

Service Resilience, Flooding & Winter Maintenance

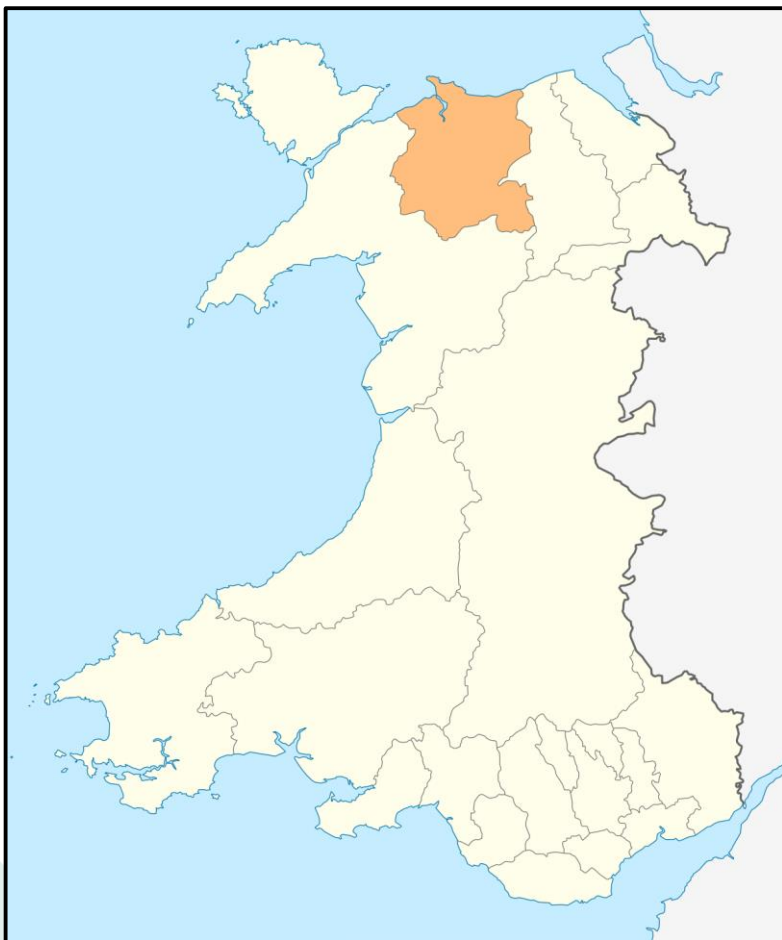
Owen Conry
Flood Risk & Infrastructure Manager

Introduction

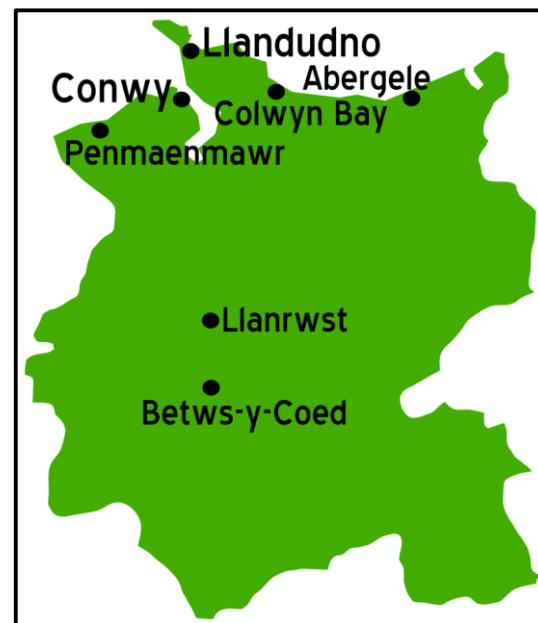


- Owen Conry
- Civil Engineer
- With Conwy since 2014
- Acting Flood Risk & Infrastructure Manager

Conwy County

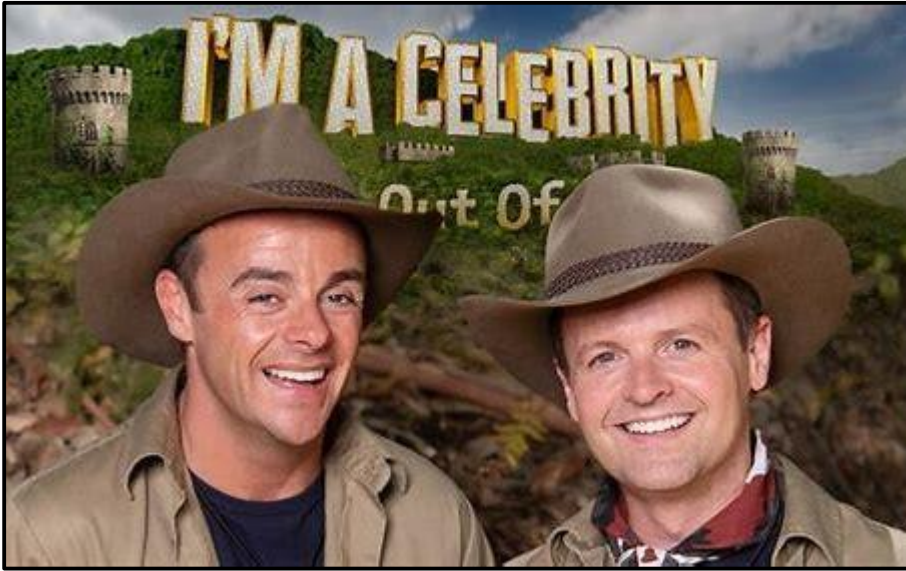


- 1 of 22 Local Authorities in Wales
- Population 115,000
- 440 sq. mi
- On Edge of Snowdonia National Park



Environment, Roads & Facilities





Sources of Flooding in the County

Flooding in the County

Flooding from Ordinary Watercourses, Highways and the Sea



Flooding in the County



Flooding from Main River



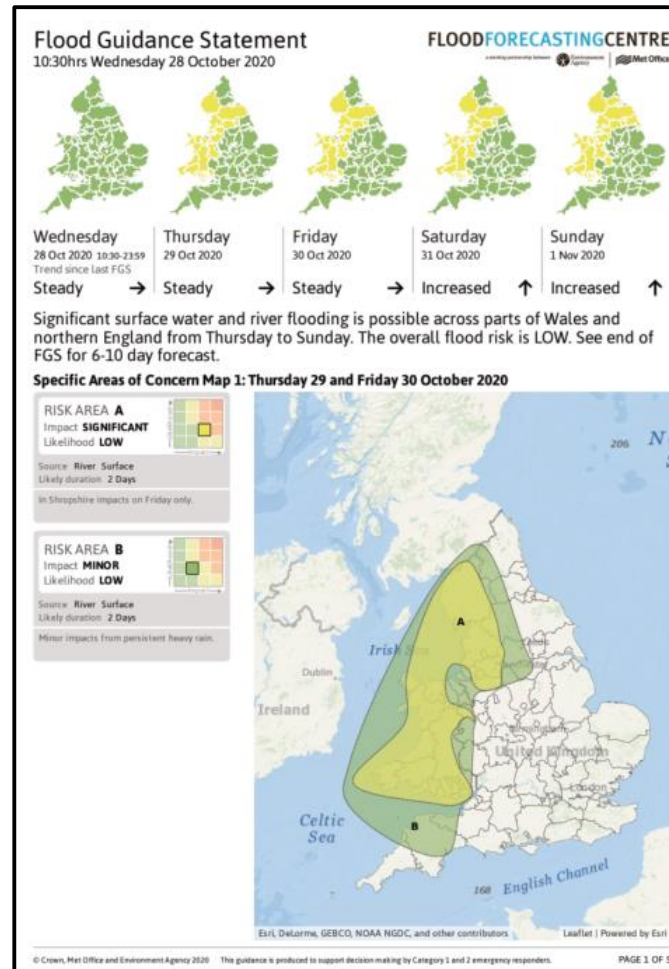
Flooding in the County



Preparing for an Event

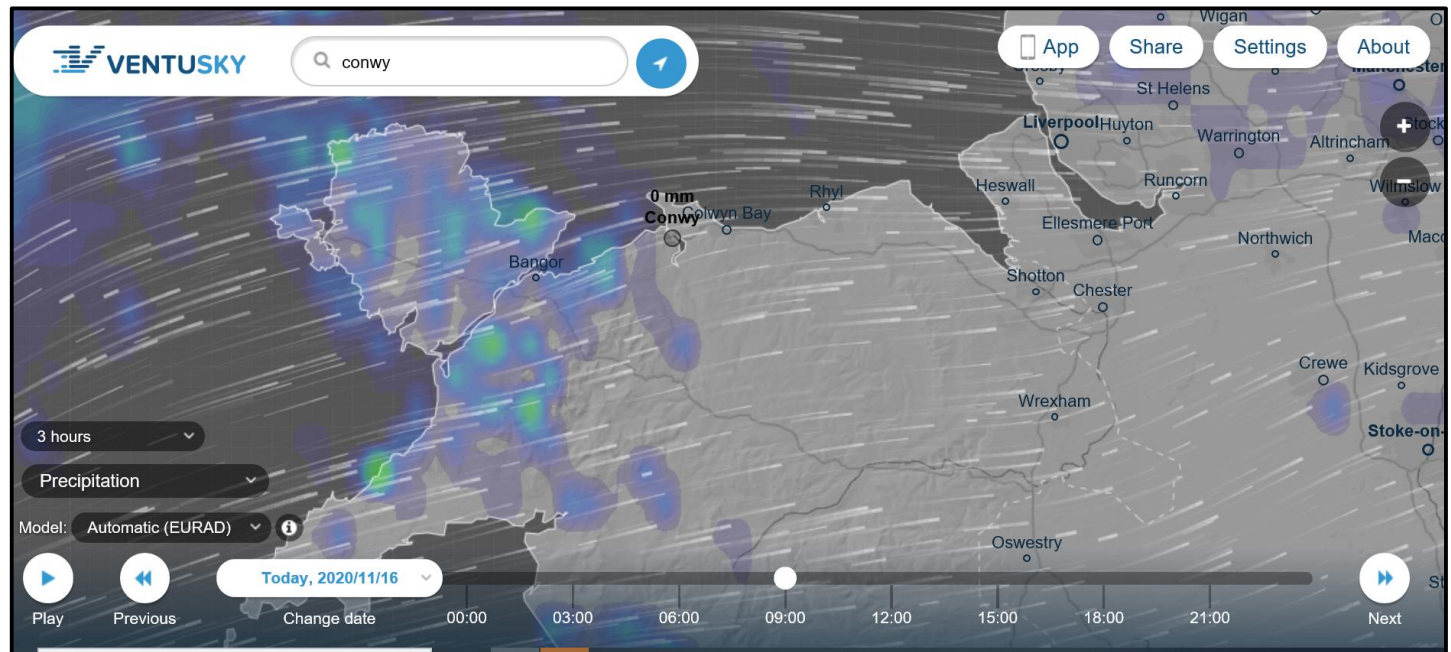
Preparing for an Event

- Flood Officer reviews data on daily basis
- Flood Risk Manager makes a call on appropriate response
 - Green
 - Yellow
 - Amber
 - Red



Preparing for an Event

Monitoring the Weather Ventusky – Free online



Preparing for an Event

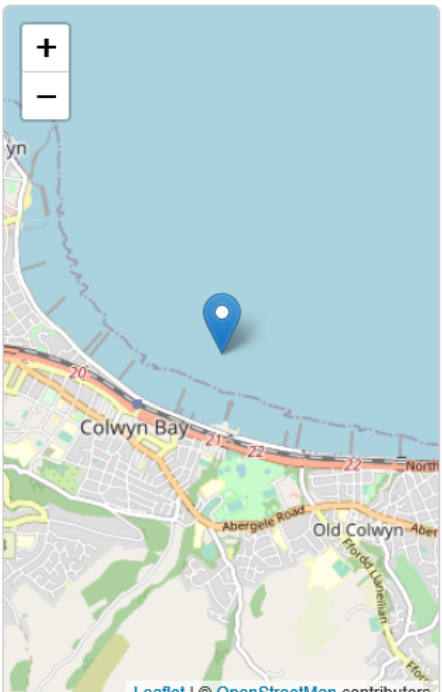
Monitoring the Weather Tidetimes – Free online

Tide Predictions for Colwyn Bay
 Subscribers now see 12 weeks of tide predictions. [Read more.](#)

Tide Times		
Hi/Lo	Time	Height
High Tide	11:13	8.26m
High Tide	23:34	8.25m

November 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Prev
Next

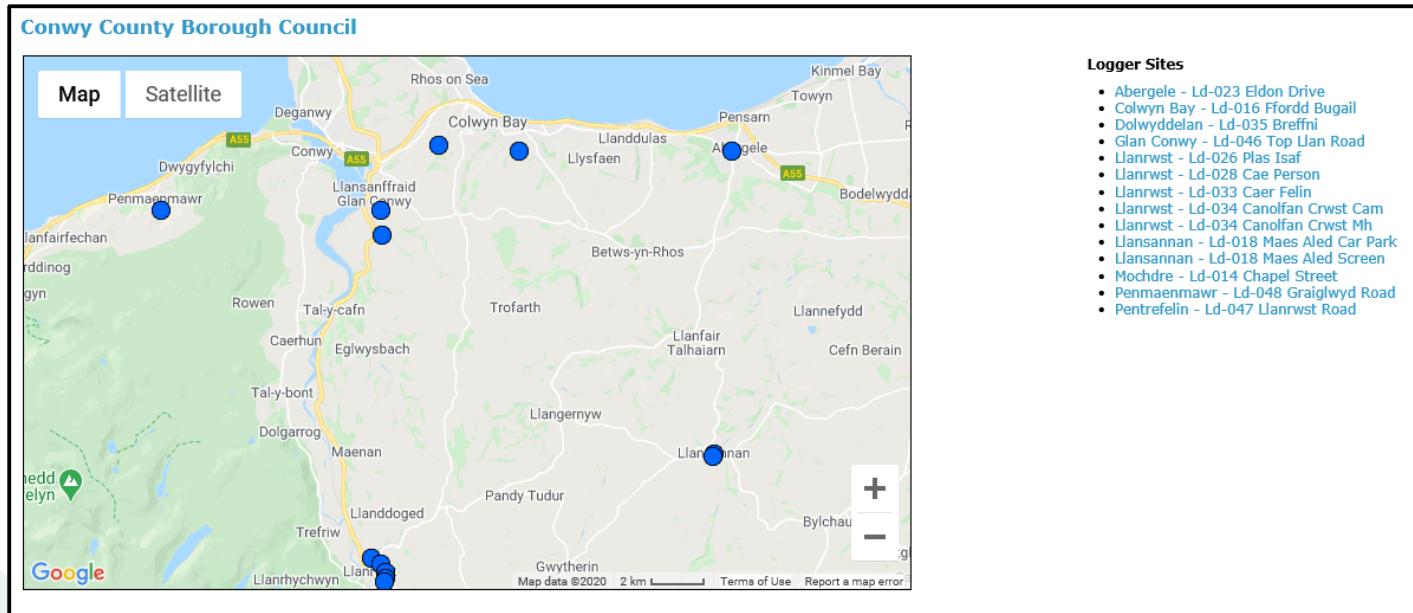


A map of Colwyn Bay, North Wales, showing the coastline and surrounding areas. A blue location pin is placed in the bay. The map includes labels for 'Colwyn Bay', 'Abergele Road', 'Old Colwyn', and 'North'. A zoom control with '+' and '-' buttons is visible in the top left corner of the map area.

Preparing for an Event

Review Telemetry Installations

- 14 critical locations
- Monitor u/stream and d/stream water levels
- Photograph



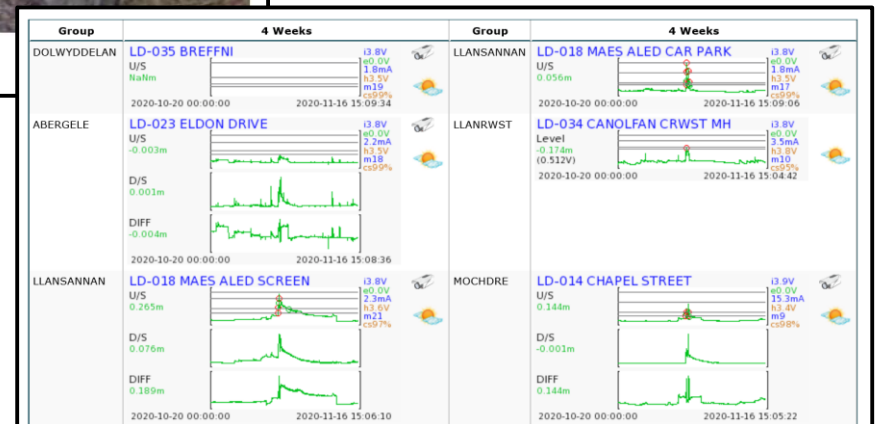
Preparing for an Event

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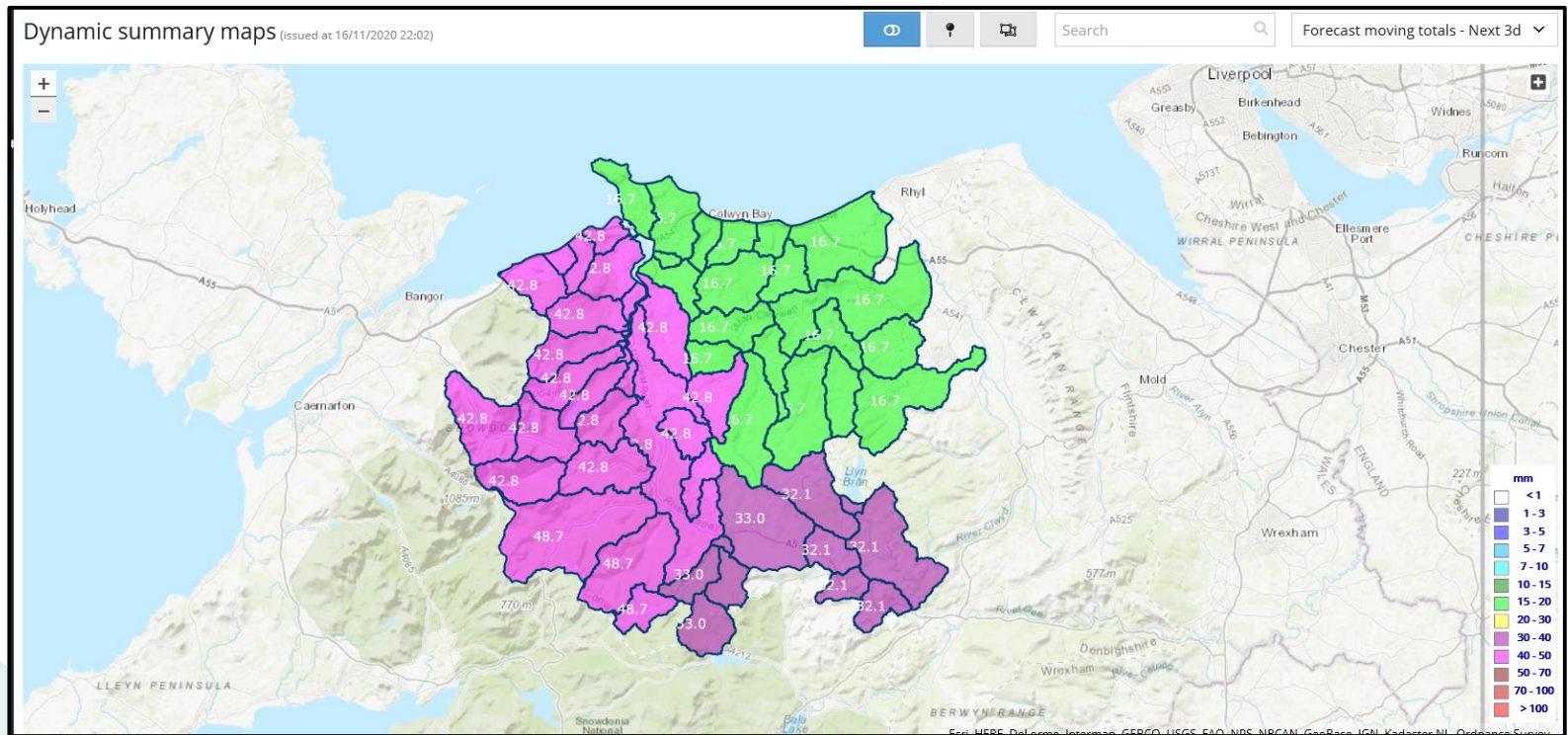


2020-11-16 09:00:00



Preparing for an Event

Monitoring the Weather Hydromaster – Subscription

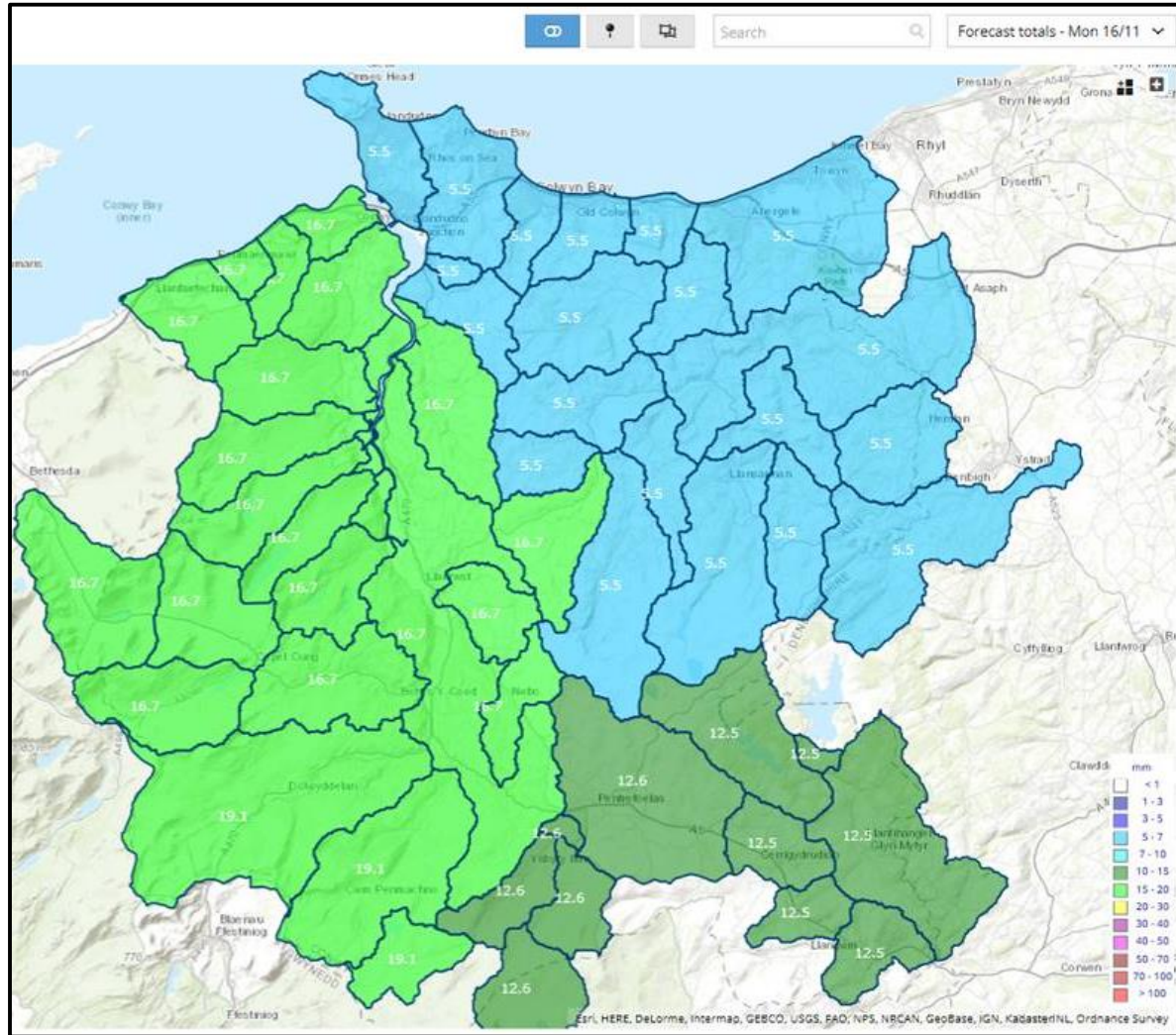


Preparing for an Event



Cumulative precipitation over 3 days

Preparing for an Event



- Daily Precipitation Predictions

Preparing for an Event

- Natural Resource Wales Teleconference
 - Instigated at an Amber
 - Attendance and sharing of information by Local Partners



Preparing for an Event

- Review critical assets
- Clear debris screens
- Walk watercourses upstream
- Confirm stock of sandbags
- Brief Out of Hours Call Centre



During the Event

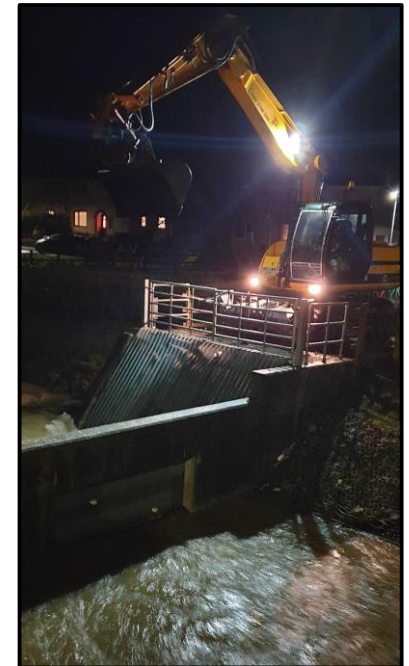
During the Event

- Monday to Friday normal hours
 - Flood Risk Manager and Open Spaces Manager manage event
 - Snr. Flood Officer takes calls from call centre and directs appropriate action
 - Flood Officers inspect critical assets on ground – watercourse, culverts, highway flood hot spots
 - Response Team from Facilities Section address any potential flood issues



During the Event

- Out of hours – After 4.30pm, weekends and holidays
 - Flood Officers on the ground during significant events – anticipate problems at known hot spots
 - Duty Officer for flooding manages calls from 24/7 Call Centre – ongoing review of telemetry and Hydromaster
 - Separate Duty Officer for Highways
 - Response Team directed to areas of most need
 - Typically requests – water entering property, road flooded, Police or Fire Service requesting assistance
 - Deploy pumps and sandbags
 - Call in external contractors if required

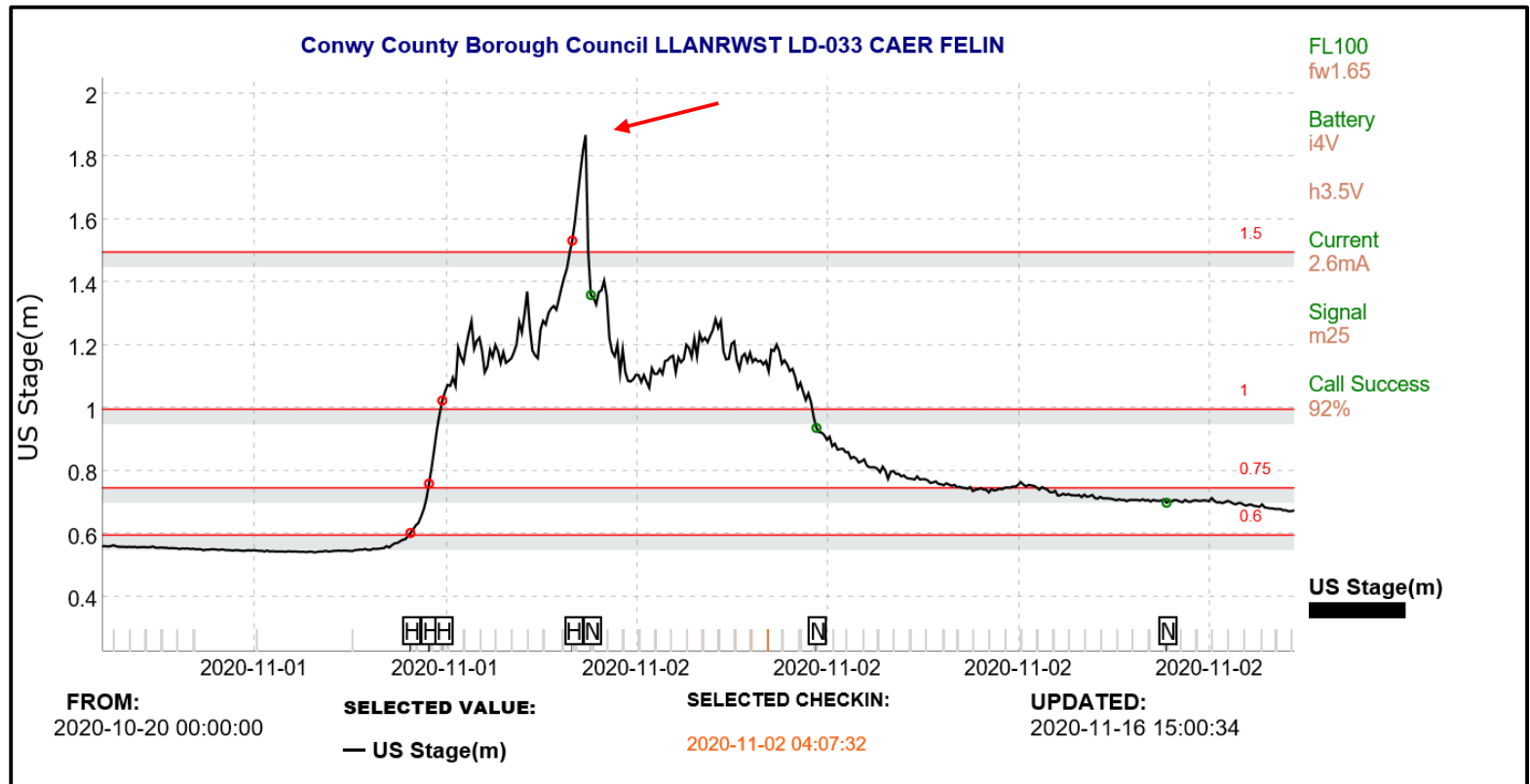


During the Event

- Establishment of Flood Incident Room
 - Incident room opened in significant events – amber/red
 - Communications brought in-house from call centre – can be done remotely due to Covid restrictions
 - Update social media and provide flood advice



During the Event

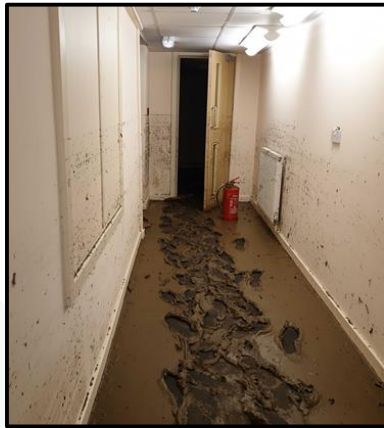


Monitoring of telemetry water levels during event – peak reduction once debris screen is cleared

Storm Cíara

Storm Cíara

- Friday 7th to Sunday 9th 2020
- Amber warning for both wind and rain
- Gusts of up to 90mph in Conwy Valley taking significant debris into watercourses
- More than 130mm of rain over weekend
- Flood response room opened to co-ordinate situation
- Almost 170 properties flooded due to 15 different events in the County
- Response team diverted to gritting runs in the evening !



Aftermath of Event

Aftermath of Event



Use of Technology

Use of Technology

- Hydromaster
 - Ability to predict intensities and their location
 - Facilitates more effective planning of response in advance
- Telemetry
 - Gives a real-time status of asset
 - Facility to direct resources on the ground
- Ventusky
 - Pressure, wind direction and precipitation prediction tool
 - Can put coastal areas on alert and close flood defence infrastructure

Use of Technology

- Telemetry – gives a real-time status of asset



Debris Screen 8th Feb

Debris Screen 9th Feb



Looking Ahead

Looking Ahead

- Review of culverts and debris screens within the County
- Raise awareness with landowners to their riparian responsibilities
- New flood alleviation works to reduce risk – 2 new interventions completed at Llanrwst since April
- Review of Out of Hours procedures to improve response during event
- Installation of additional telemetry points on critical assets
- Training up other personnel – playground inspectors - to recognise flood risk
- Ongoing engagement with Town and Community Councils to provide information of flood risk in their area
- Increased use of social media in liaison with Council comms team



Any Questions?