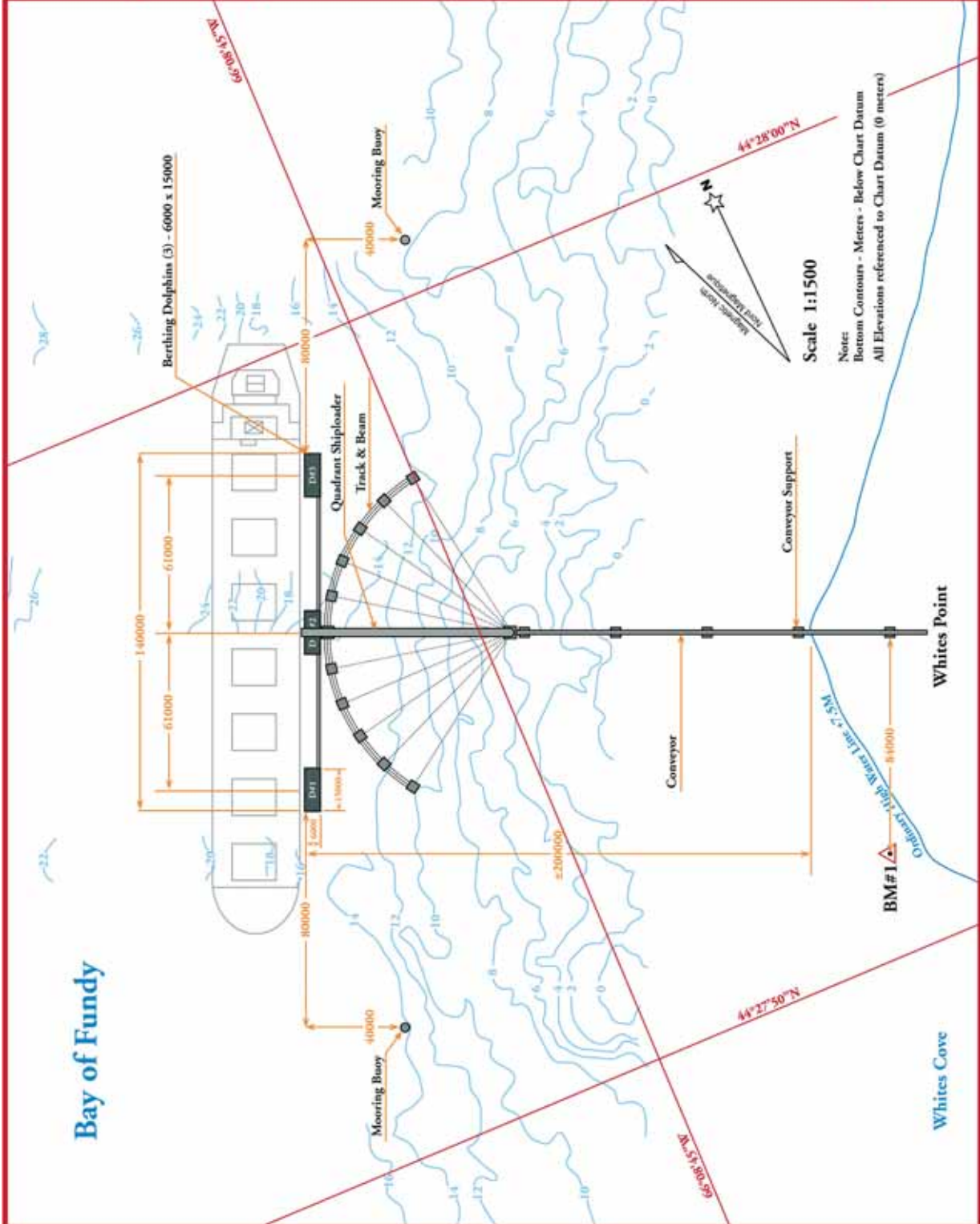
Legend

- BenchMark # 1, Elevation 9.5M
 44°27'57"N 66°08'66"W
- △
- D#1, D#2, D#3, - Berthing Dolphins

Produced for: Bilcon of Nova Scotia Corporation

**Marine Terminal
 Plan**
 Figure 2

Graphic Design by Mark Proulx, Four River, N.S.



Whites Point Quarry
 Little River, Digby County
 Nova Scotia

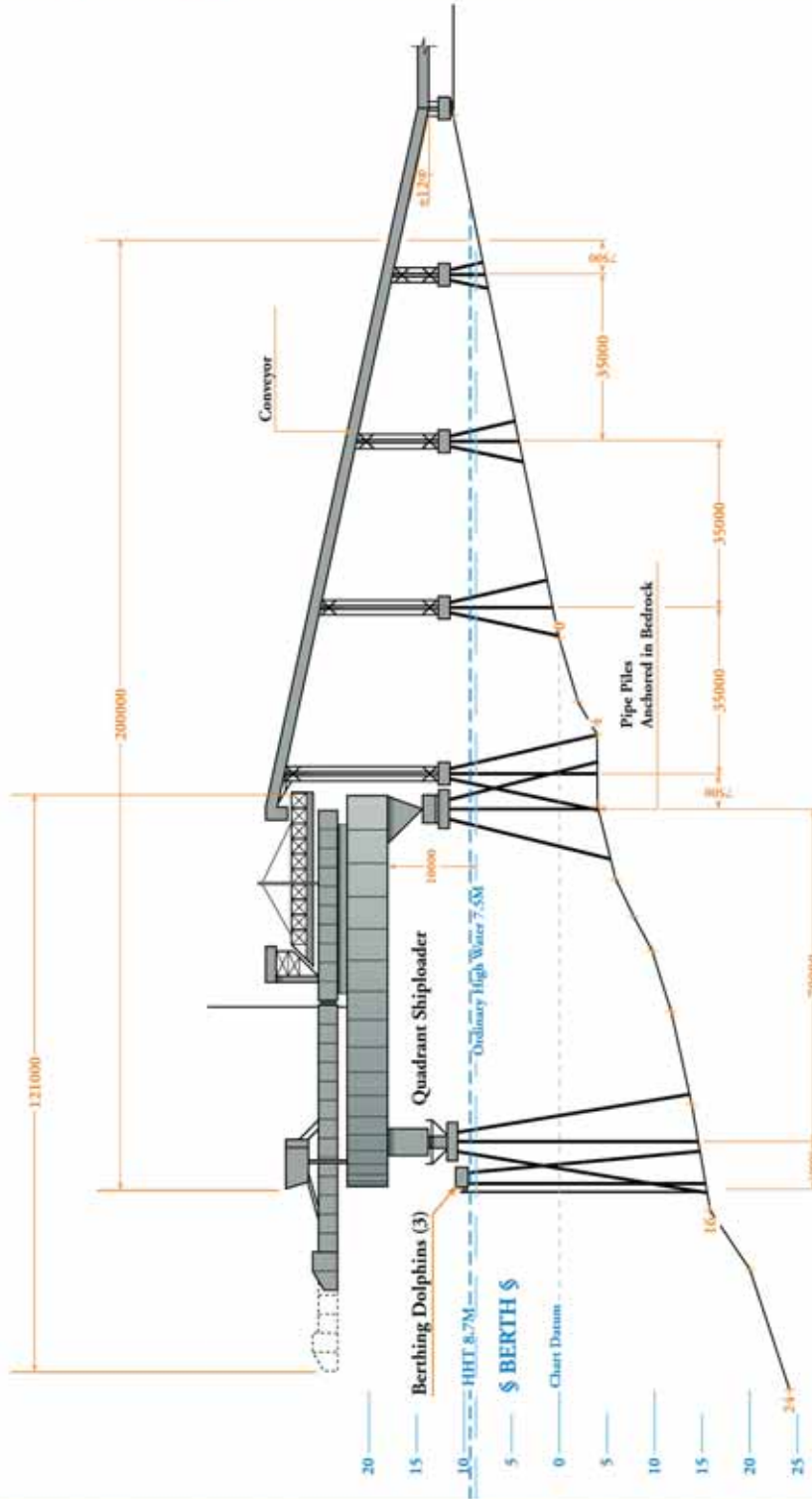
**Environmental Assessment/
 Impact Statement**

Produced for: Bilsons of Nova Scotia Corporation

**Marine Terminal
 Elevation**

Figure 3

Graphic Design by Mark Pines, Baur Pines, N.S.









Horizontal Scale 1:1000

Vertical Scale 1:500

Note:
 All Elevations referenced to Chart Datum (0 meters)

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

- Legend**
-  Environmental Preservation Zone - 30M wide
 -  Security Fence
 -  Landscaped Areas
 -  Well
 -  Septic Field
 -  Electrical Power Poles



Scale 1:1200 (1 inch = 100 feet)

Produced for: Bilcofs of Nova Scotia Corporation

**Quarry Compound
 Plan**

Figure 4

Graphic Design by Mark Fries, Blue River, N.S.

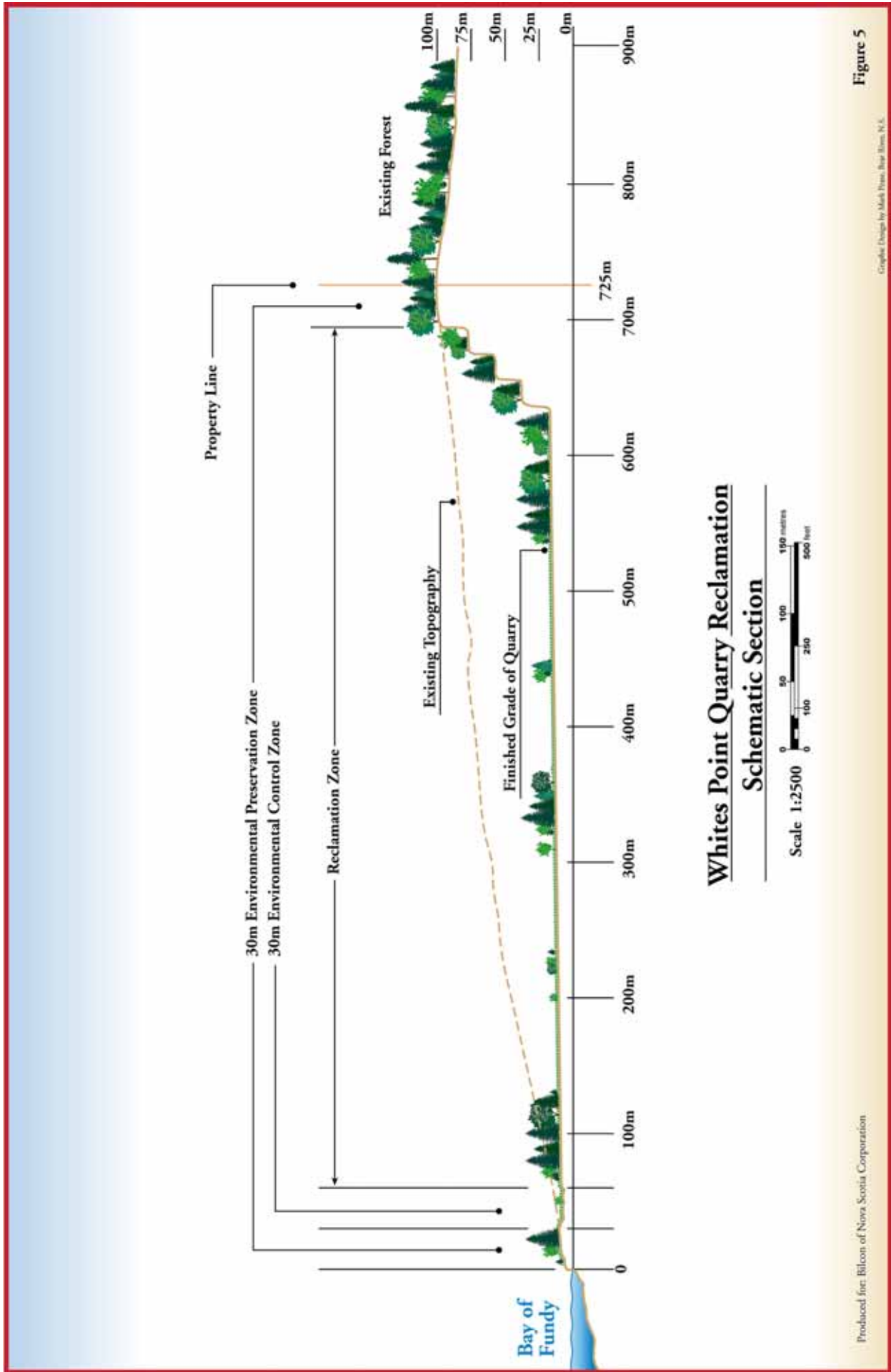
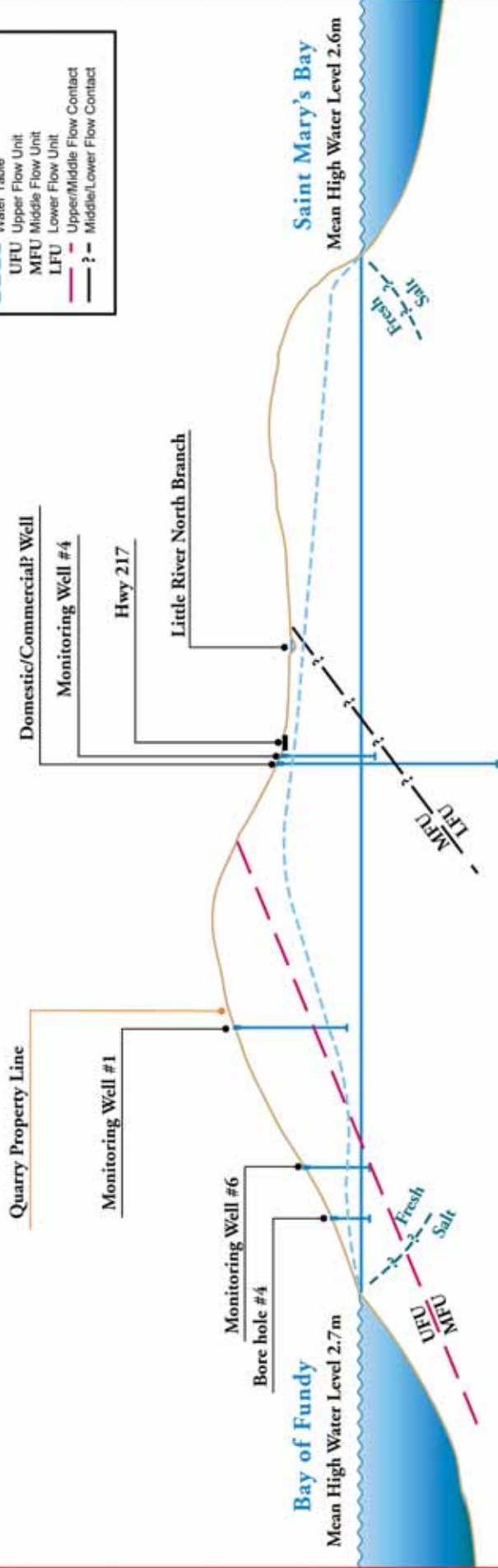
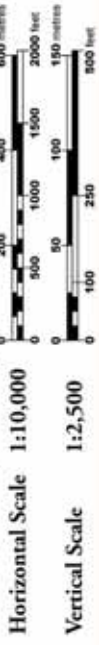


Figure 5



Hydrogeology Section A - A



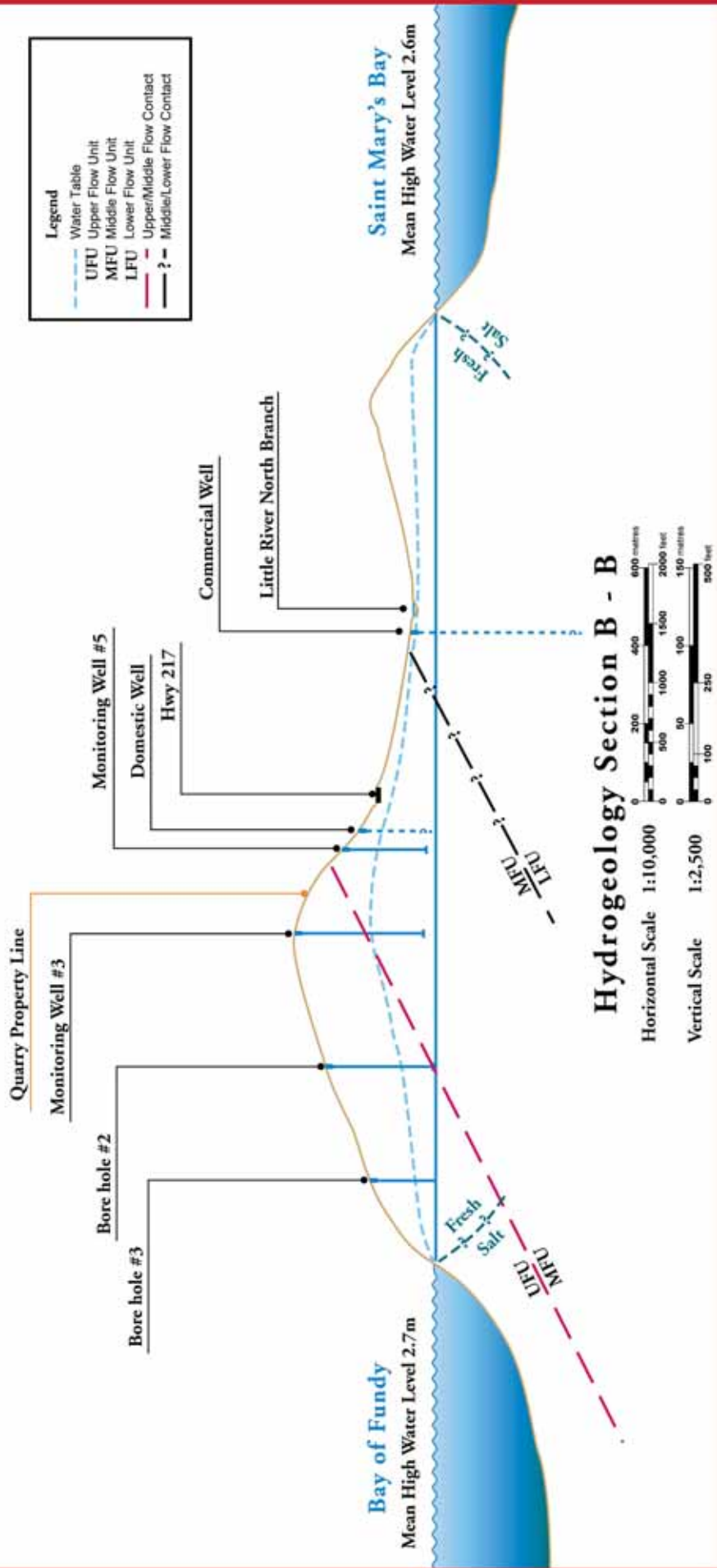


Figure 6B

Graphics Design by Mark Patten, Royal Hollow, U.K.

Produced for: Bilcon of Nova Scotia Corporation

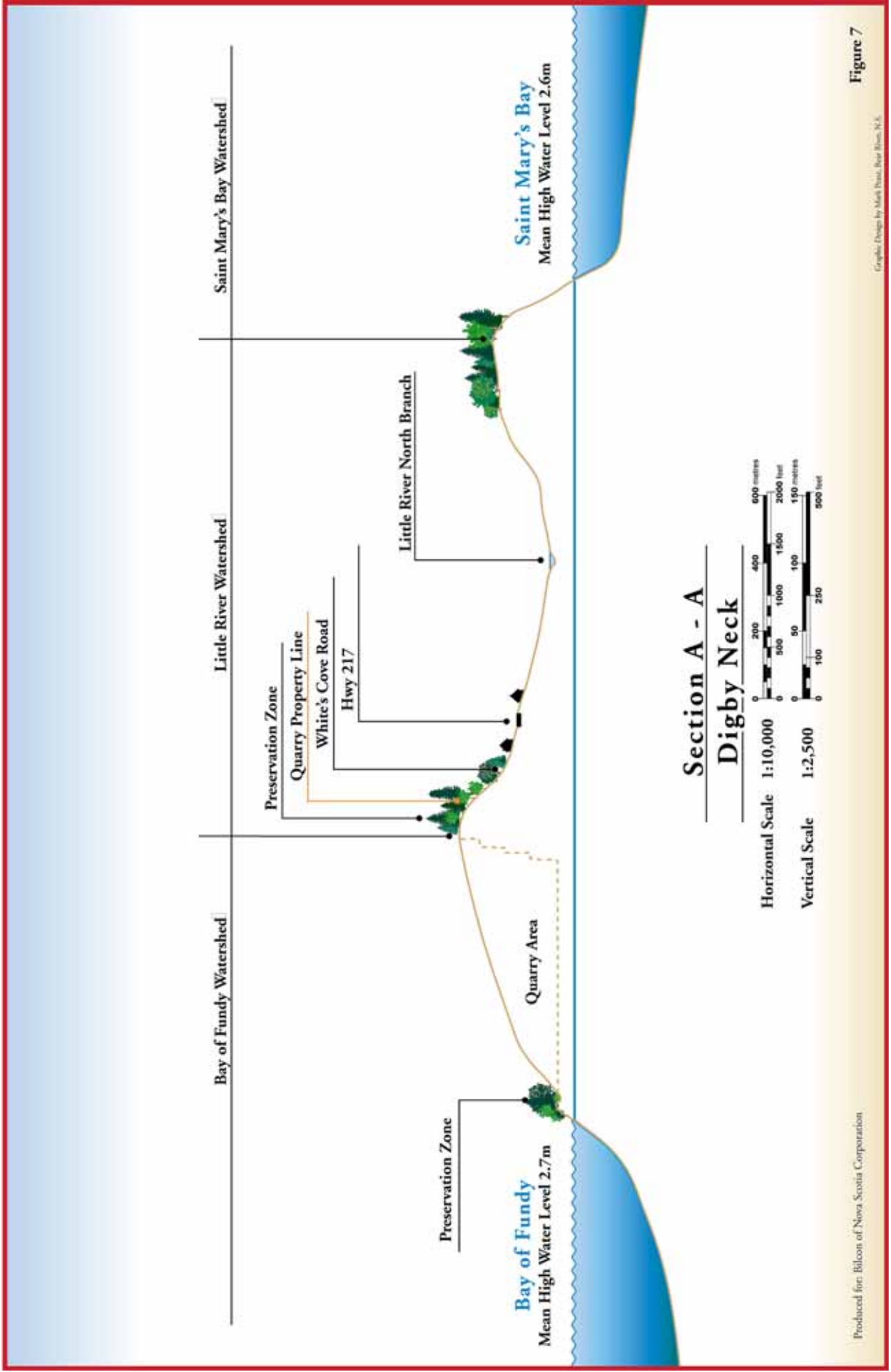
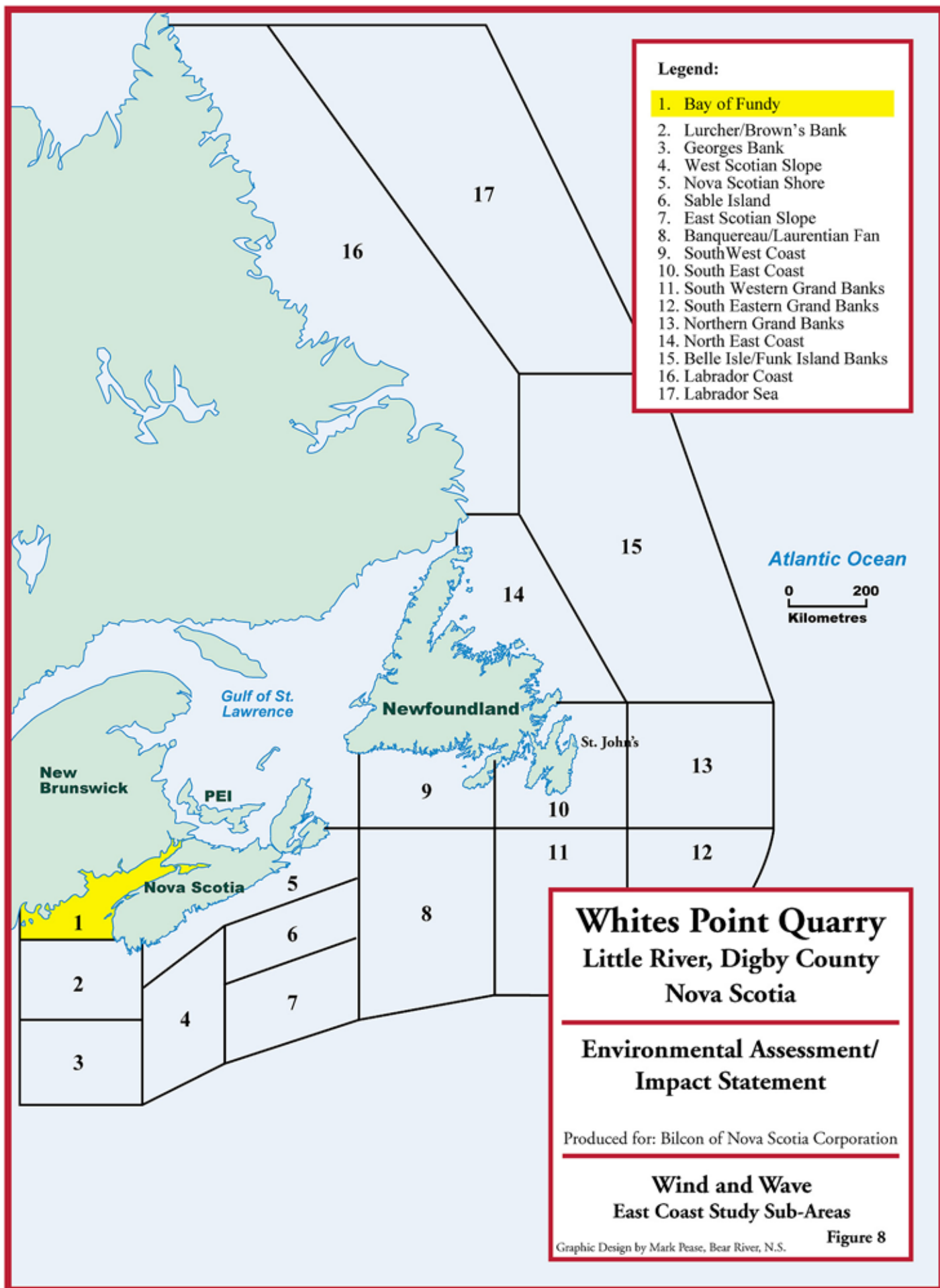
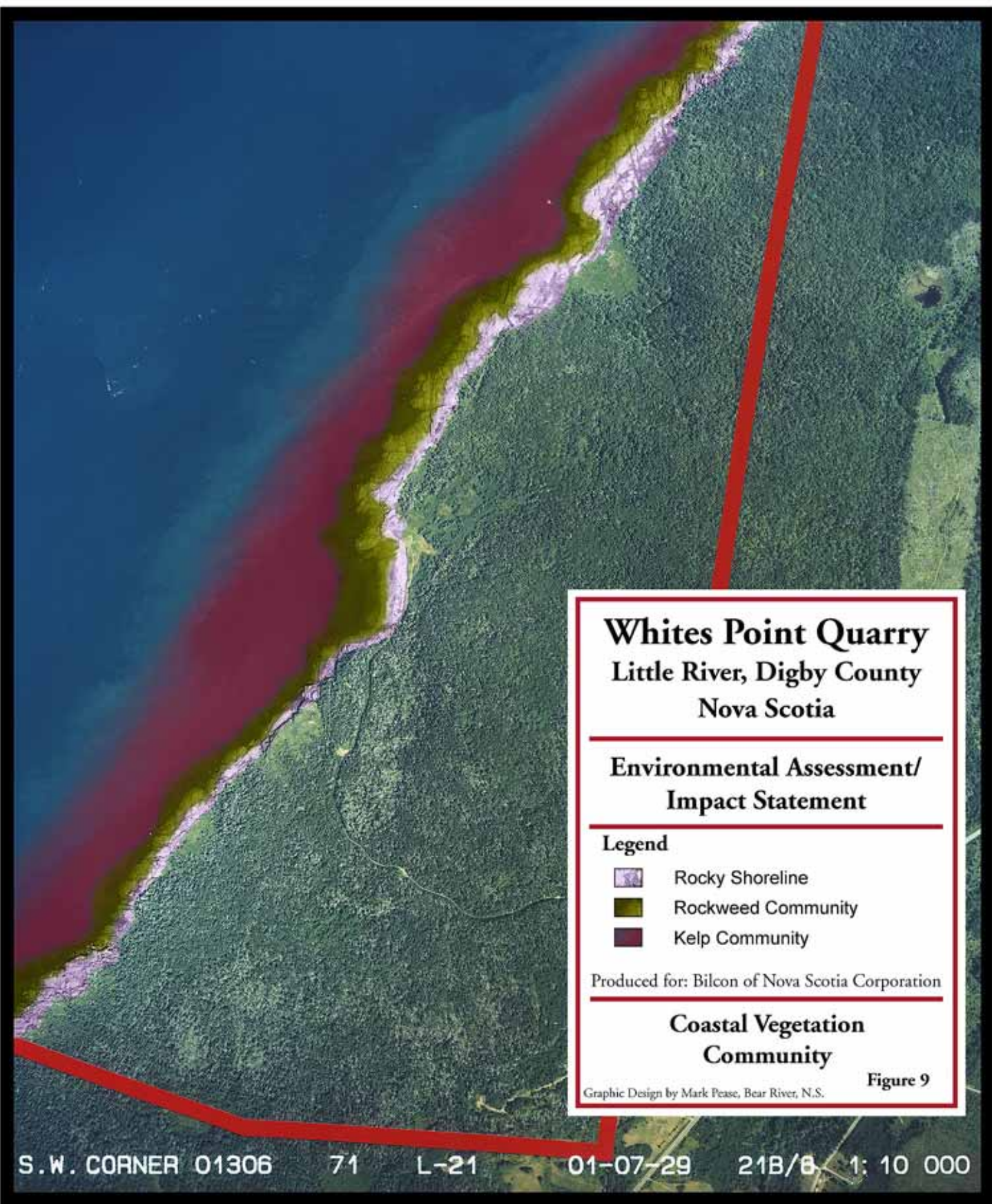


Figure 7








Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

Legend

-  Rocky Shoreline
-  Rockweed Community
-  Kelp Community

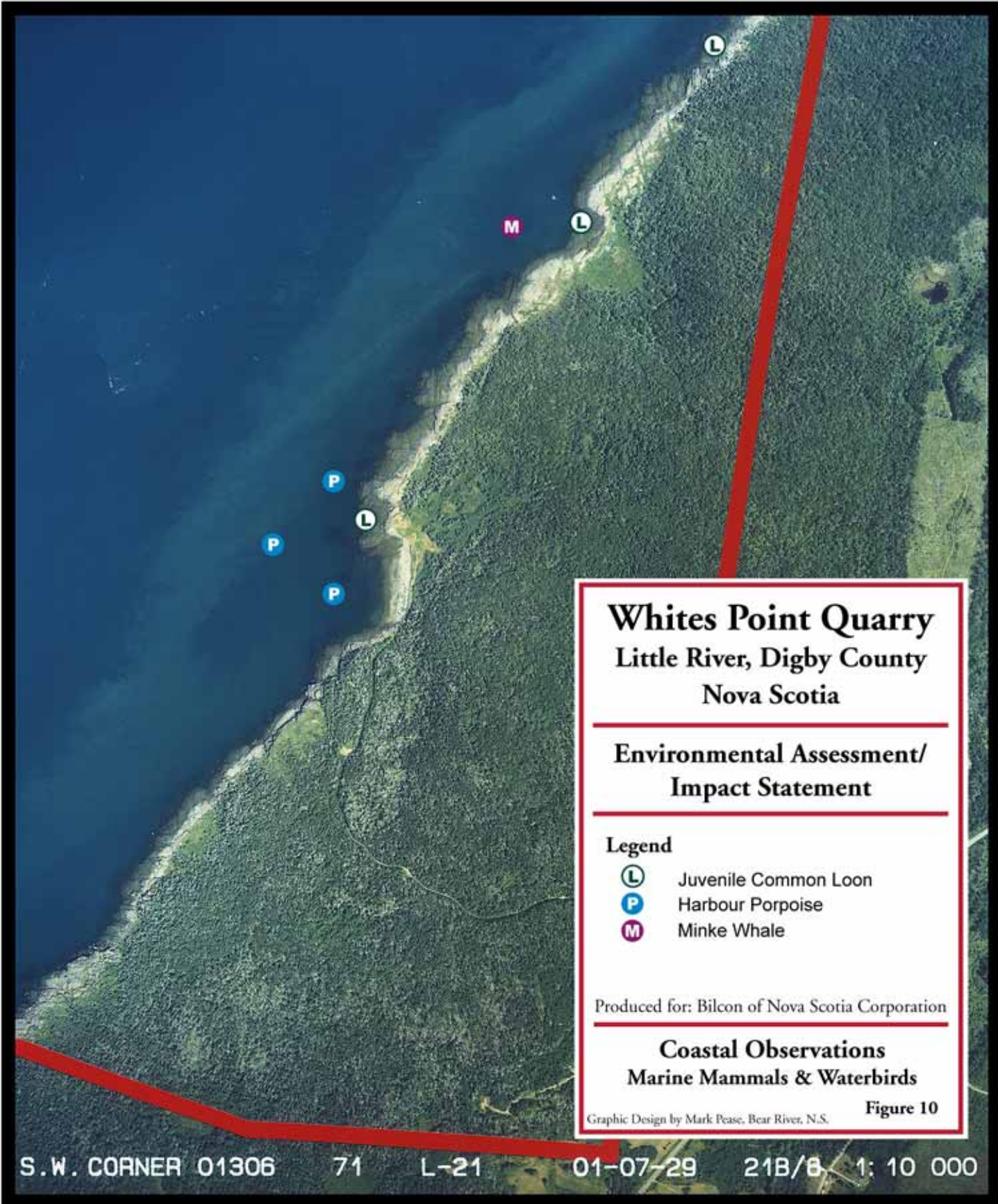
Produced for: Bilcon of Nova Scotia Corporation

**Coastal Vegetation
Community**

Figure 9

Graphic Design by Mark Pease, Bear River, N.S.

S.W. CORNER 01306 71 L-21 01-07-29 21B/8 1: 10 000



Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

Legend

- L** Juvenile Common Loon
- P** Harbour Porpoise
- M** Minke Whale

Produced for: Bilcon of Nova Scotia Corporation

Coastal Observations
Marine Mammals & Waterbirds

Graphic Design by Mark Pease, Bear River, N.S. **Figure 10**

S.W. CORNER 01306 71 L-21 01-07-29 21B/B 1: 10 000

Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

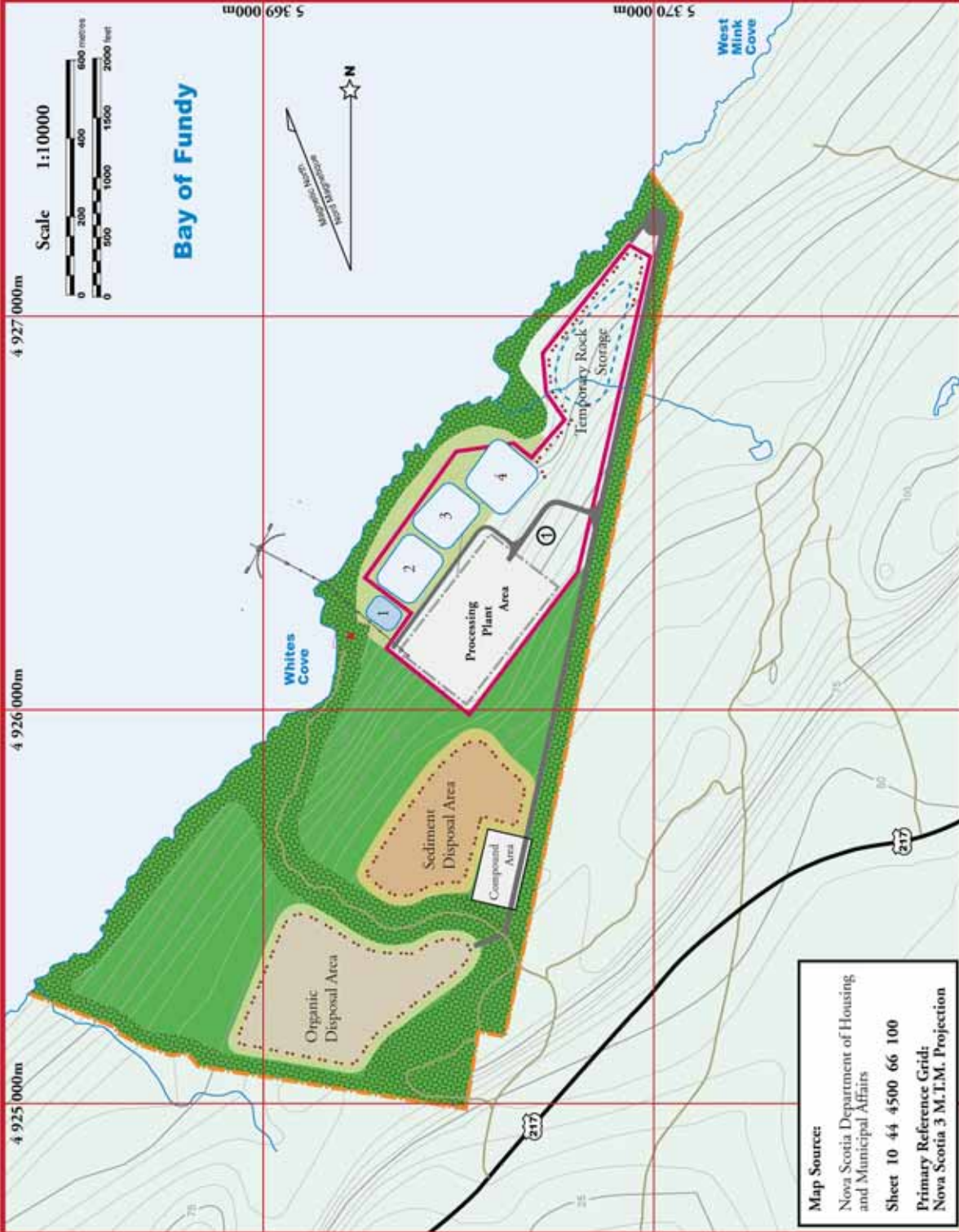
- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing Habitat
 - Quarry Area ①
 - Processing Plant Area
 - Existing Sediment Pond
 - New Sediment Ponds (Year 2)
 - Berm/Dyke
 - Quarry Road
 - New Sediment Pond (Year 4)
 - Reclamation (Year 2)
 - Reclamation (Year 4)

Produced for Bilcon of Nova Scotia Corporation

Concept Quarry Plan
Years 1 - 5

Plan OP 1

Graphic Design by Mark Press, Peter Blinn, N.S.



Map Source:
Nova Scotia Department of Housing
and Municipal Affairs
Sheet 10 44 4500 66 100
Primary Reference Grid:
Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

Legend

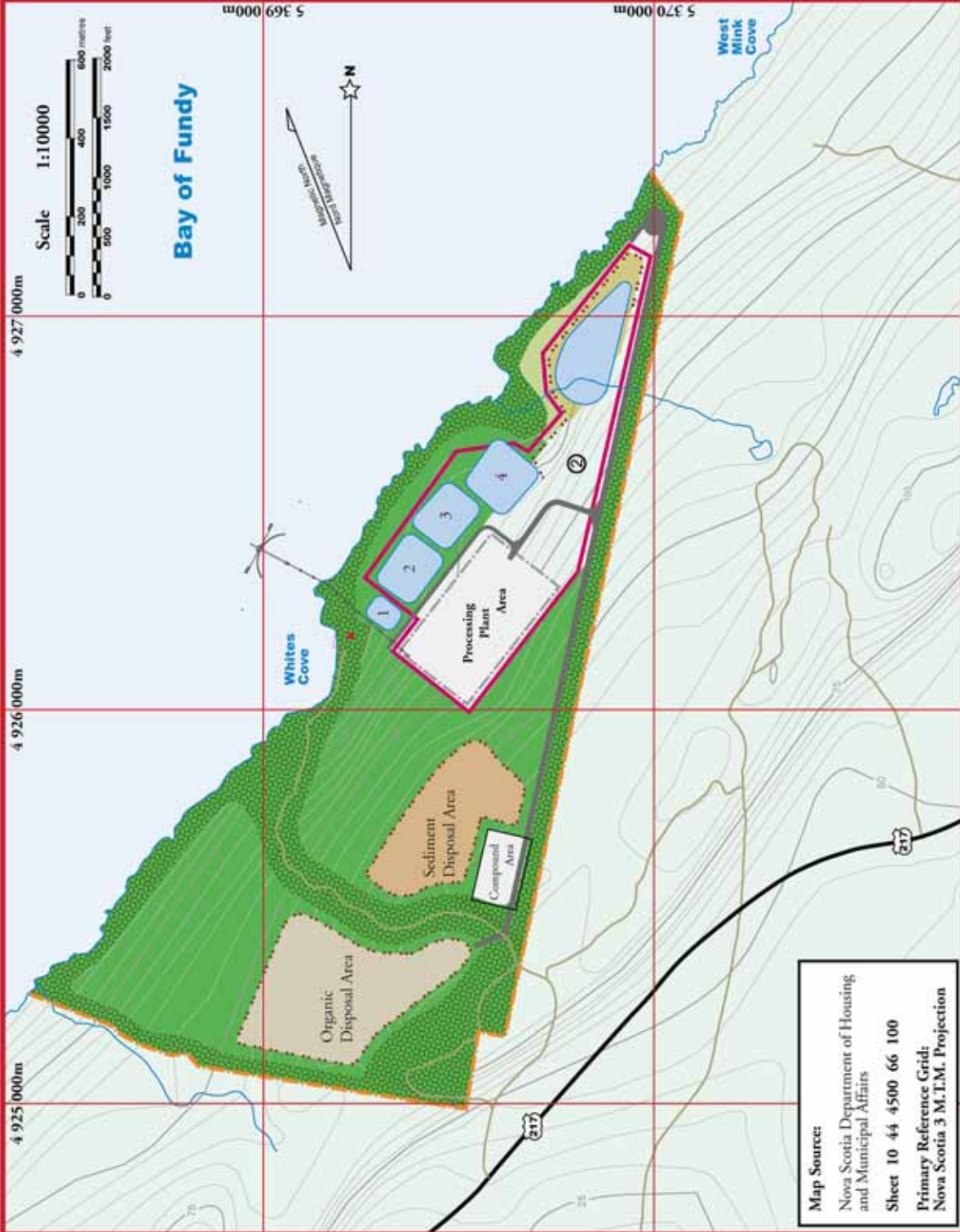
- Highway 217
- Gravel Road
- Property Line
- Environmental Preservation Zone
- Existing and Reclaimed Habitat
- Quarry Area ②
- Processing Plant Area
- Existing Sediment Pond
- Berm/Dyke
- Quarry Road
- Reclamation (Year 6)
- Reclamation (Year 10)

Produced for Bilcon of Nova Scotia Corporation

Concept Quarry Plan
Years 6 - 10

Plan OP 2

Graphic Design by Mark Press, Bear River, N.S.



Map Source:
Nova Scotia Department of Housing
and Municipal Affairs
Sheet 10 44 4500 66 100
Primary Reference Grid:
Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

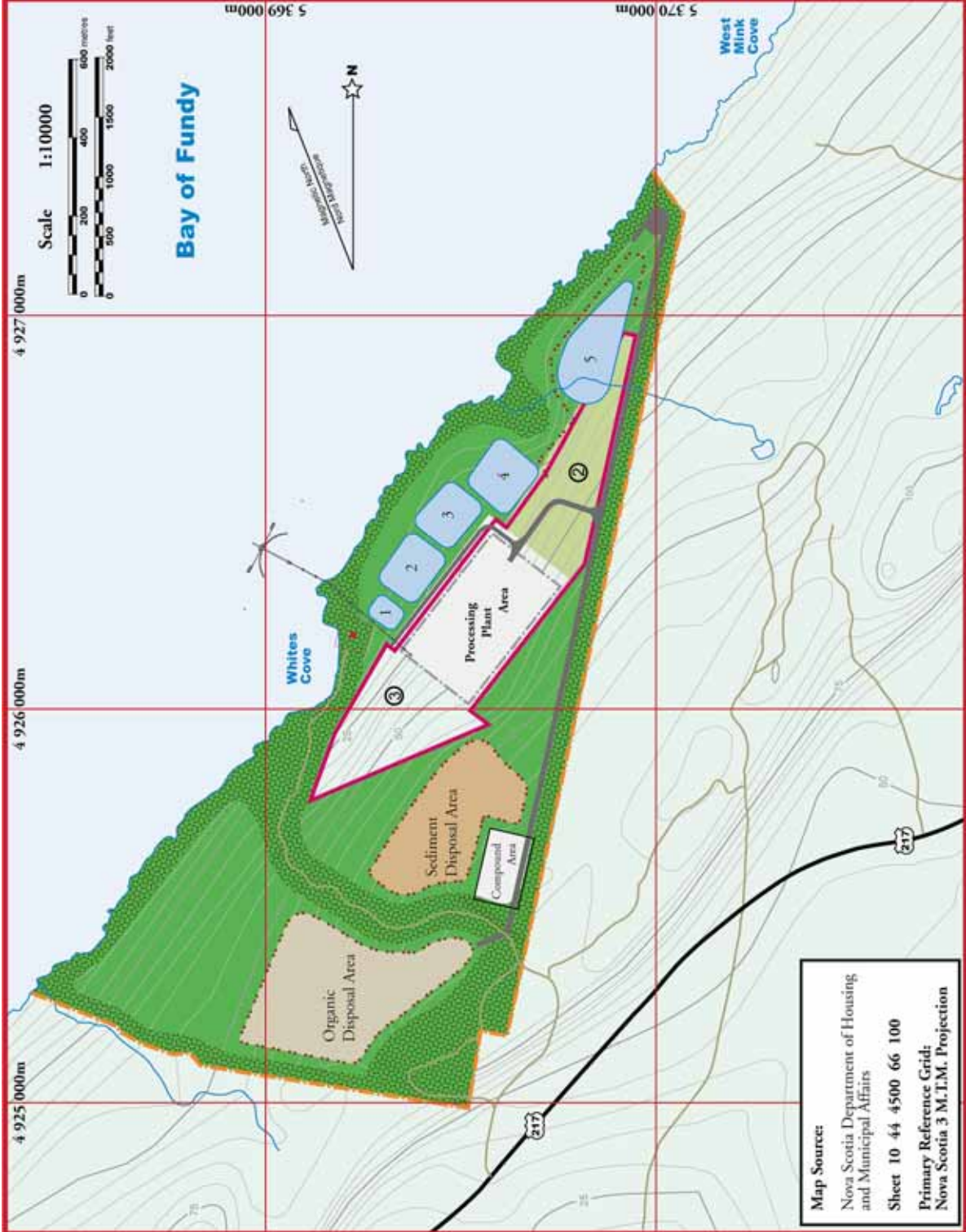
- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing and Reclaimed Habitat
 - Quarry Area ② and ③
 - Processing Plant Area
 - Existing Sediment Pond
 - Berm/Dyke
 - Quarry Road
 - Reclamation (Year 14)

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Concept Quarry Plan
 Years 11 - 15

Plan OP 3

Graphic Design by Mark Press, Bear River, N.S.



Map Source:
 Nova Scotia Department of Housing
 and Municipal Affairs
Sheet 10 44 4500 66 100
Primary Reference Grid:
 Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

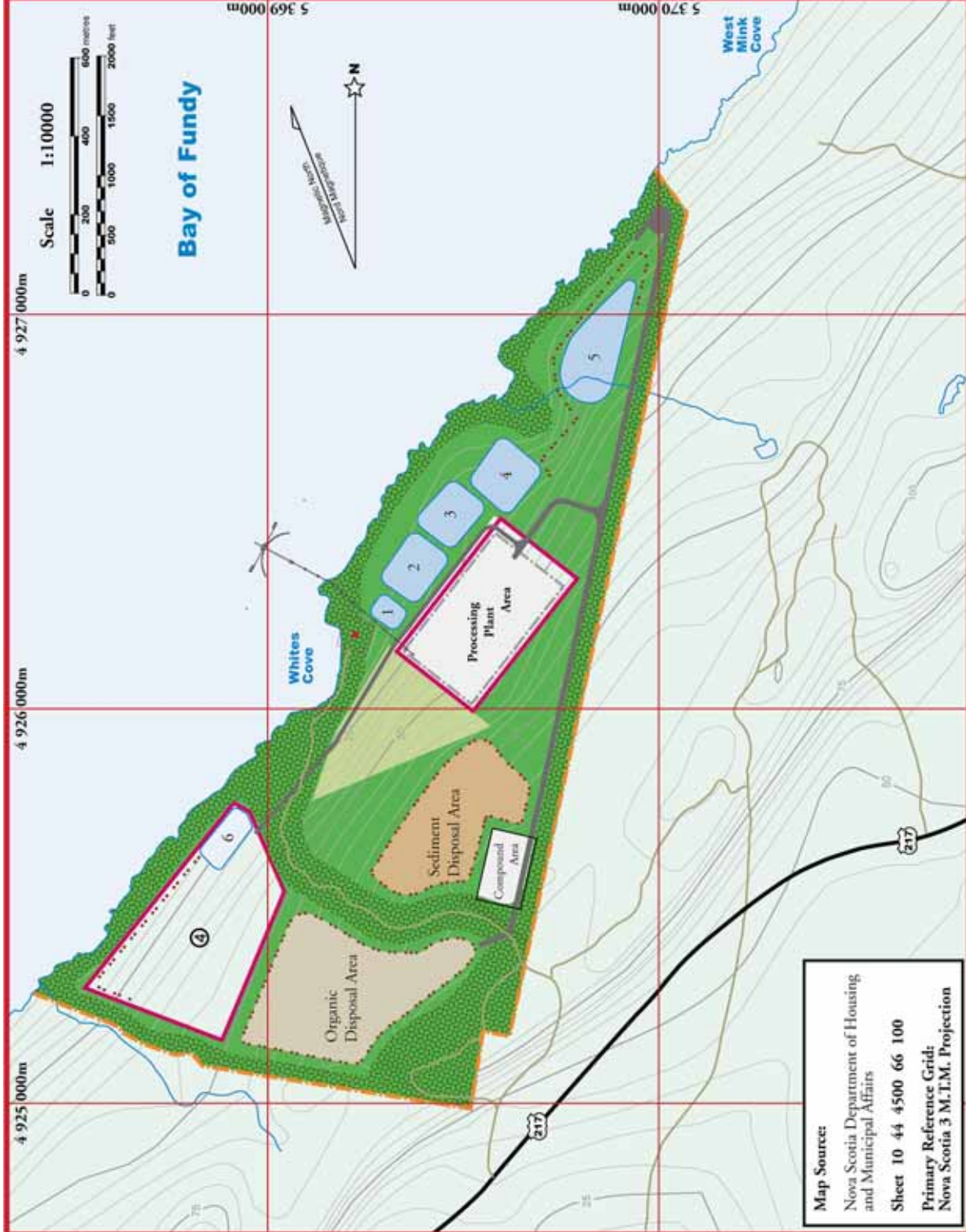
**Environmental Assessment/
 Impact Statement**

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing and Reclaimed Habitat
 - Quarry Area ④
 - Processing Plant Area
 - Existing Sediment Pond
 - New Sediment Pond (Year 16)
 - Berm/Dyke
 - Quarry Road
 - Reclamation (Year 17)

Produced for Bilcon of Nova Scotia Corporation

Concept Quarry Plan
 Years 16 - 20
 Plan OP 4

Graphic Design by Mark Pines, Burr Blinn, N.S.



Map Source:
 Nova Scotia Department of Housing
 and Municipal Affairs
 Sheet 10 44 4500 66 100
 Primary Reference Grid:
 Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

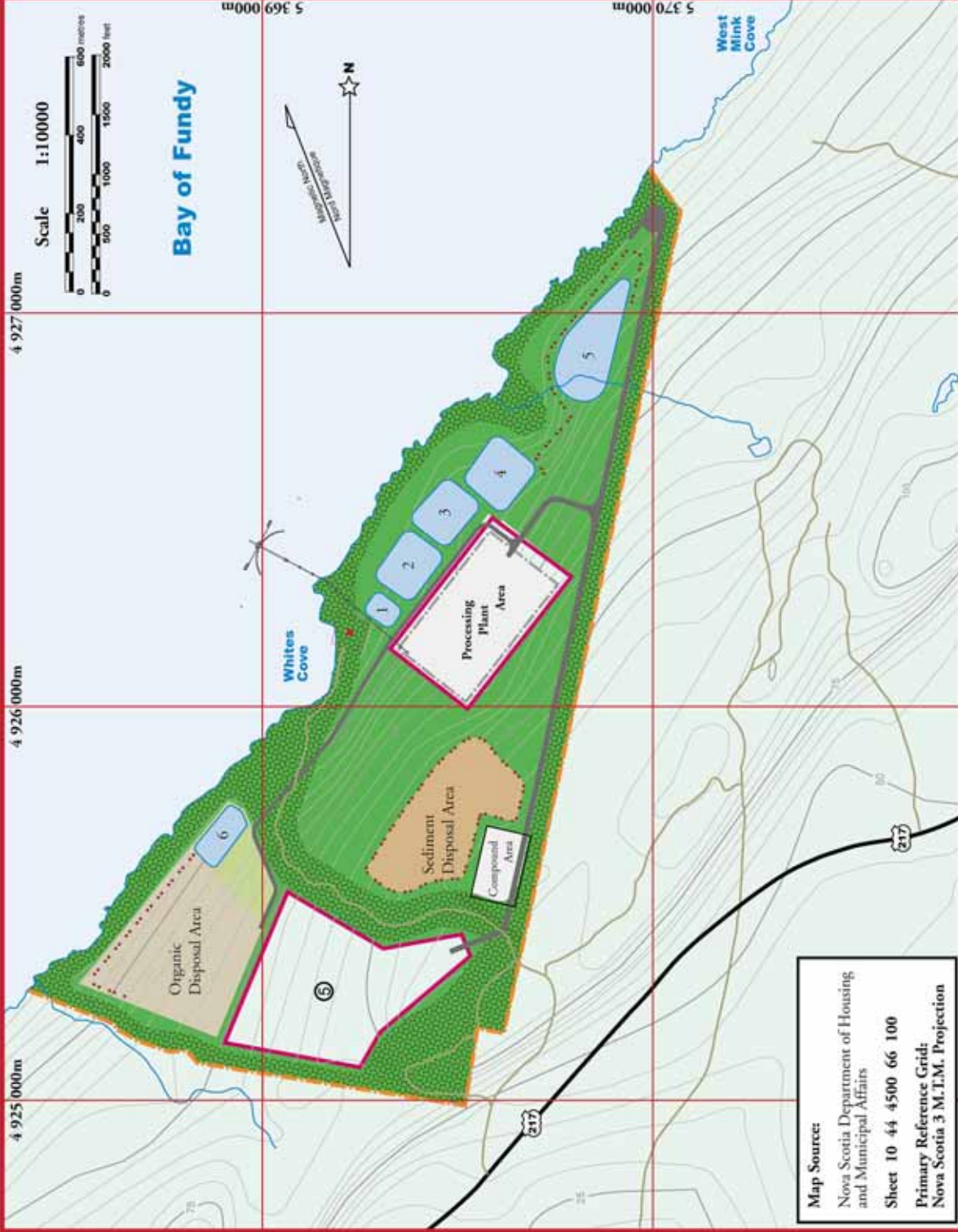
**Environmental Assessment/
 Impact Statement**

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing and Reclaimed Habitat
 - Quarry Area ⑤
 - Processing Plant Area
 - Existing Sediment Pond
 - Berm/Dyke
 - Quarry Road
 - Reclamation (Year 21)

Produced for: Billion of Nova Scotia Corporation

Concept Quarry Plan
 Years 21 - 30
 Plan OP 5

Graphic Design by Mark Press, Bear River, N.S.



Map Source:
 Nova Scotia Department of Housing
 and Municipal Affairs
 Sheet 10 44 4500 66 100
 Primary Reference Grid:
 Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

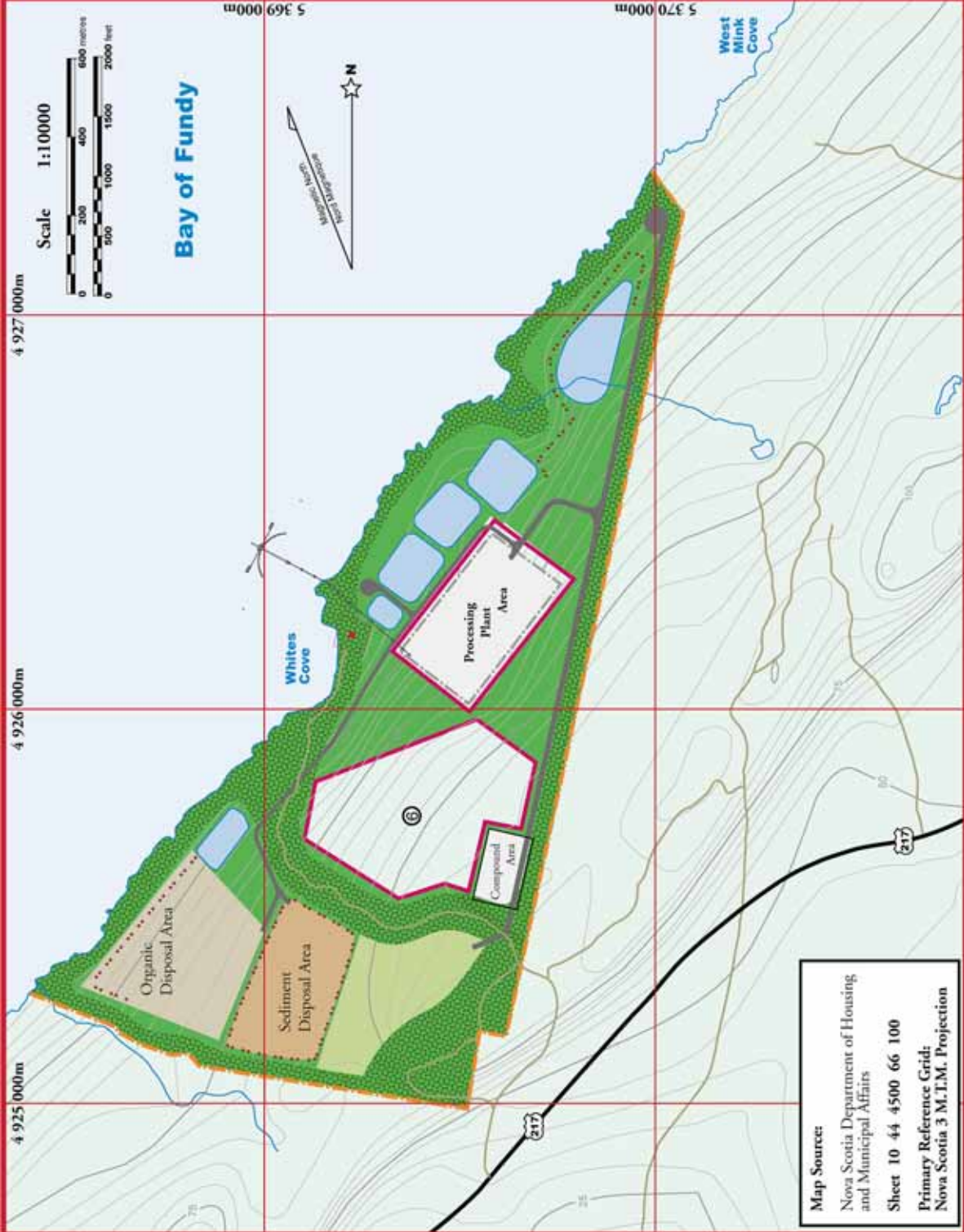
- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing and Reclaimed Habitat
 - Quarry Area ⑥
 - Processing Plant Area
 - Sediment Pond
 - Berm/Dyke
 - Quarry Road
 - Reclamation (Year 31)

Produced for: Bilcon of Nova Scotia Corporation

Concept Quarry Plan
 Years 31 - 40

Plan OP 6

Graphic Design by Mark Press, Bear River, N.S.



Whites Point Quarry

Little River, Digby County
Nova Scotia

Environmental Assessment/ Impact Statement

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing and Reclaimed Habitat
 - Quarry Area (7)
 - Processing Plant Area
 - Sediment Pond
 - Berm/Dyke
 - Quarry Road
 - Reclamation (Year 41)

Produced for Bilcon of Nova Scotia Corporation

Concept Quarry Plan Years 41 - 49 Plan OP 7

Graphic Design by Mark Pease, Peter Brown, N.S.



Map Source:
Nova Scotia Department of Housing
and Municipal Affairs
Sheet 10 44 4500 66 100
Primary Reference Grid:
Nova Scotia 3 M.T.M. Projection

Whites Point Quarry
 Little River, Digby County
 Nova Scotia

**Environmental Assessment/
 Impact Statement**

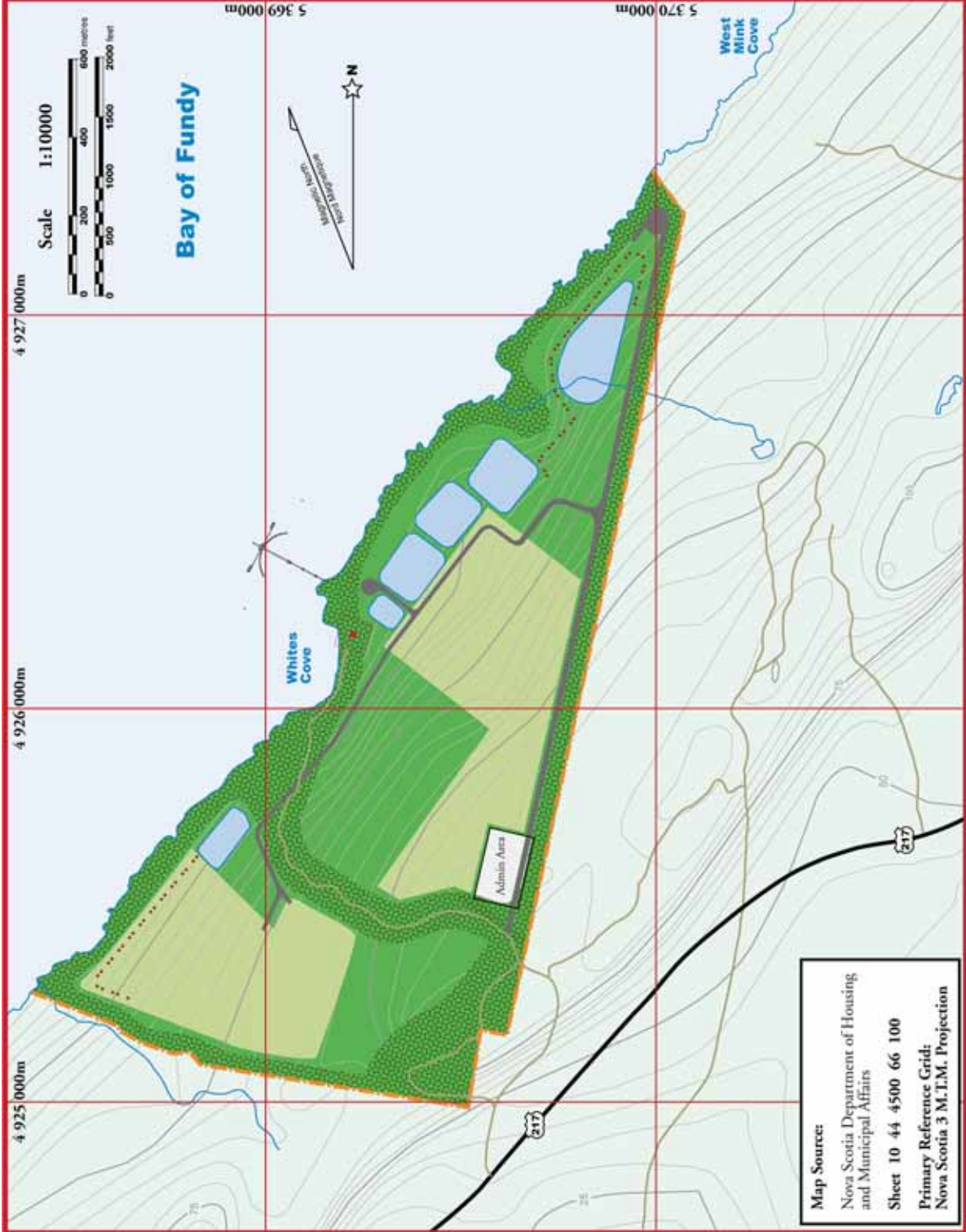
- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Reclaimed Terrestrial Habitat
 - Pond Habitat
 - Berm/Dyke
 - Road
 - Reclamation (Year 50)

Produced for: Bilcon of Nova Scotia Corporation

Concept Quarry Plan
Year 50

Plan OP 8

Graphic Design: Ian Matheson, Bear River, N.S.



Whites Point Quarry
Little River, Digby County
Nova Scotia

**Environmental Assessment/
Impact Statement**

- Legend**
- Highway 217
 - Gravel Road
 - Property Line
 - Environmental Preservation Zone
 - Existing Habitat
 - Quarry Area ①
 - Processing Plant Area
 - Existing Sediment Pond
 - New Sediment Ponds (Year 2)
 - Berm/Dyke
 - Quarry Road
 - New Sediment Pond (Year 4)
 - Reclamation (Year 2)
 - Reclamation (Year 4)
 - Flocculant Tank
 - Fines to sediment ponds
 - Wood chips, leaves and top soil
 - Fines from sediment ponds and from high rate thickener
 - Crushed rock by ship
 - Organic/sediment mix for reclamation

Produced for: Bilcon of Nova Scotia Corporation

Debris Cycle Schematic
Years 1 - 5

Plan OP 1-9

Graphic Design by Mark Pinn, Bear River, N.S.

