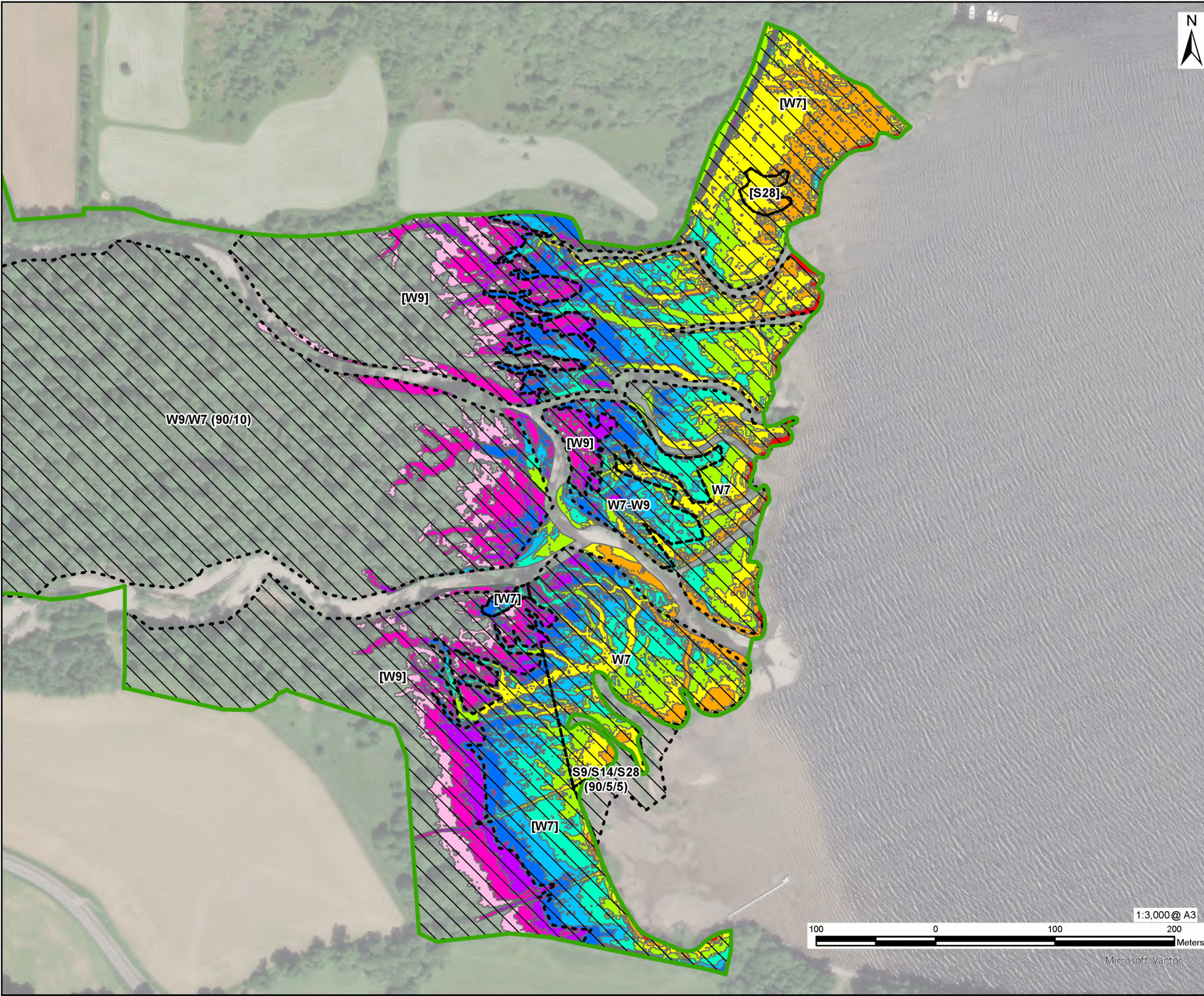


Inundation Event Analysis
LnC + LK + GEE
Seasonal Variable Weir

Spring
(Mar-May)



AECOM

PROJECT

Glen Earrach PSH

CLIENT

Glen Earrach Energy Ltd

CONSULTANT

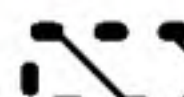
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Edinburgh
EH3 5DA
www.aecom.com

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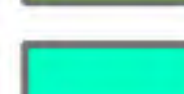
SAC boundary

 SAC boundary

NVC (labelled)

 NVC (labelled)

Overlapped Predicted Water Areas at increasing heights (m), from median summer loch level of 15.7 m

-  15.7
-  15.9
-  16.1
-  16.3
-  16.5
-  16.7
-  16.9
-  17.1
-  17.3
-  17.5

NOTES

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NVC types without square brackets indicates areas accessed in summer 2024. Square brackets indicates that NVC type has been derived from information from site visits in late 2025 / early 2026, combined with LiDAR data in comparison to the W7/W9 seen in summer 2024.

ISSUE PURPOSE

FOR INFORMATION

PROJECT NUMBER

60719875

FIGURE TITLE

Predicted Water Areas overlaid with NVC for the relevant parts of Urquhart Bay Wood

FIGURE NUMBER

Figure 1

1:3,000 @ A3

100 0 100 200 Meters

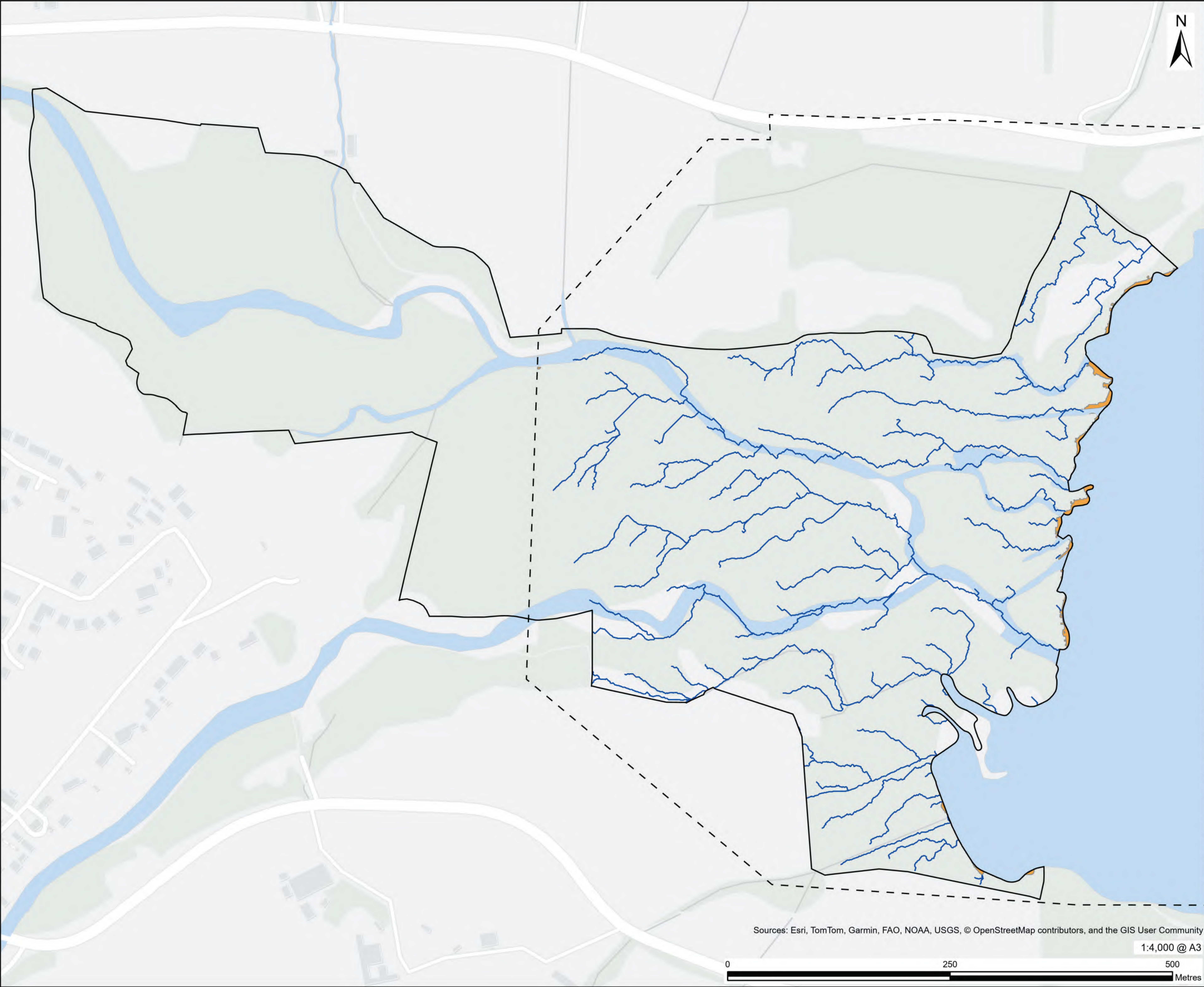
Microsoft, Vantor

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
15.7	W7; S9 / S14 / S28	0.13	0.30	0.13	0.30
15.9	W7; S28	1.2	2.60	1.33	2.90
16.1	W7; S28	2.3	5.00	3.63	7.90
16.3	W7	1.95	4.20	5.58	12.10
16.5	W7	1.91	4.10	7.49	16.20
16.7	W7; W7-W9 (intermediate)	1.57	3.40	9.06	19.60
16.9	W7; W7-W9 (intermediate)	1.38	3.00	10.44	22.60
17.1	W7 / W9 (transition)	1.24	2.70	11.68	25.30
17.3	W9 dominant	1.52	3.30	13.2	28.60
17.5	W9 dominant	1.18	2.50	14.38	31.10

Inundation Event

Level Threshold = 15.70 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
15.7	W7; S9 / S14 / S28	0.13	0.30	0.13	0.30





PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

Glen Earrach Energy Ltd.

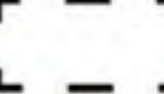
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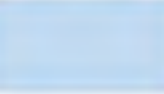
LEGEND



Urquhart Bay Wood - Special Areas of Conservation (SAC)



LiDAR Survey Extent



OS OML Surface Water



Modelled Watercourse

Predicted Water Area (Meters Above Datum)



15.7m - 0.14ha

NOTES

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Modelled Watercourses have been generated from ESRI Spatial Analyst flow accumulation modelling based on the LiDAR DTM. A flow accumulation threshold of 1000sqm has been applied.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

Urquhart Bay Wood LiDAR Survey - Predicted Water Areas at 0.2m Level Bandings

FIGURE NUMBER

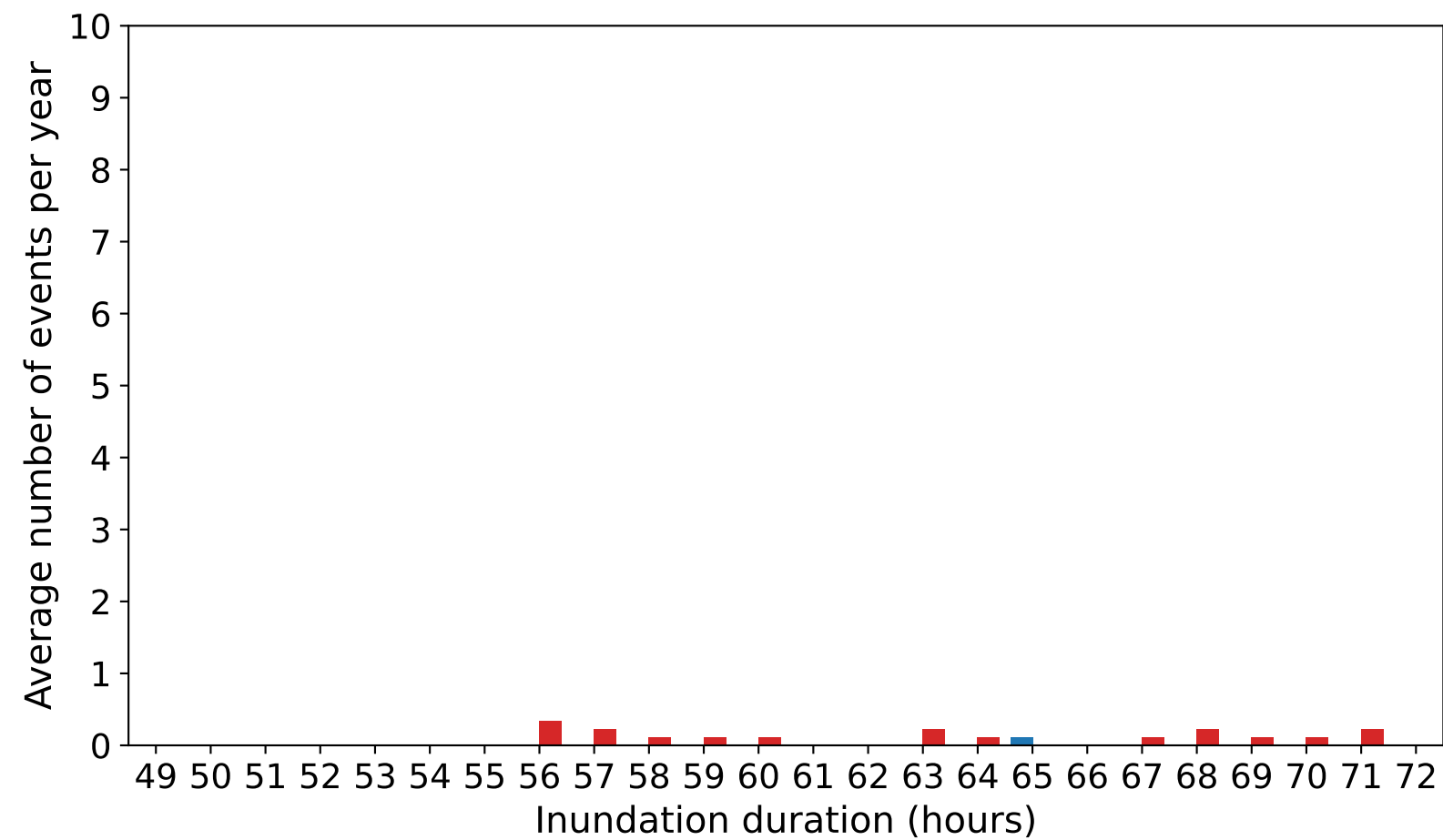
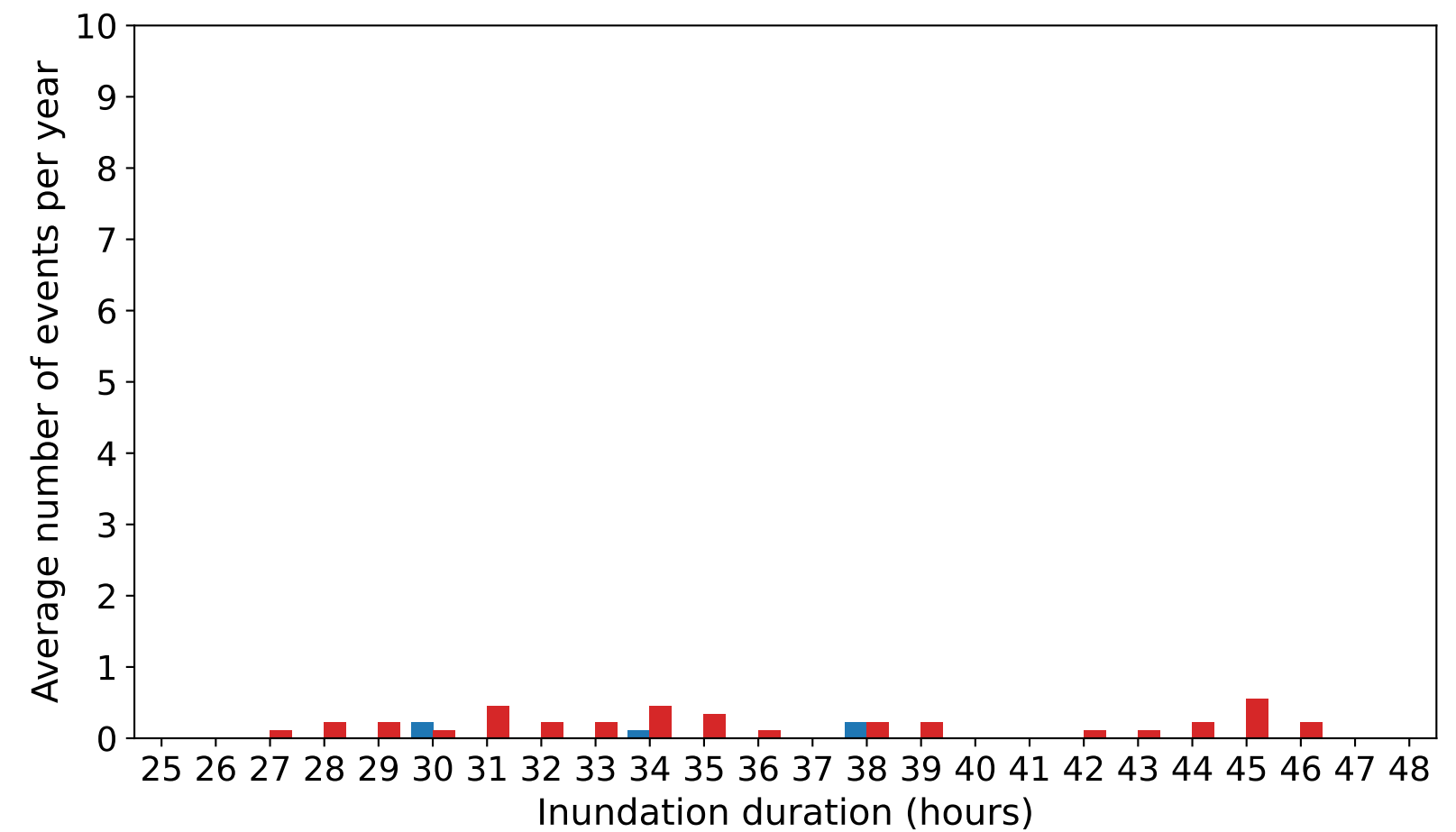
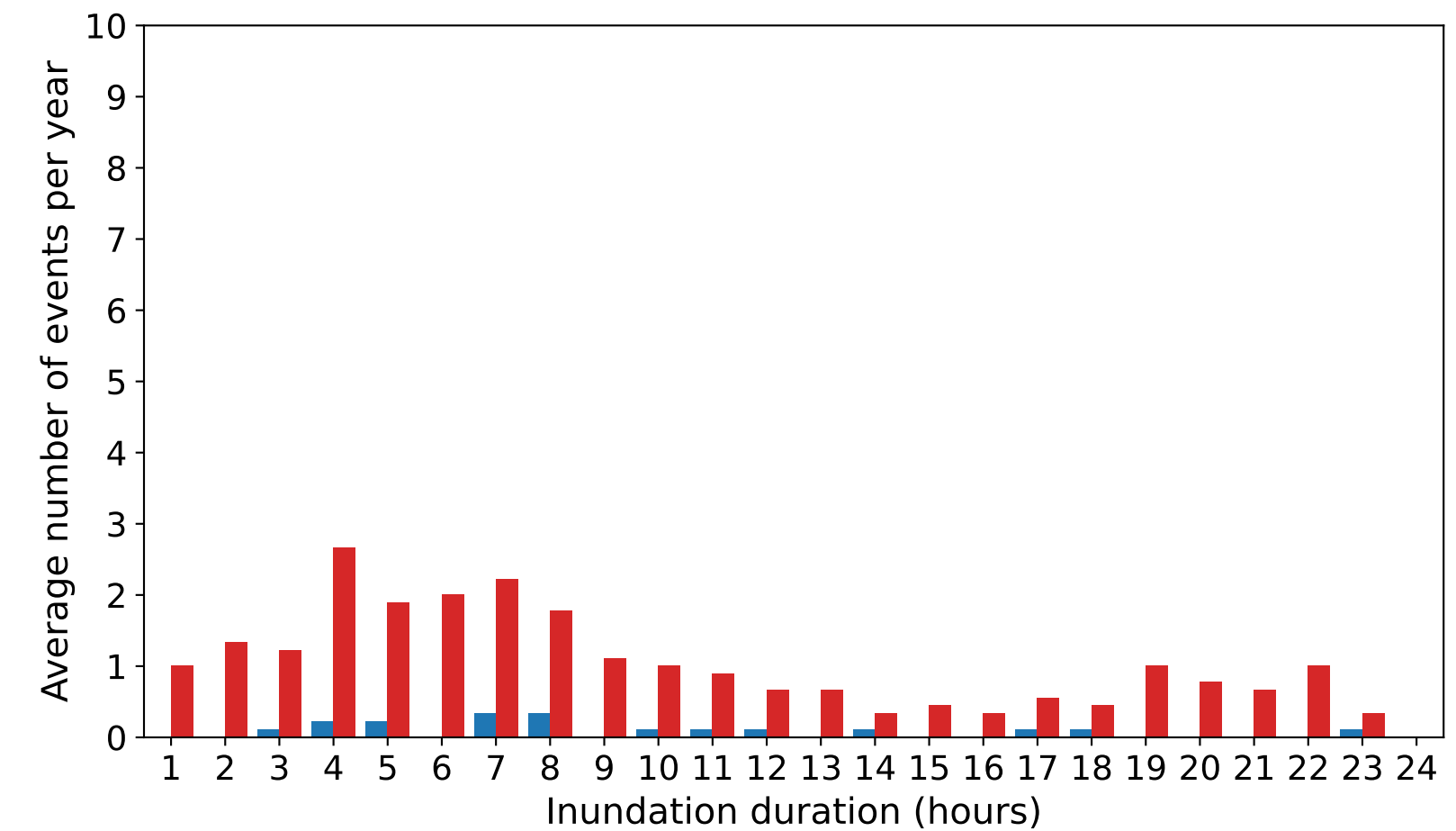
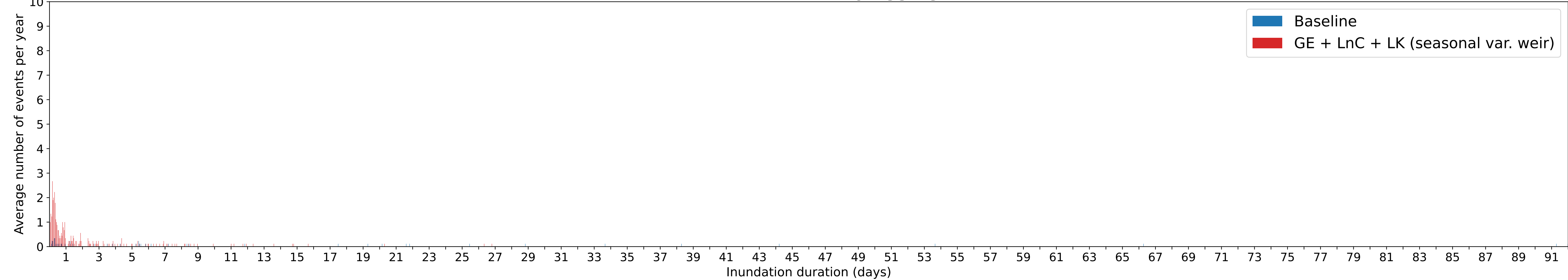
Figure 2.1

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

1:4,000 @ A3

0 250 500 Metres

Spring - Level [15.70] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)



Note: Values represent average events per year (9-year dataset).

Spring - Level [15.70] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	4 hr	11 hr	92 hr (3.8 days)	420 hr (17.5 days)	1591 hr (66.3 days)
GE + LnC + LK (seasonal var. weir)	2 hr	6 hr	13 hr	43 hr (1.8 days)	202 hr (8.4 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of ≤ 24 hr (up to 1 day)	2.0	24.3
Sums of 25 – 72 hr (just over 1 day up to 3 days)	0.7	6.1
Sums of 73 – 168 hr (just over 3 days up to 7 days)	1.1	3.4
Sums of > 168 hr (over 1 week)	2.0	2.7

Inundation Event

Level Threshold = 15.90 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
15.9	W7; S28	1.2	2.60	1.33	2.90

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 Modelled Watercourse
 Predicted Water Area (Meters Above Datum)
 15.9m - 1.33ha

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Predicted Water Areas have been derived from a LiDAR based Digital Terrain Model (DTM) supplied by Zenith Surveying Ltd (December 2025)

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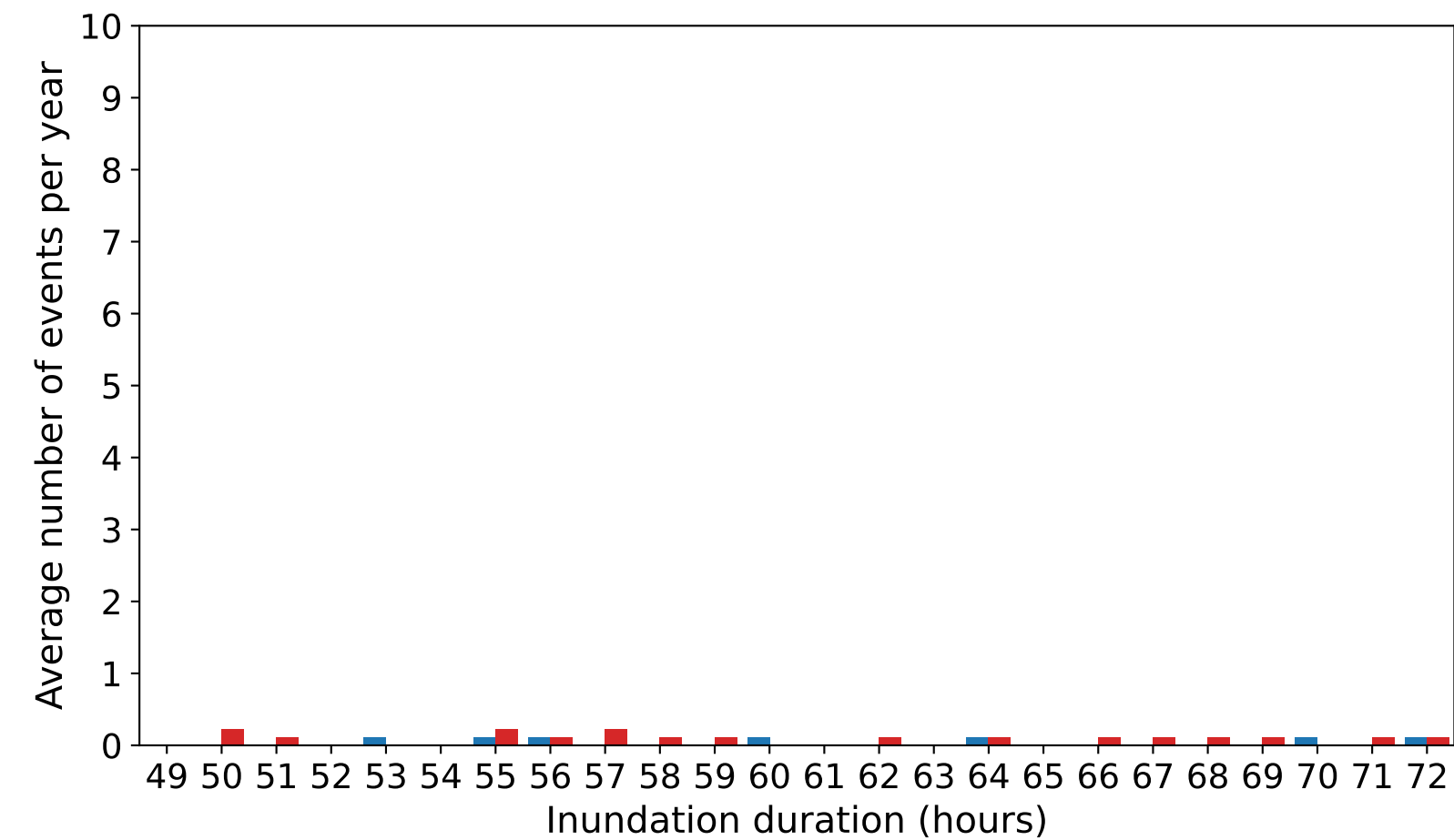
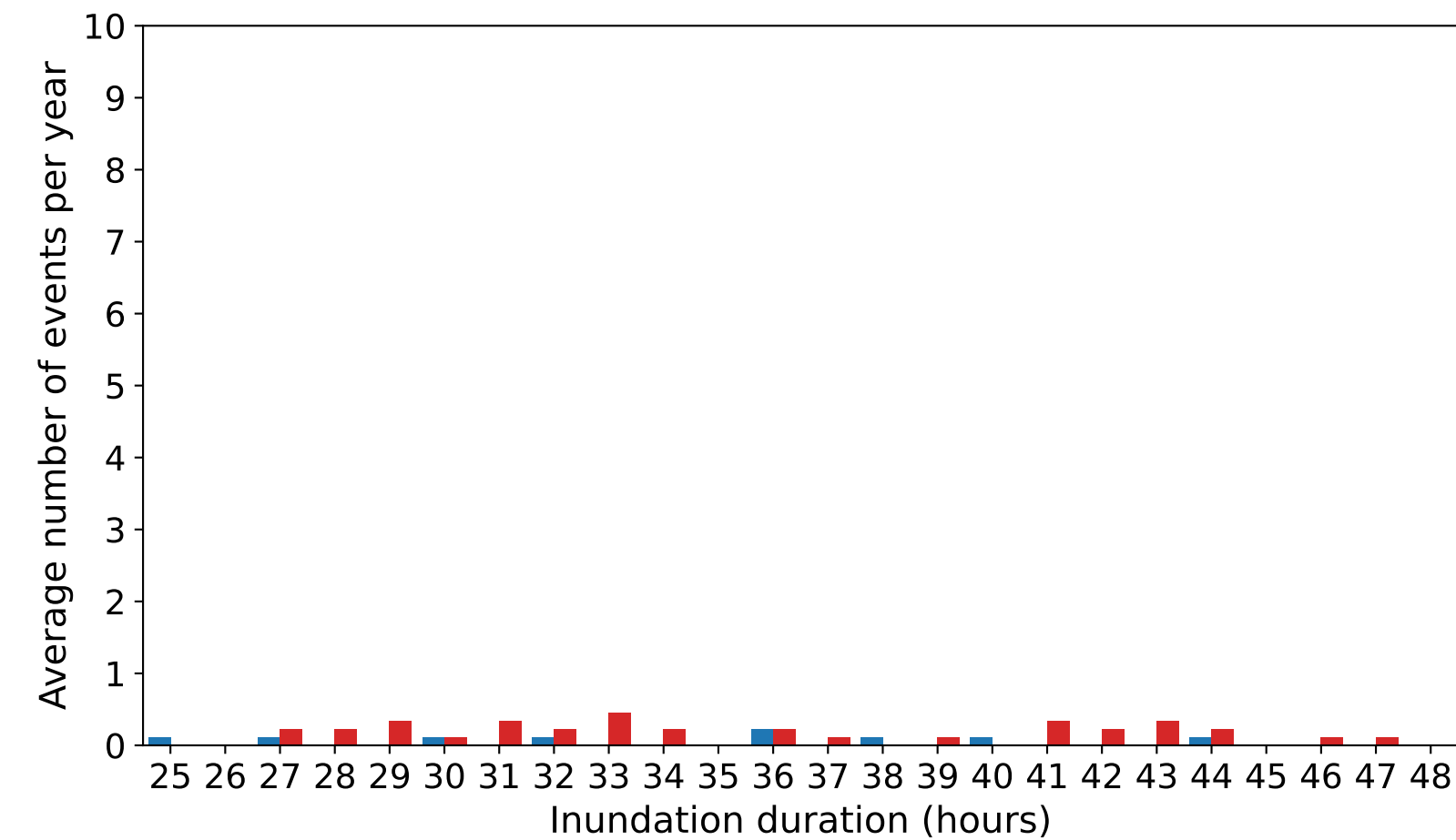
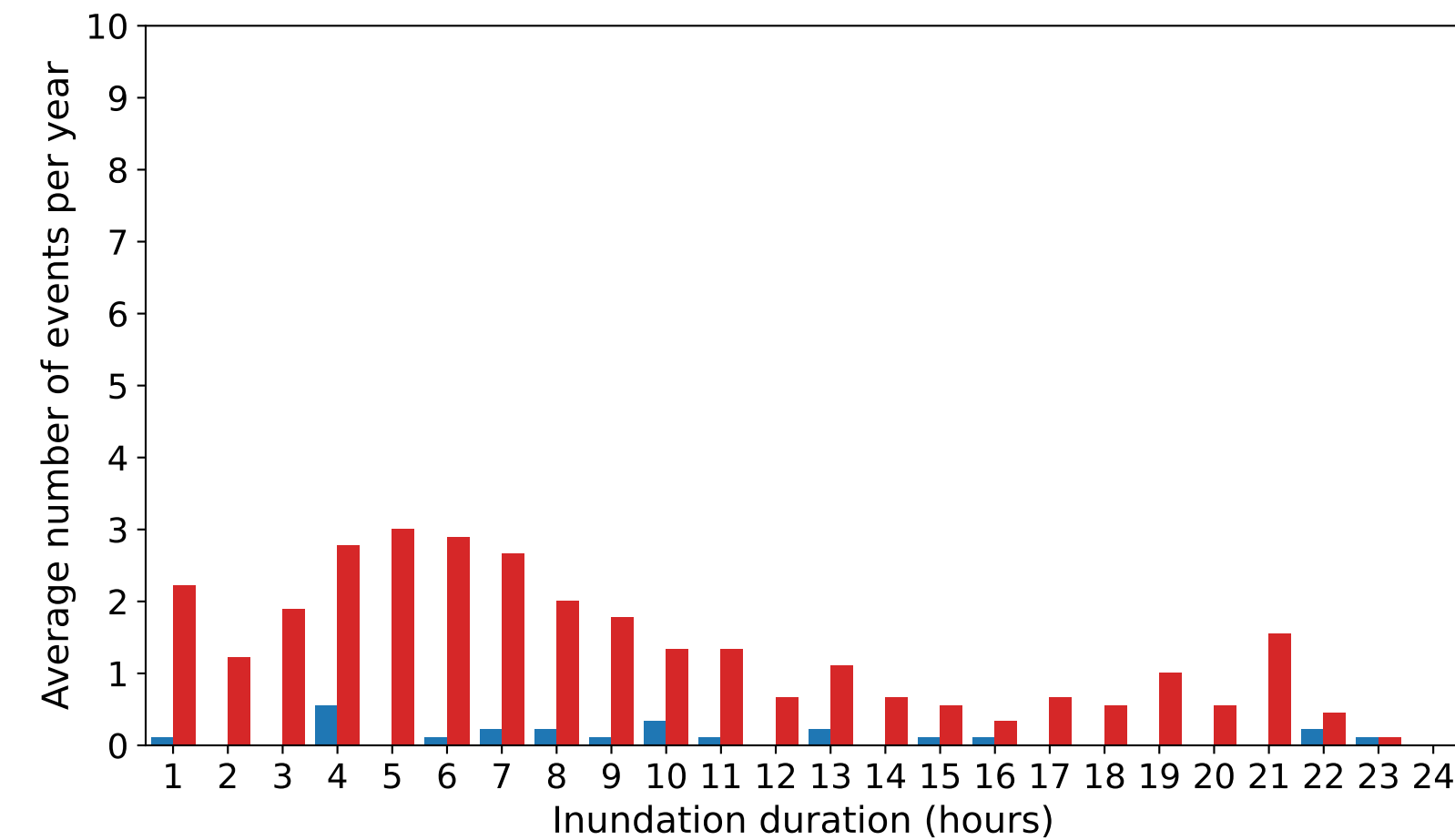
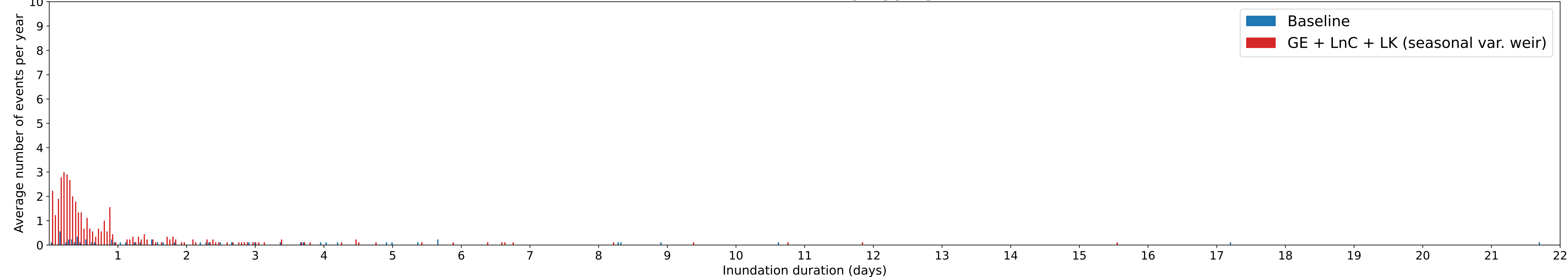
FINAL

60719875

Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

Figure 2.2

Spring - Level [15.90] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)



Note: Values represent average events per year (9-year dataset).

Spring - Level [15.90] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	4 hr	10 hr	36 hr (1.5 days)	95 hr (4.0 days)	255 hr (10.6 days)
GE + LnC + LK (seasonal var. weir)	1 hr	5 hr	9 hr	21 hr	89 hr (3.7 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of $\leq$ 24 hr (up to 1 day)	2.6	31.3
Sums of 25 - 72 hr (just over 1 day up to 3 days)	1.8	5.9
Sums of 73 - 168 hr (just over 3 days up to 7 days)	1.2	2.0
Sums of $>$ 168 hr (over 1 week)	0.7	0.6

Inundation Event

Level Threshold = 16.10 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
16.1	W7; S28	2.3	5.00	3.63	7.90

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 Predicted Water Area (Meters Above Datum)
 16.1m - 3.63ha

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Predicted Water Areas have been derived from a LiDAR based Digital Terrain Model (DTM) supplied by Zenith Surveying Ltd (December 2025)

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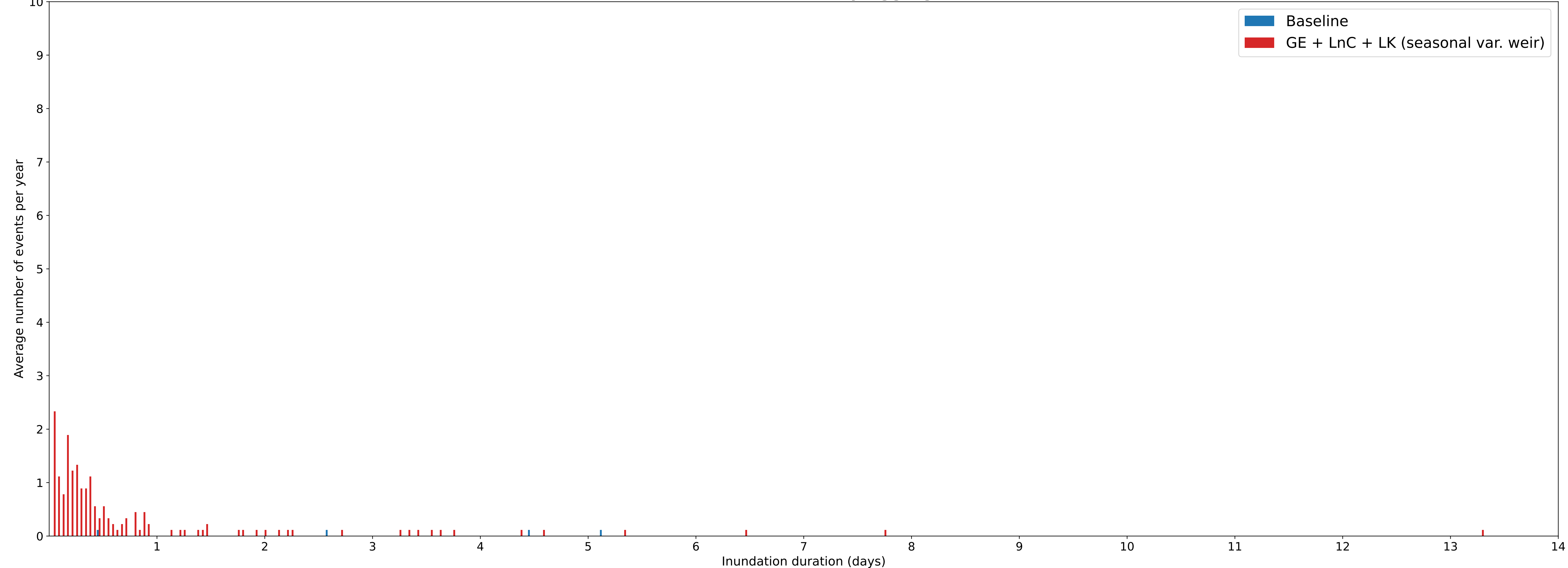
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Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

Figure 2.3

**Spring - Level [16.10] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)**



Note: Values represent average events per year (9-year dataset).

Spring - Level [16.10] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	11 hr	11 hr	62 hr (2.6 days)	107 hr (4.5 days)	123 hr (5.1 days)
GE + LnC + LK (seasonal var. weir)	1 hr	4 hr	7 hr	16 hr	85 hr (3.5 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of $\leq$ 24 hr (up to 1 day)	0.1	15.4
Sums of 25 – 72 hr (just over 1 day up to 3 days)	0.1	1.7
Sums of 73 – 168 hr (just over 3 days up to 7 days)	0.2	1.1
Sums of > 168 hr (over 1 week)	0.0	0.2

Inundation Event

Level Threshold = 16.30 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
16.3	W7	1.95	4.20	5.58	12.10

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Predicted Water Area (Meters Above Datum)
 16.3m - 5.58ha

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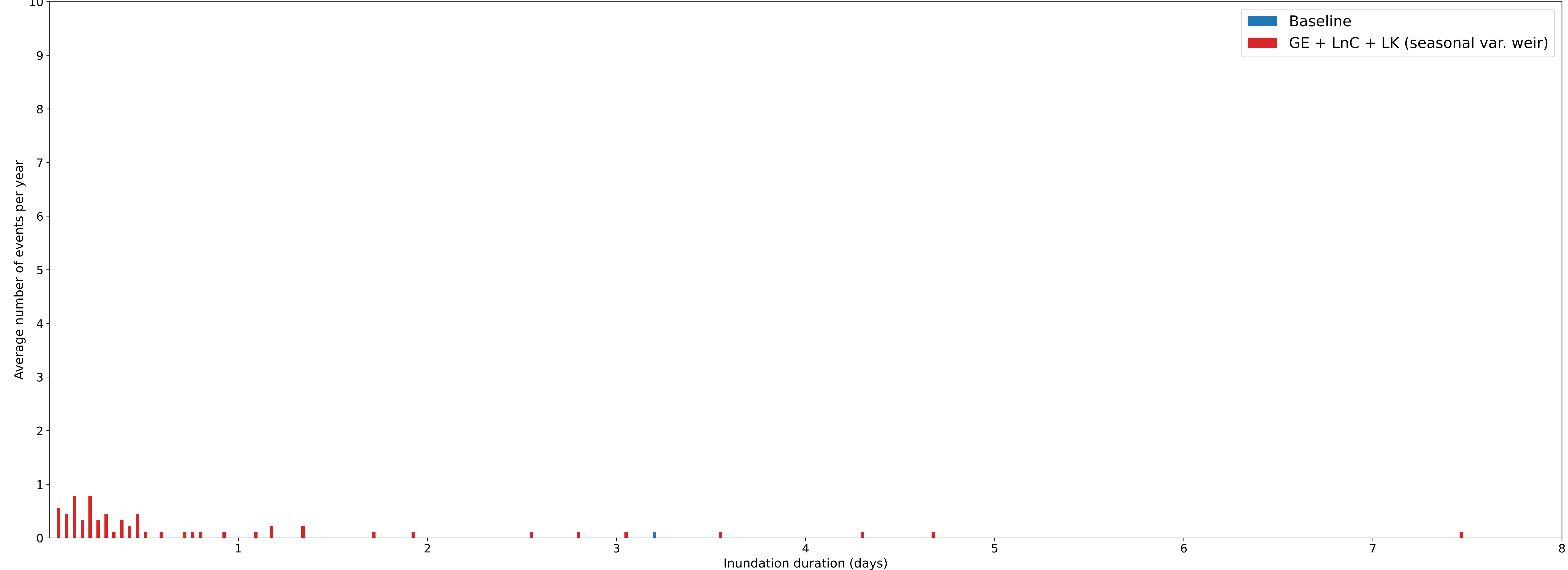
FINAL

60719875

Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

Figure 2.4

Spring - Level [16.30] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)



Note: Values represent average events per year (9-year dataset).

Spring - Level [16.30] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	77 hr (3.2 days)	77 hr (3.2 days)	77 hr (3.2 days)	77 hr (3.2 days)	77 hr (3.2 days)
GE + LnC + LK (seasonal var. weir)	1 hr	3 hr	7 hr	19 hr	85 hr (3.5 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of $\leq$ 24 hr (up to 1 day)	0.0	5.4
Sums of 25 - 72 hr (just over 1 day up to 3 days)	0.0	1.0
Sums of 73 - 168 hr (just over 3 days up to 7 days)	0.1	0.4
Sums of $>$ 168 hr (over 1 week)	0.0	0.1

Inundation Event

Level Threshold = 16.50 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
16.5	W7	1.91	4.10	7.49	16.20

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 Modelled Watercourse
 Predicted Water Area (Meters Above Datum)
 16.5m - 7.49ha

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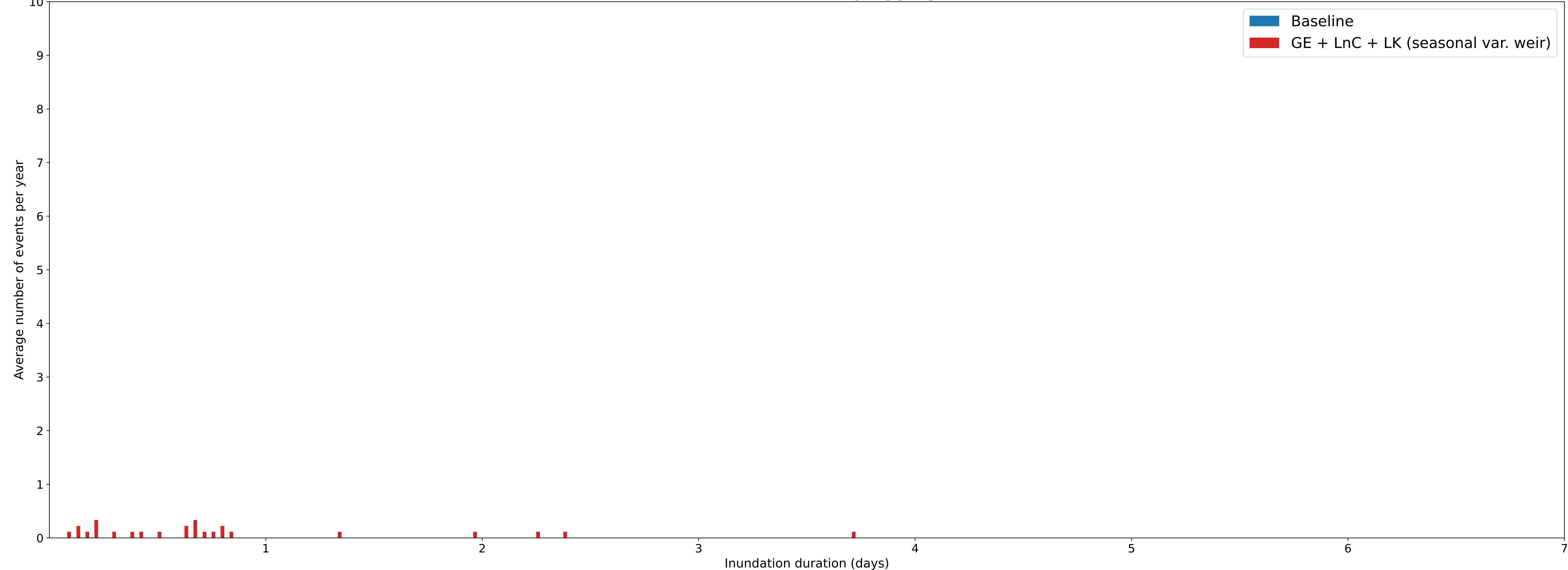
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Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

Figure 2.5

**Spring - Level [16.50] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)**



Note: Values represent average events per year (9-year dataset).

Spring - Level [16.50] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	-	-	-	-	-
GE + LnC + LK (seasonal var. weir)	3 hr	5 hr	15 hr	19 hr	57 hr (2.4 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of ≤ 24 hr (up to 1 day)	0.0	2.3
Sums of 25 – 72 hr (just over 1 day up to 3 days)	0.0	0.4
Sums of 73 – 168 hr (just over 3 days up to 7 days)	0.0	0.1
Sums of > 168 hr (over 1 week)	0.0	0.0

Inundation Event

Level Threshold = 16.70 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
16.7	W7; W7-W9 (intermediate)	1.57	3.40	9.06	19.60

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Predicted Water Area (Meters Above Datum)

 16.7m - 9.06ha

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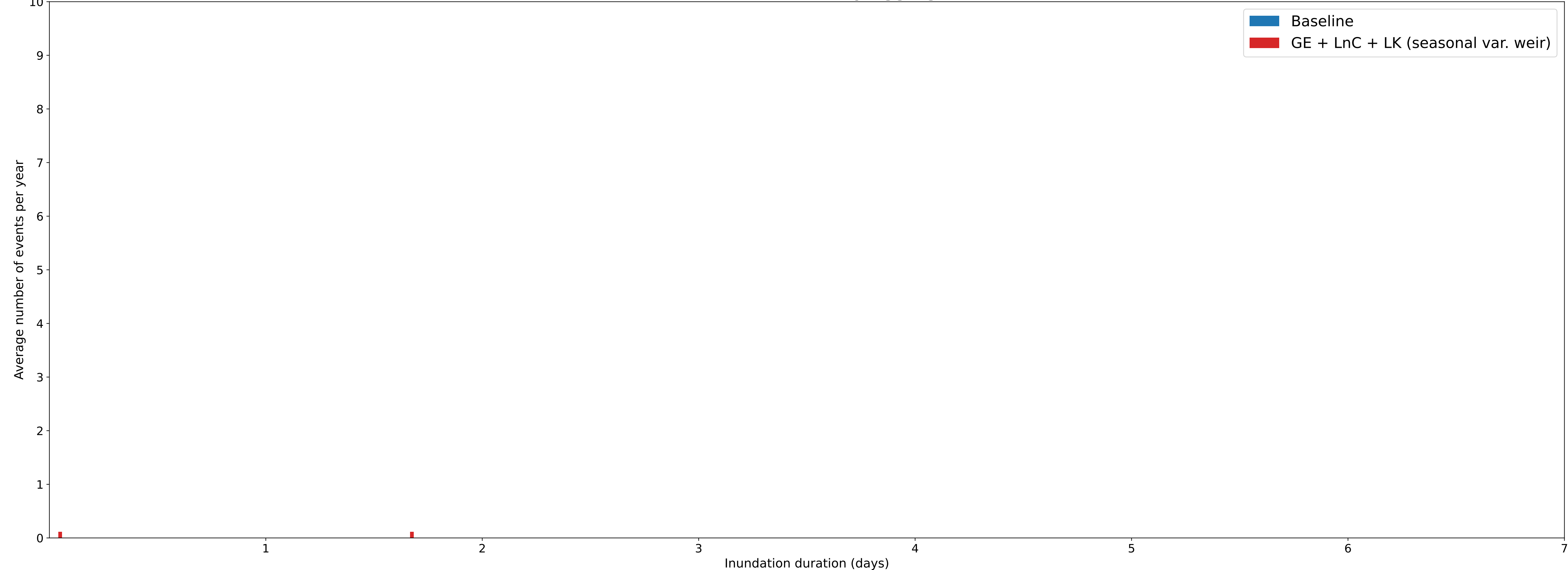
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Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

Figure 2.6

**Spring - Level [16.70] m - Seasonal Variable Weir
Inundation Events (Hourly Aggregation)**



Note: Values represent average events per year (9-year dataset).

Spring - Level [16.70] m - Seasonal Variable Weir
Inundation Events (9-year dataset)

Event duration summary statistics

	5% percentile	25% percentile	50% percentile (median)	75% percentile	95% percentile
Baseline	-	-	-	-	-
GE + LnC + LK (seasonal var. weir)	1 hr	1 hr	1 hr	40 hr (1.7 days)	40 hr (1.7 days)

Event counts by duration category
(Average number per year)

	Baseline	GE + LnC + LK (seasonal var. weir)
Sums of ≤ 24 hr (up to 1 day)	0.0	0.1
Sums of 25 - 72 hr (just over 1 day up to 3 days)	0.0	0.1
Sums of 73 - 168 hr (just over 3 days up to 7 days)	0.0	0.0
Sums of > 168 hr (over 1 week)	0.0	0.0

Inundation Event

Level Threshold = 16.90 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
16.9	W7; W7-W9 (intermediate)	1.38	3.00	10.44	22.60

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 Modelled Watercourse

Predicted Water Area (Meters Above Datum)

 16.9m - 10.44ha

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Urquhart Bay Wood LiDAR Survey -
Predicted Water Areas at 0.2m Level
Bandings

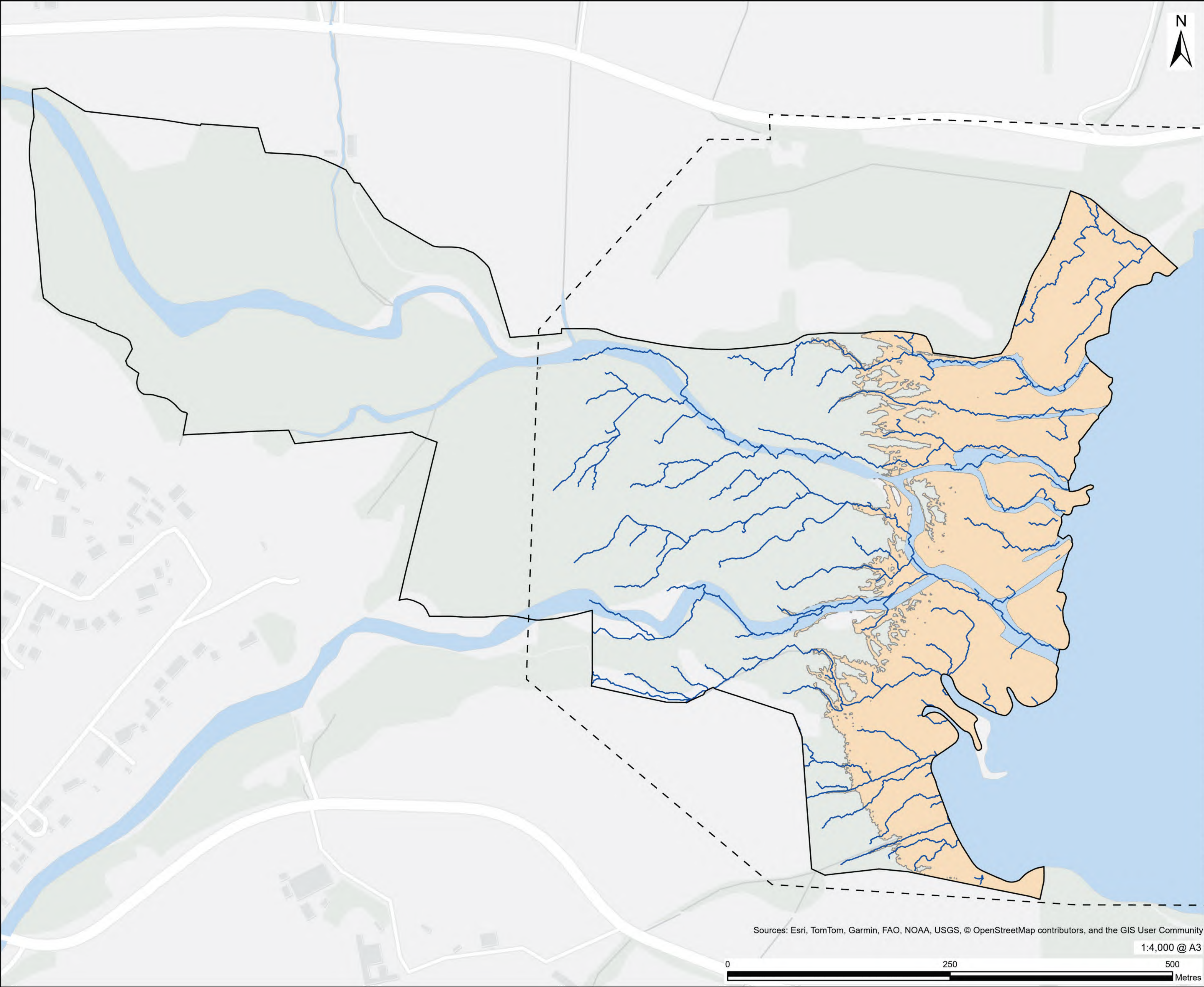
Figure 2.7

No inundation events occurred
Season: spring
Level threshold: 16.9 m
Scheme: baseline vs GE + LNC + LK

Inundation Event

Level Threshold = 17.10 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
17.1	W7 / W9 (transition)	1.24	2.70	11.68	25.30





PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

Glen Earrach Energy Ltd.

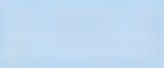
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LEGEND

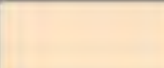
 Urquhart Bay Wood - Special Areas of Conservation (SAC)

 LiDAR Survey Extent

 OS OML Surface Water

 Modelled Watercourse

Predicted Water Area (Meters Above Datum)

 17.1m - 11.68ha

NOTES

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ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

Urquhart Bay Wood LiDAR Survey - Predicted Water Areas at 0.2m Level Bandings

FIGURE NUMBER

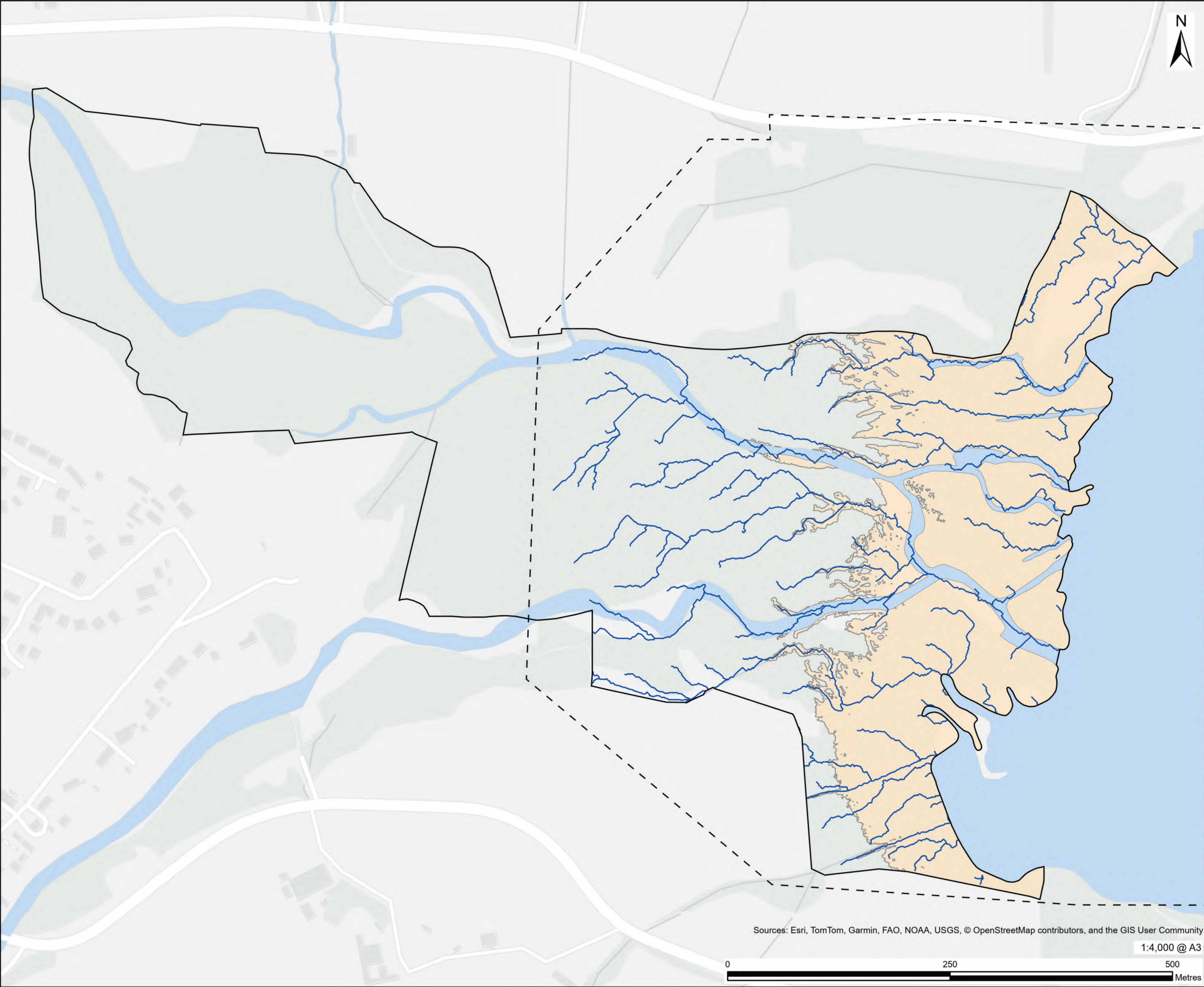
Figure 2.8

No inundation events occurred
Season: spring
Level threshold: 17.1 m
Scheme: baseline vs GE + LNC + LK

Inundation Event

Level Threshold = 17.30 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
17.3	W9 dominant	1.52	3.30	13.2	28.60



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PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

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Urquhart Bay Wood - Special Areas of Conservation (SAC)

LiDAR Survey Extent

OS OML Surface Water

Modelled Watercourse

Predicted Water Area (Meters Above Datum)

17.3m - 13.20ha

NOTES

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Modelled Watercourses have been generated from ESRI Spatial Analyst flow accumulation modelling based on the LiDAR DTM. A flow accumulation threshold of 1000sqm has been applied.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

Urquhart Bay Wood LiDAR Survey - Predicted Water Areas at 0.2m Level Bandings

FIGURE NUMBER

Figure 2.9

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1:4,000 @ A3

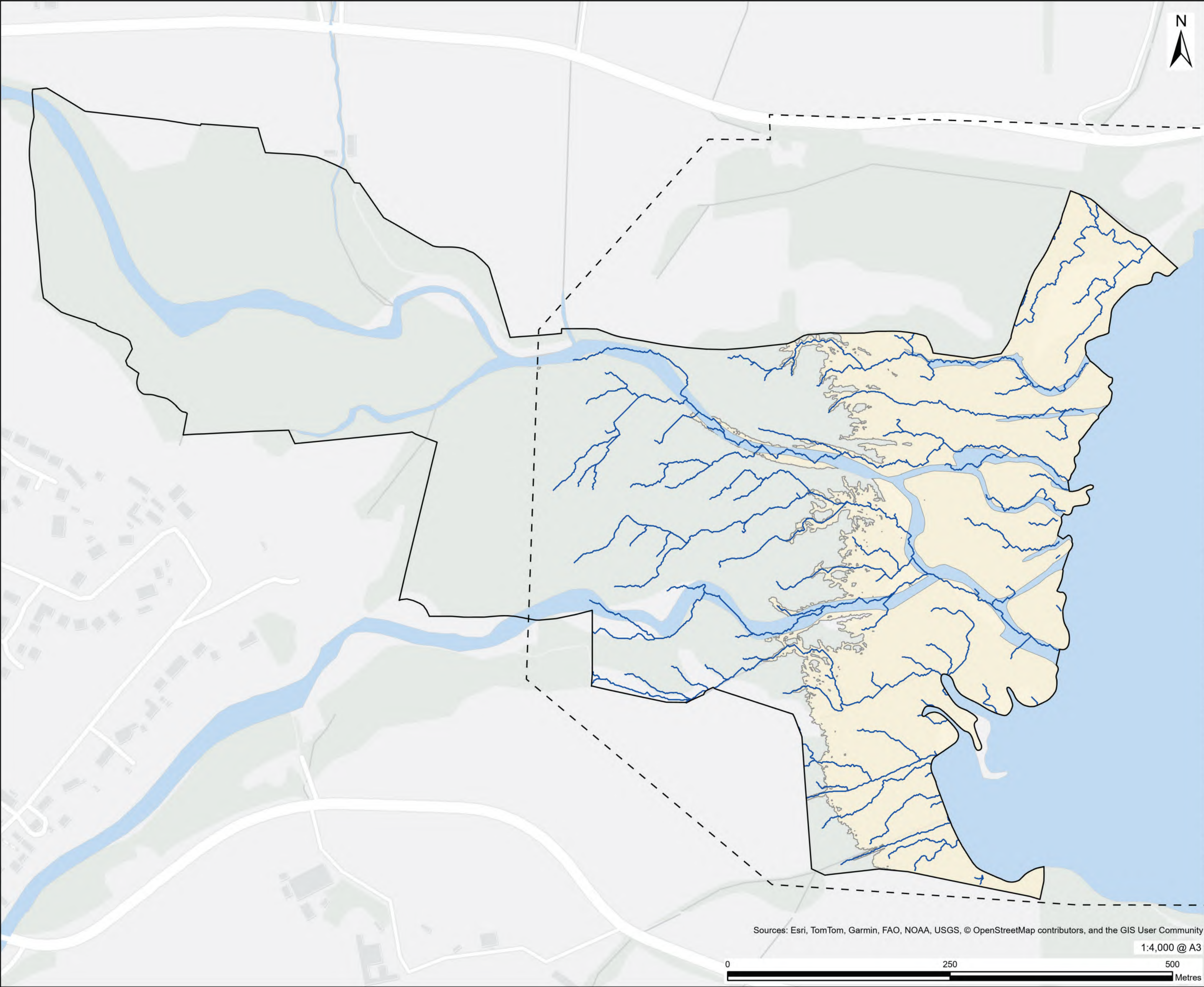
0 250 500 Metres

No inundation events occurred
Season: spring
Level threshold: 17.3 m
Scheme: baseline vs GE + LNC + LK

Inundation Event

Level Threshold = 17.50 m

Water level (m AOD)	Habitat / NVC at this level band	Area at this level band (ha)	Percentage of SAC (%)	Cumulative Area of SAC at this level (ha)	Cumulative Percentage of SAC (%)
17.5	W9 dominant	1.18	2.50	14.38	31.10



AECOM

PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

Glen Earrach Energy Ltd.

CONSULTANT

AECOM Limited
Aldgate Tower
2, Leman Street
London, E1 8FA
United Kingdom

LEGEND

- Urquhart Bay Wood - Special Areas of Conservation (SAC)
- LiDAR Survey Extent
- OS OML Surface Water
- Modelled Watercourse

Predicted Water Area (Meters Above Datum)

- 17.5m - 14.38ha

NOTES

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Predicted Water Areas have been derived from a LiDAR based Digital Terrain Model (DTM) supplied by Zenith Surveying Ltd. (December 2025)

Modelled Watercourses have been generated from ESRI Spatial Analyst flow accumulation modelling based on the LiDAR DTM. A flow accumulation threshold of 1000sqm has been applied.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

Urquhart Bay Wood LiDAR Survey - Predicted Water Areas at 0.2m Level Bandings

FIGURE NUMBER

Figure 2.10

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

1:4,000 @ A3

0 250 500 Metres

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No inundation events occurred
Season: spring
Level threshold: 17.5 m
Scheme: baseline vs GE + LNC + LK