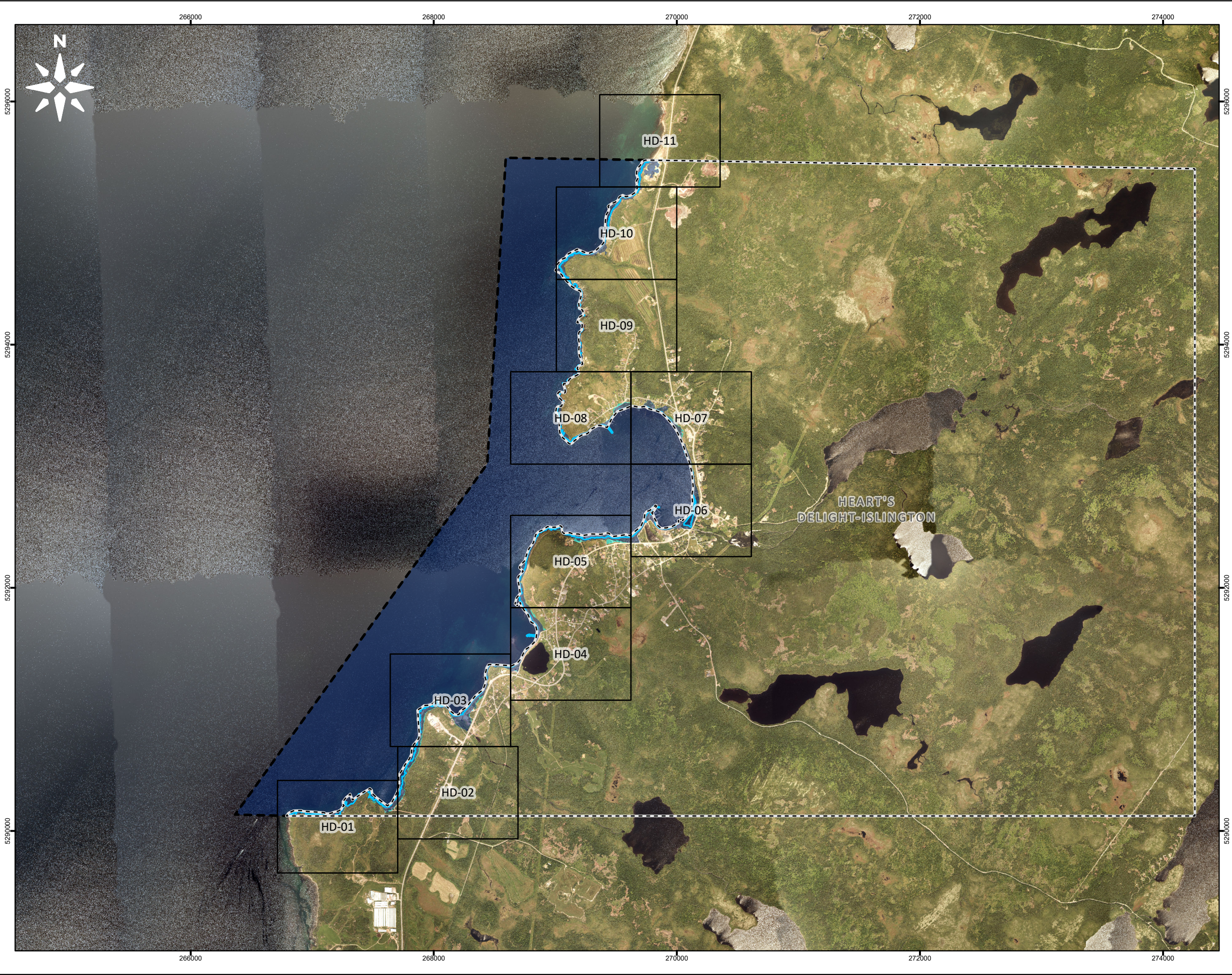
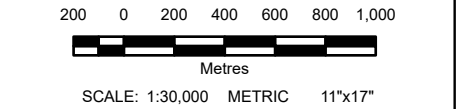




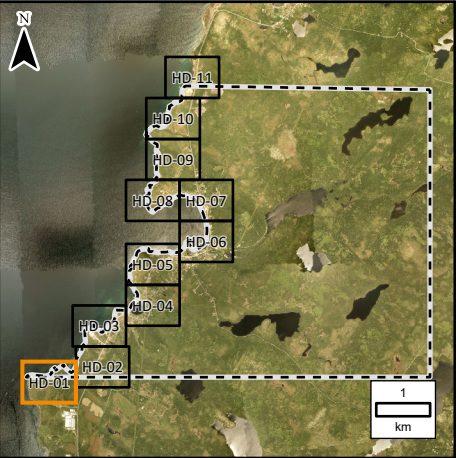
- LEGEND:**
- Limit of Mapping
 - Coastline
 - Map Extent
 - Municipal Boundary
 - 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



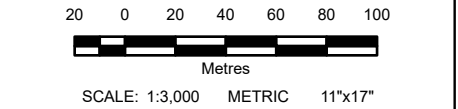
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
				
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR				
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - OVERVIEW MAP				
DECEMBER 2025		FIGURE 20.1	REV:	0



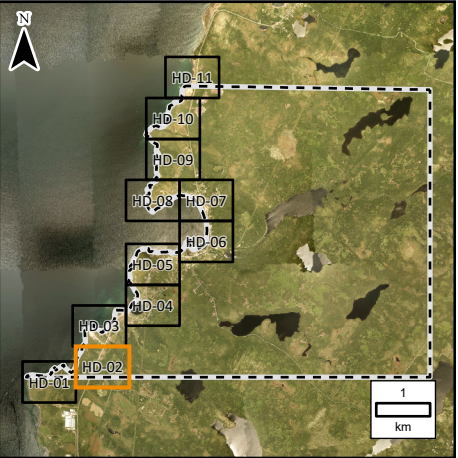
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
				
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR				
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD)				
WAVE RUN UP - HD-01				
DECEMBER 2025		FIGURE 20.2		REV: 0



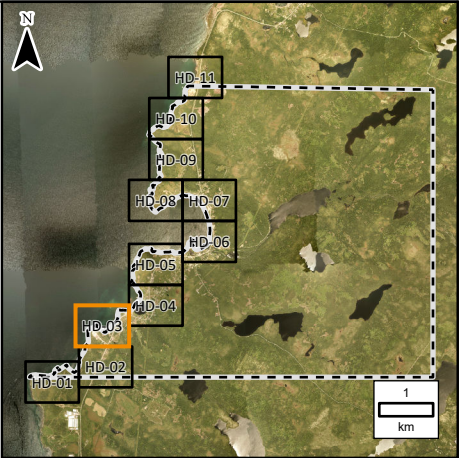
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.

20 0 20 40 60 80 100
Metres
SCALE: 1:3,000 METRIC 11"x17"

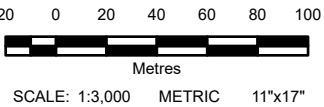
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB			
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY			
REVISIONS / ISSUE							
							
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR							
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - HD-02							
DECEMBER 2025		FIGURE 20.2		REV: 0			



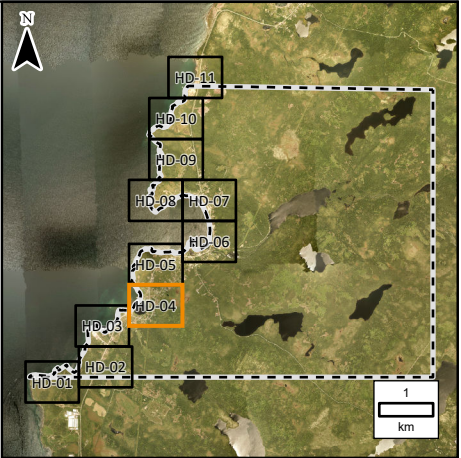
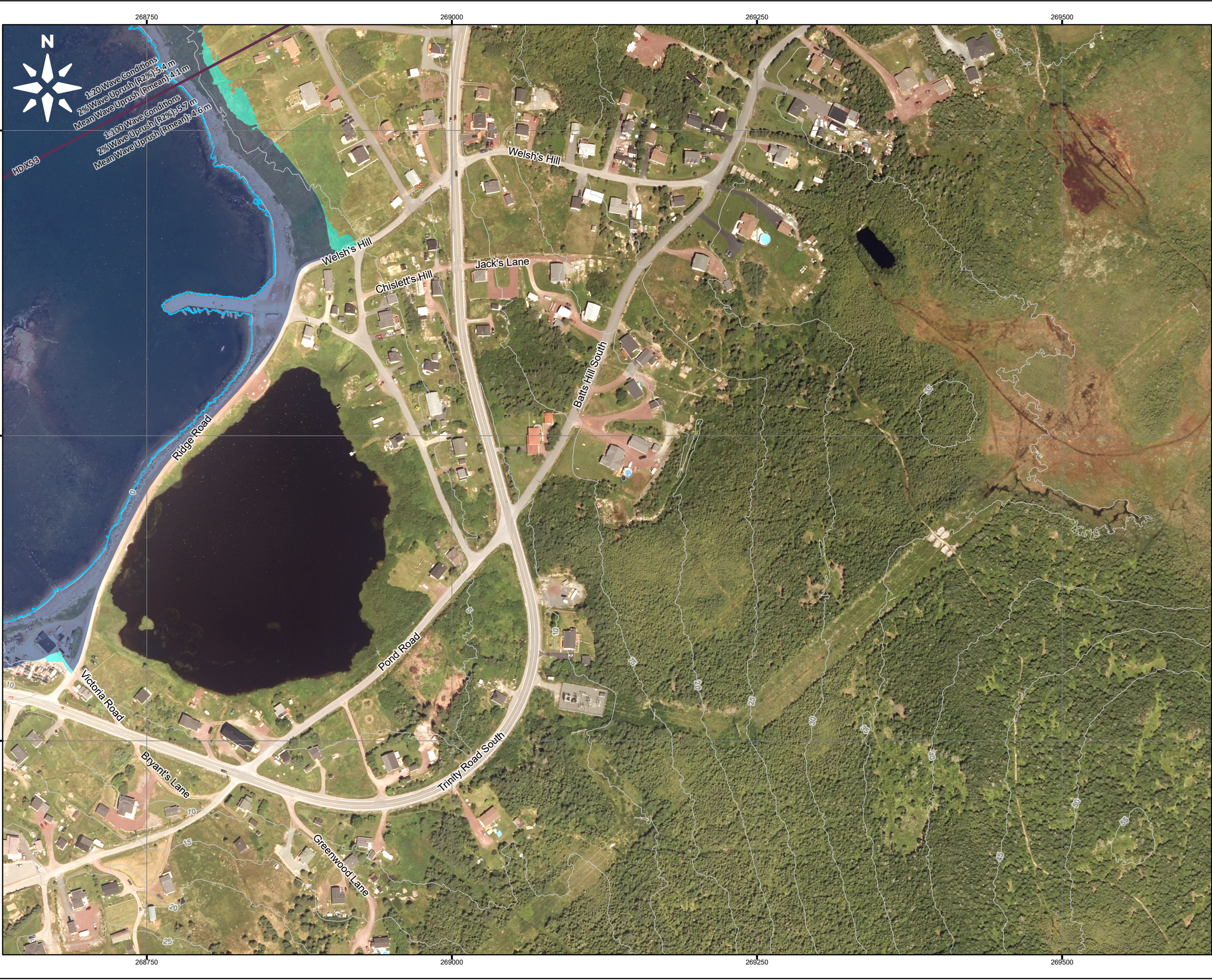
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



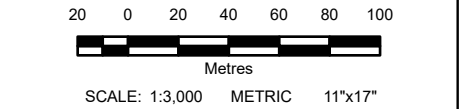
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

➡	0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
	NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE					
					
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR					
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD)					
WAVE RUN UP - HD-03					
DECEMBER 2025		FIGURE 20.2		REV:	0



- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



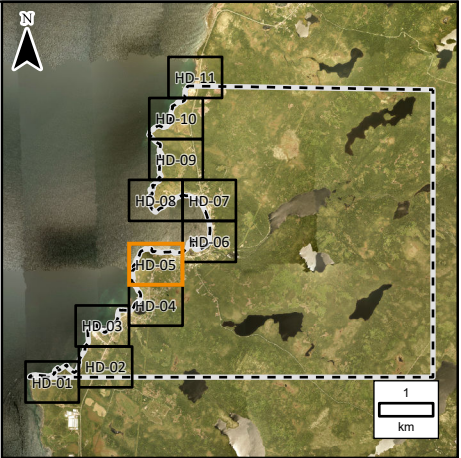
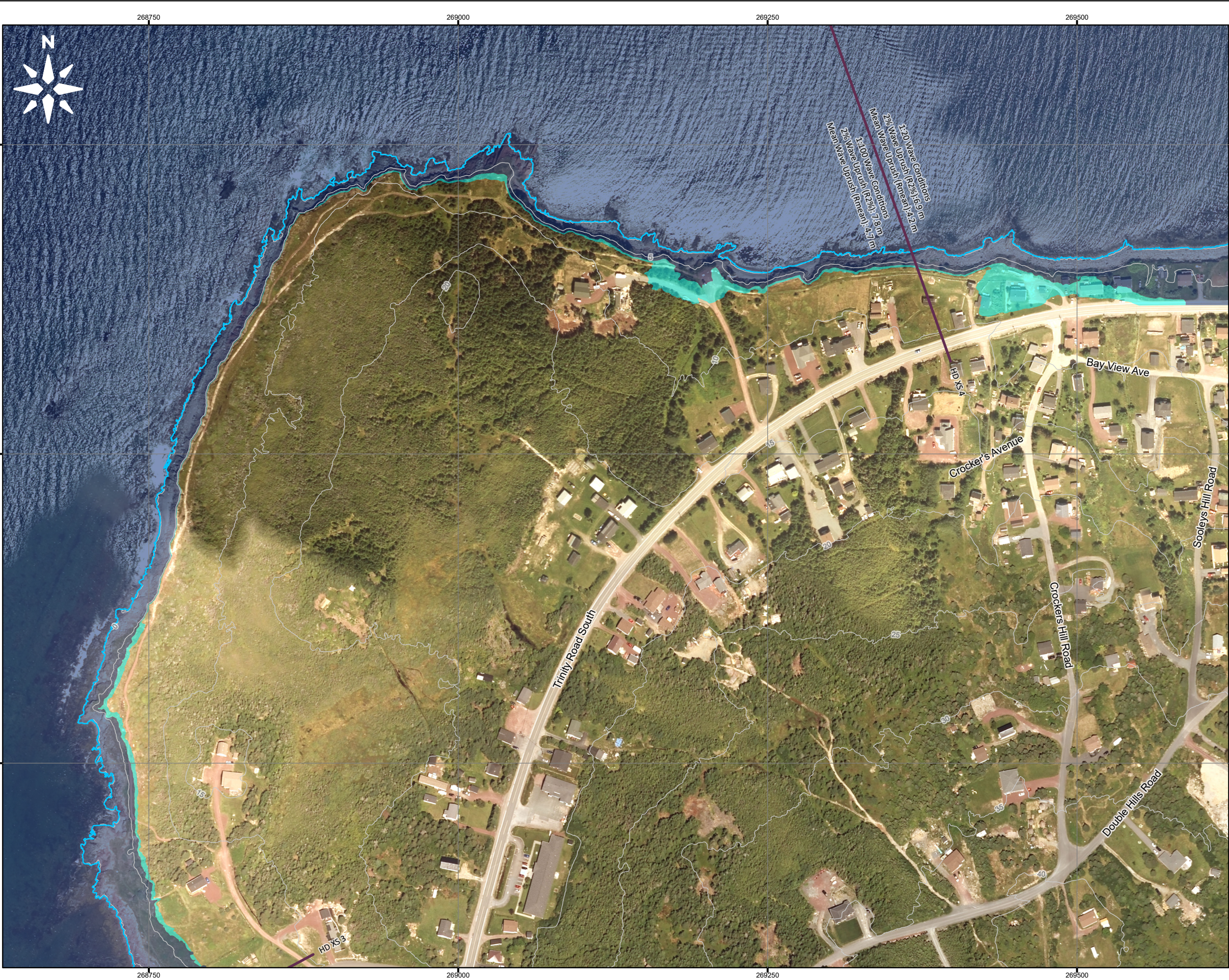
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				



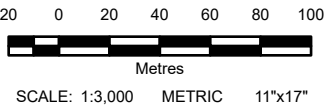
CLIMATE CHANGE FLOOD HAZARD MAPPING
STUDY FOR FERRYLAND, BRIGUS, HEART'S
DELIGHT, WINTERTON & HANT'S HARBOUR
CLIMATE CHANGE AND CURRENT
DEVELOPMENT CONDITION (CLC-CD)
WAVE RUN UP - HD-04

DECEMBER 2025	FIGURE 20.2	REV: 0
---------------	-------------	--------



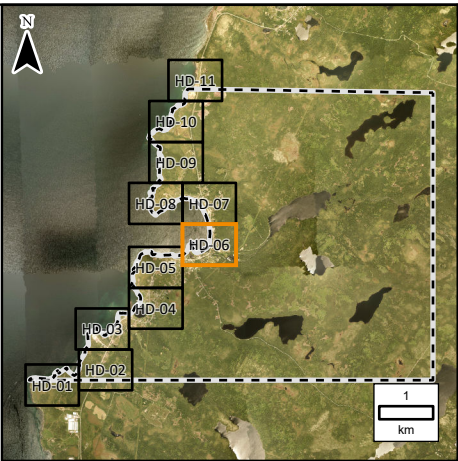
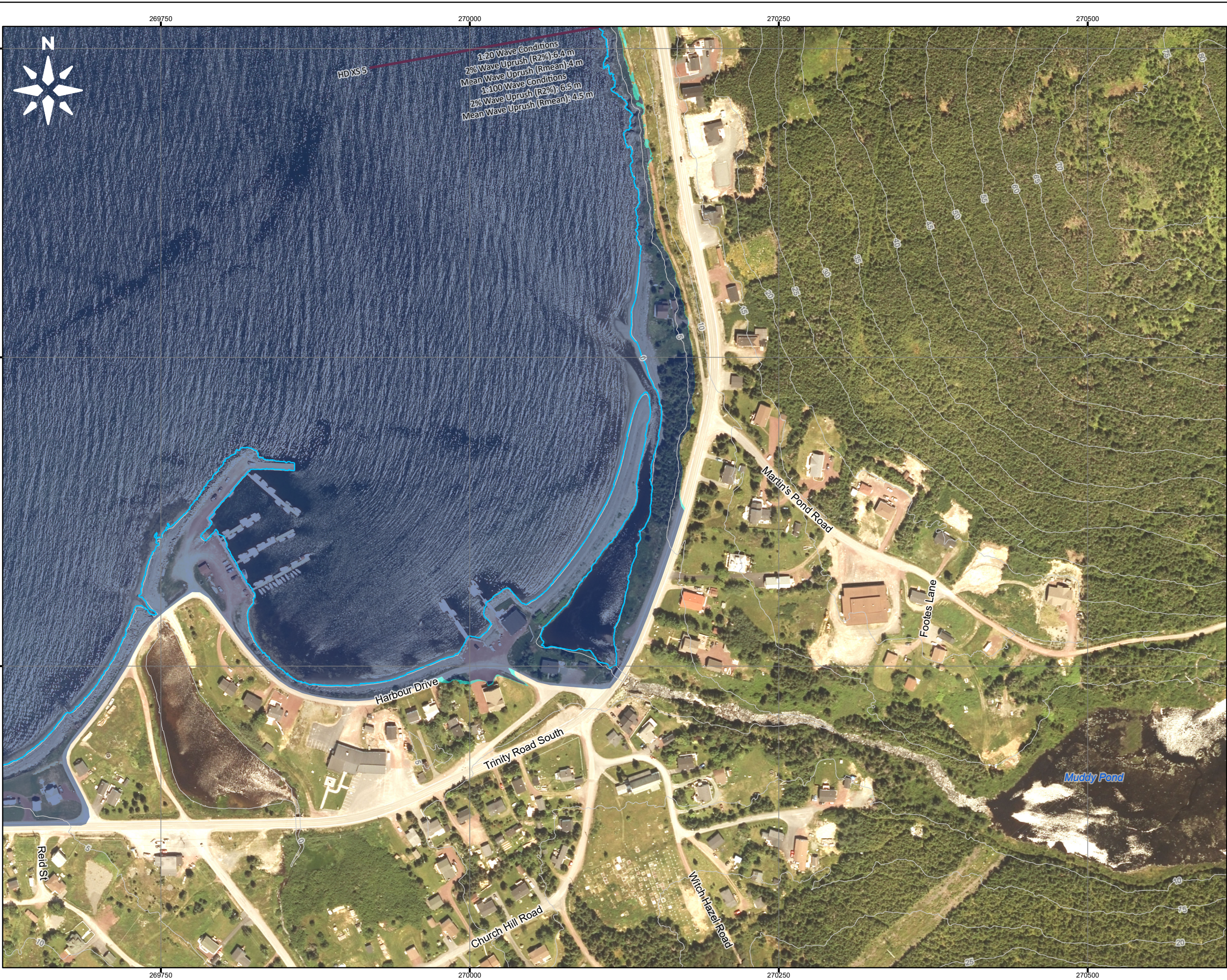
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
1. Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 2. Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 3. Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



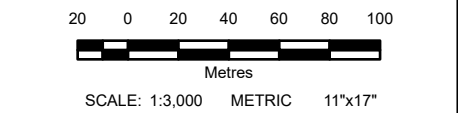
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

➔	0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
	NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE					
					
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR					
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - HD-05					
DECEMBER 2025			FIGURE 20.2		REV: 0



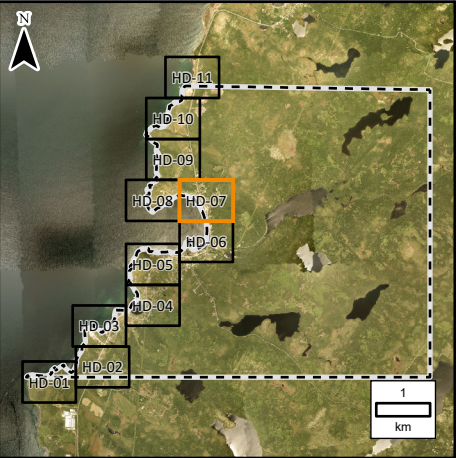
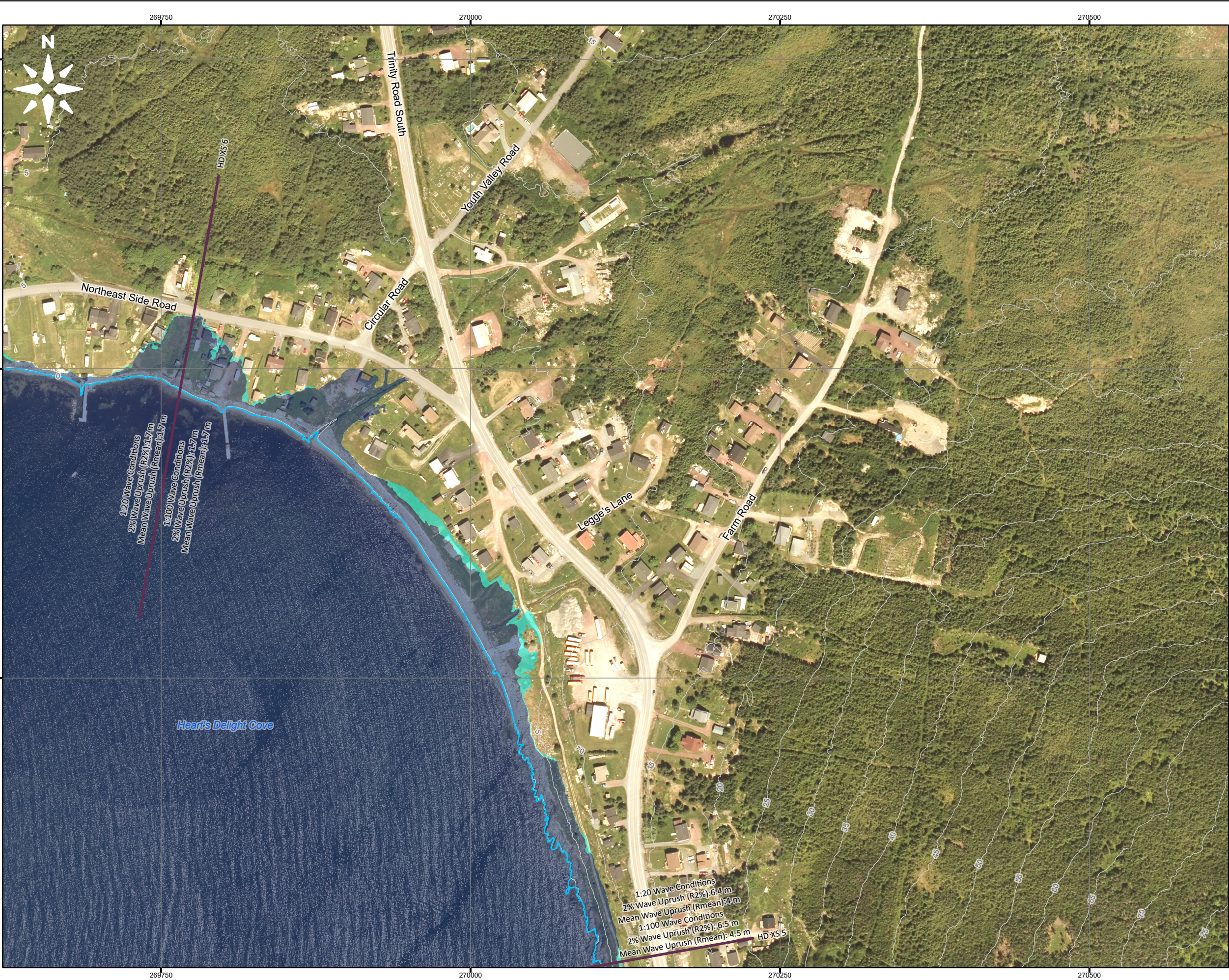
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
1. Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 2. Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 3. Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
				
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR				
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD)				
WAVE RUN UP - HD-06				
DECEMBER 2025		FIGURE 20.2	REV:	0



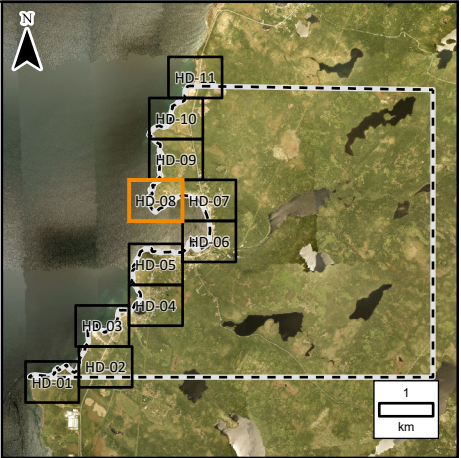
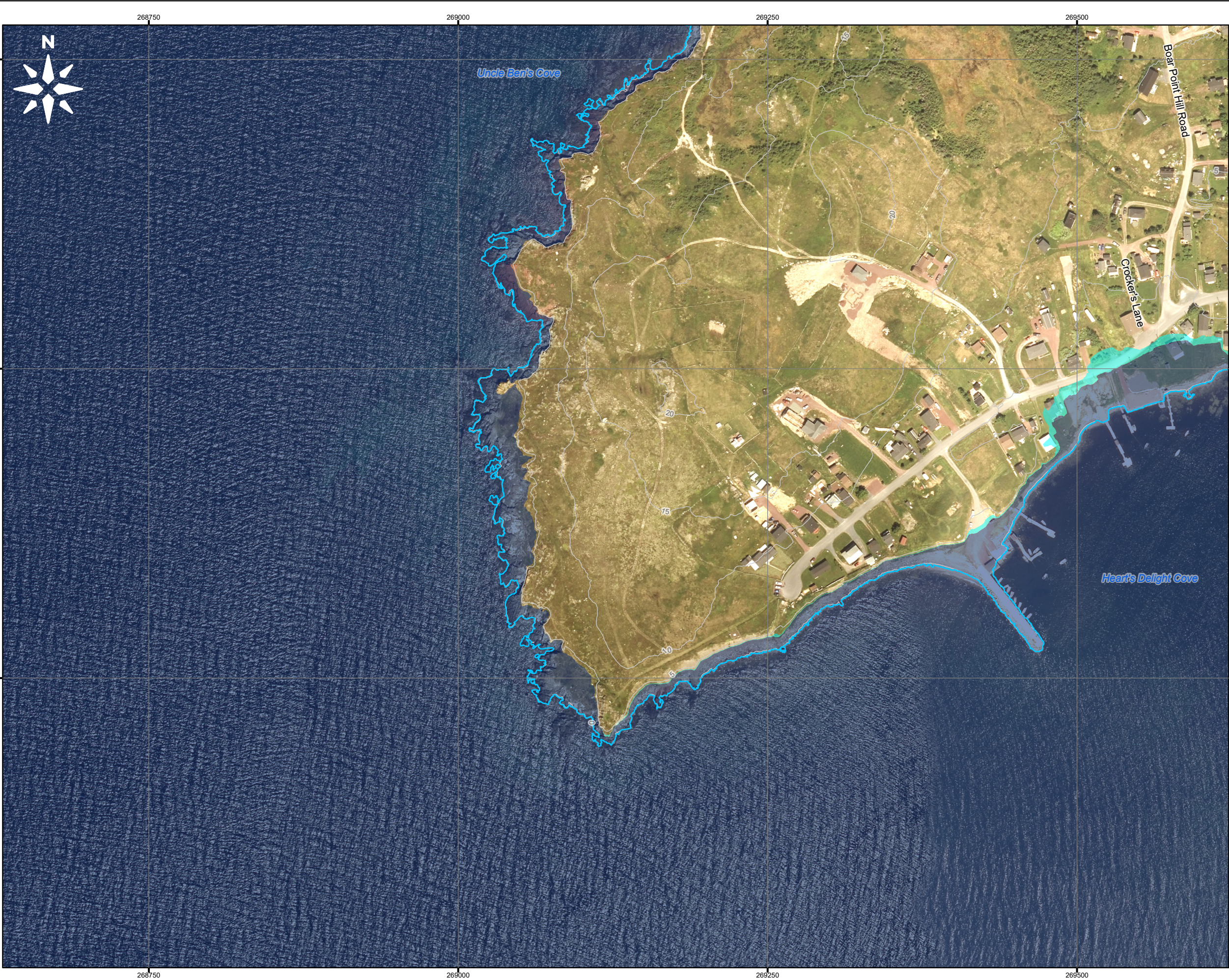
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
1. Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 2. Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 3. Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.

20 0 20 40 60 80 100
Metres
SCALE: 1:3,000 METRIC 11"x17"

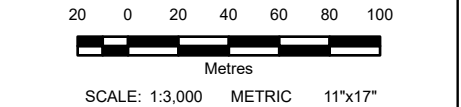
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
				
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR				
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD)				
WAVE RUN UP - HD-07				
DECEMBER 2025		FIGURE 20.2		REV: 0



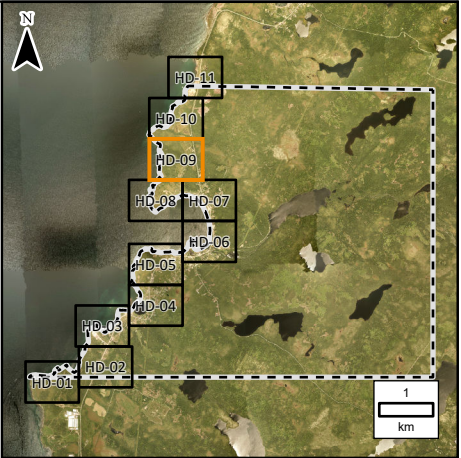
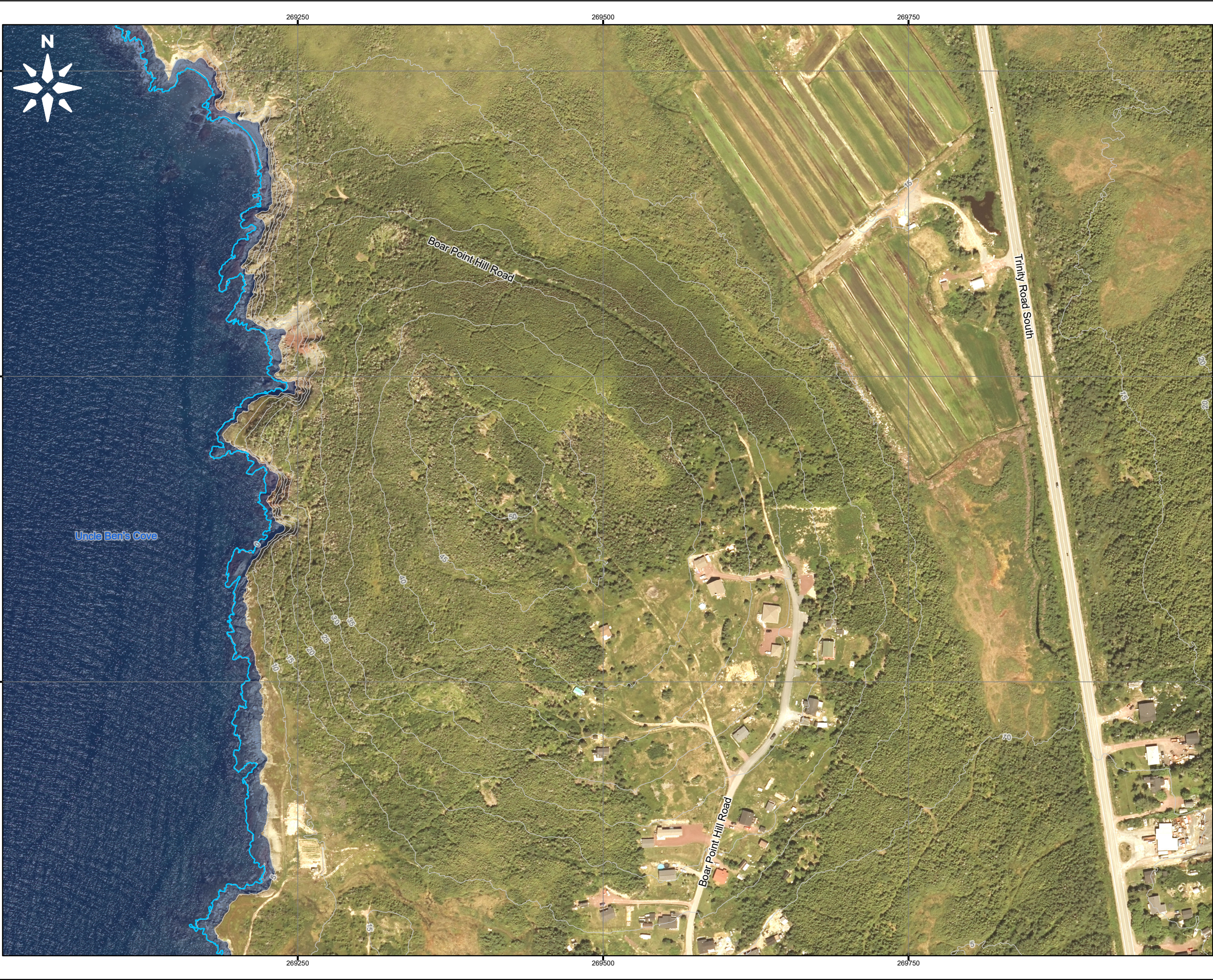
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



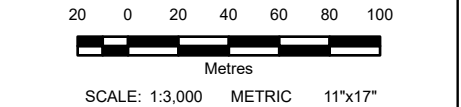
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

➡	0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
	NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE					
					
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR					
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - HD-08					
DECEMBER 2025			FIGURE 20.2	REV:	0



- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

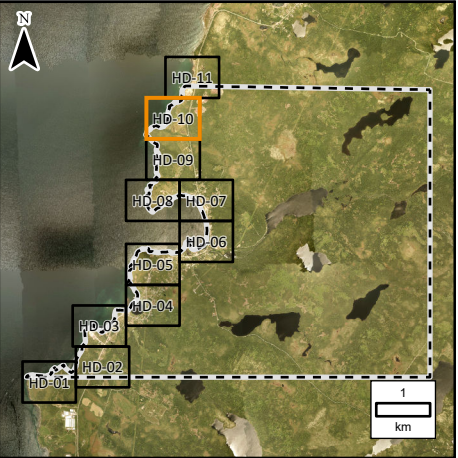
- NOTES:**
- Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 - Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 - Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

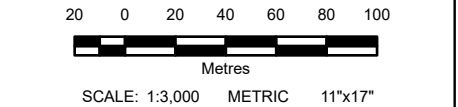
➡

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB			
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY			
REVISIONS / ISSUE							
							
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR							
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - HD-09							
DECEMBER 2025		FIGURE 20.2	REV:	0			



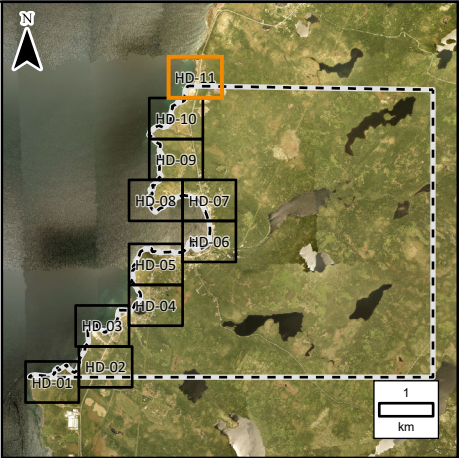
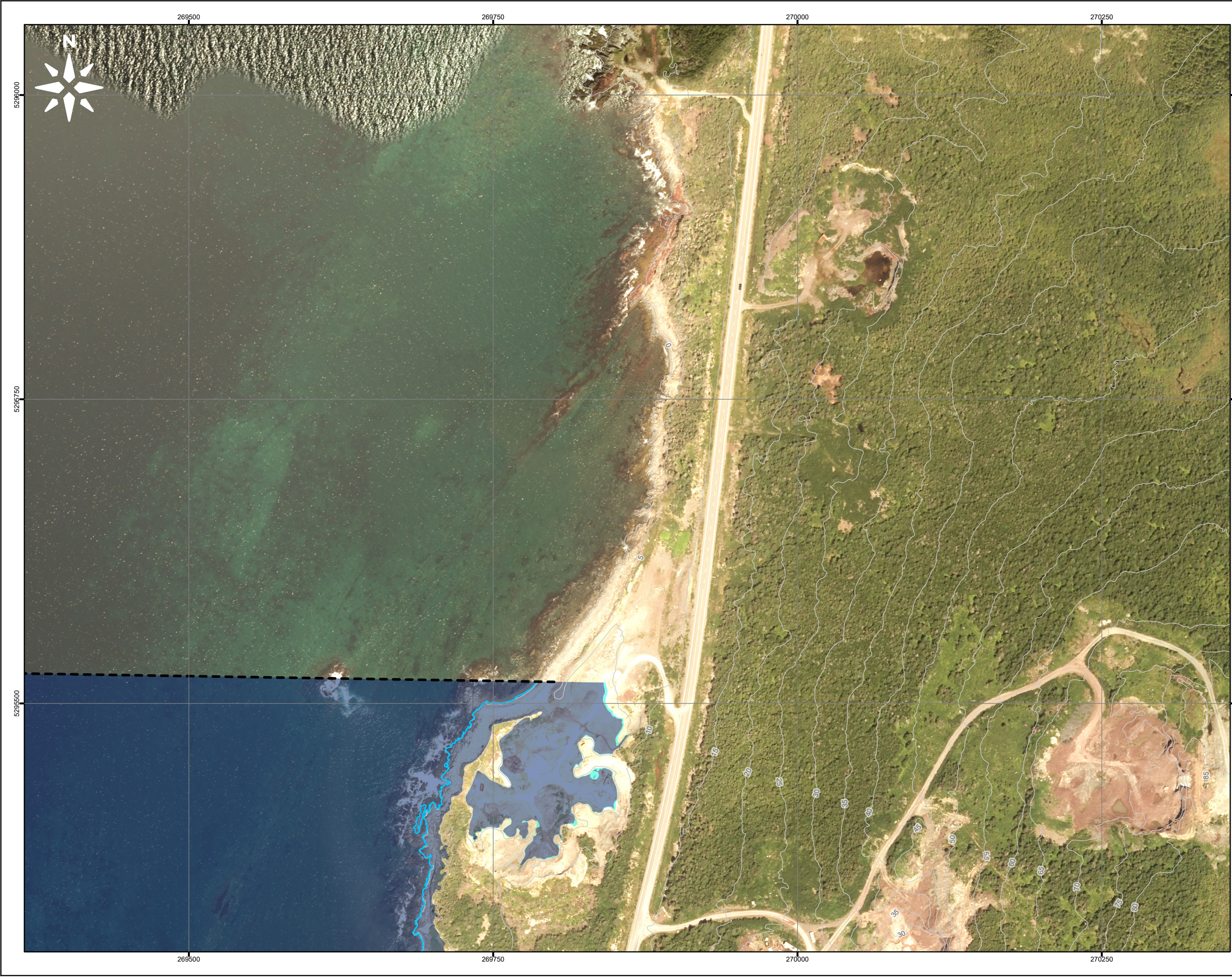
- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
1. Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 2. Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 3. Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



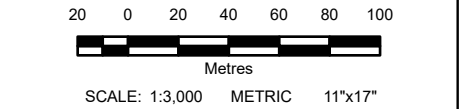
All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
				
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR				
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD)				
WAVE RUN UP - HD-10				
DECEMBER 2025		FIGURE 20.2		REV: 0



- LEGEND:**
- 1:20 Year Wave Run Up
 - 1:100 Year Wave Run Up
 - Coastline
 - 5m LiDAR Contour
 - Limit of Mapping
 - Wave Run Up Transect

- NOTES:**
1. Imagery is supplied by the Government of Newfoundland and Labrador. (Capture date: 2020)
 2. Topography shown was developed by KGS Group from the HRDEM from Natural Resources Canada (NRCAN). (Capture date: June and July, 2020)
 3. Climate change impacts on wave effects are incorporated by considering mid-century and late-century relative sea level projections (RCP 8.5) from the IPCC Fifth Assessment Report, obtained through the ClimateData.ca project.



All units are metric and in metres unless otherwise specified.
Horizontal Projection: North American Datum 1983 CSRS (NAD83), Modified Transverse Mercator Projection (MTM) Zone 1. Elevations are in metres above sea level (MSL), Canadian Geodetic Vertical Datum 2013 (CGVD2013).

➡

0	25/12/19	ISSUED WITH FINAL REPORT	ALW	DSB			
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY			
REVISIONS / ISSUE							
							
CLIMATE CHANGE FLOOD HAZARD MAPPING STUDY FOR FERRYLAND, BRIGUS, HEART'S DELIGHT, WINTERTON & HANT'S HARBOUR							
CLIMATE CHANGE AND CURRENT DEVELOPMENT CONDITION (CLC-CD) WAVE RUN UP - HD-11							
DECEMBER 2025		FIGURE 20.2	REV:	0			