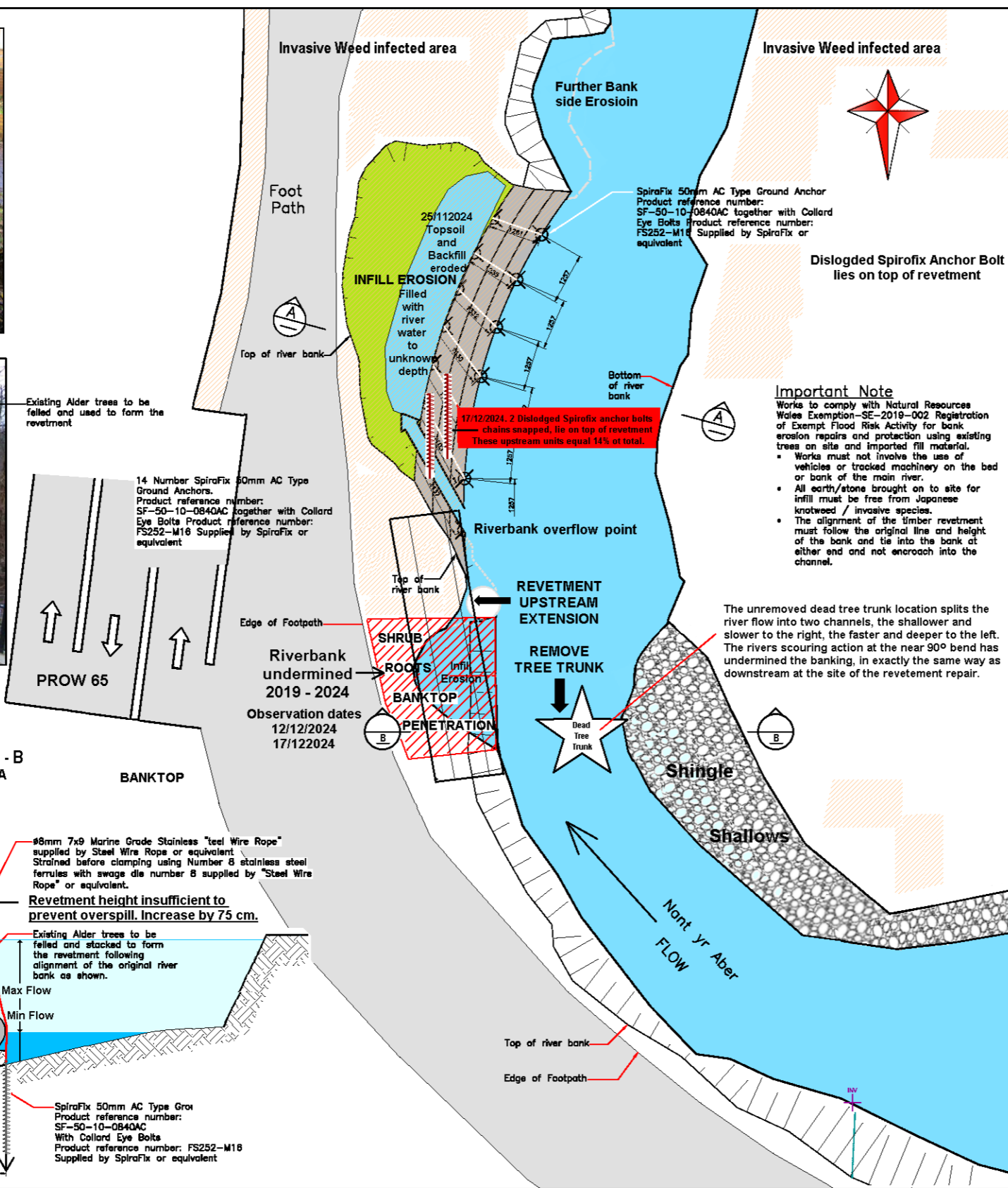
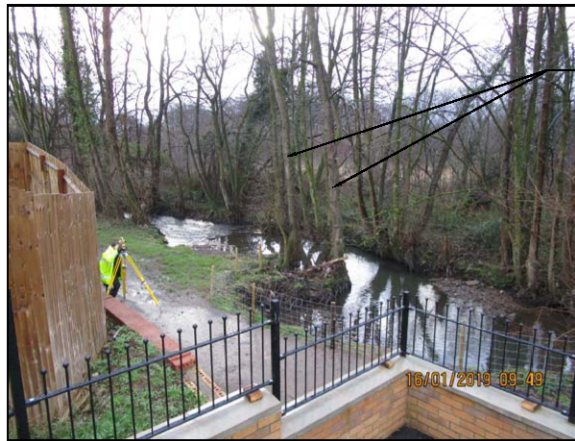


NANT YR ABER REVETMENT REPAIR 2019, DECAY UPDATE JANUARY 2025.



THIS DRAWING SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE EXPRESS PERMISSION OF THE ENGINEERING CONSULTANCY.

DO NOT SCALE

HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

It is assumed that the work undertaken will be carried out by a competent Contractor who is aware of all generic risks associated with the works. Listed below are significant risks relating to the works:

The Client must ensure that a construction phase plan is drawn up before the construction phase begins and that the Contractor responsible for ensuring that the plan is drawn up adequately addresses the arrangements for managing the risks.

Revision	Description

CAERPHILLY
ENGINEERING PROJECTS GROUP
ENGINEERING CONSULTANCY

Communities Directorate
Engineering Services Division
Ty Penllyn, Tredeman Park
Hengoed CF82 7PG
Head of Infrastructure - Marcus Lloyd
B.Eng MBA C.Eng MICE MCM MCIMT

Project title: Foot Path 55 Nant yr Aber Caerphilly

Drawing title: River Bank Reinstatement

Scale	Date	Drawn	Checked
As shown	12:2:19	D Grewar	
Project Ref.	Drawing No.	Rev.	
SDB47	002		

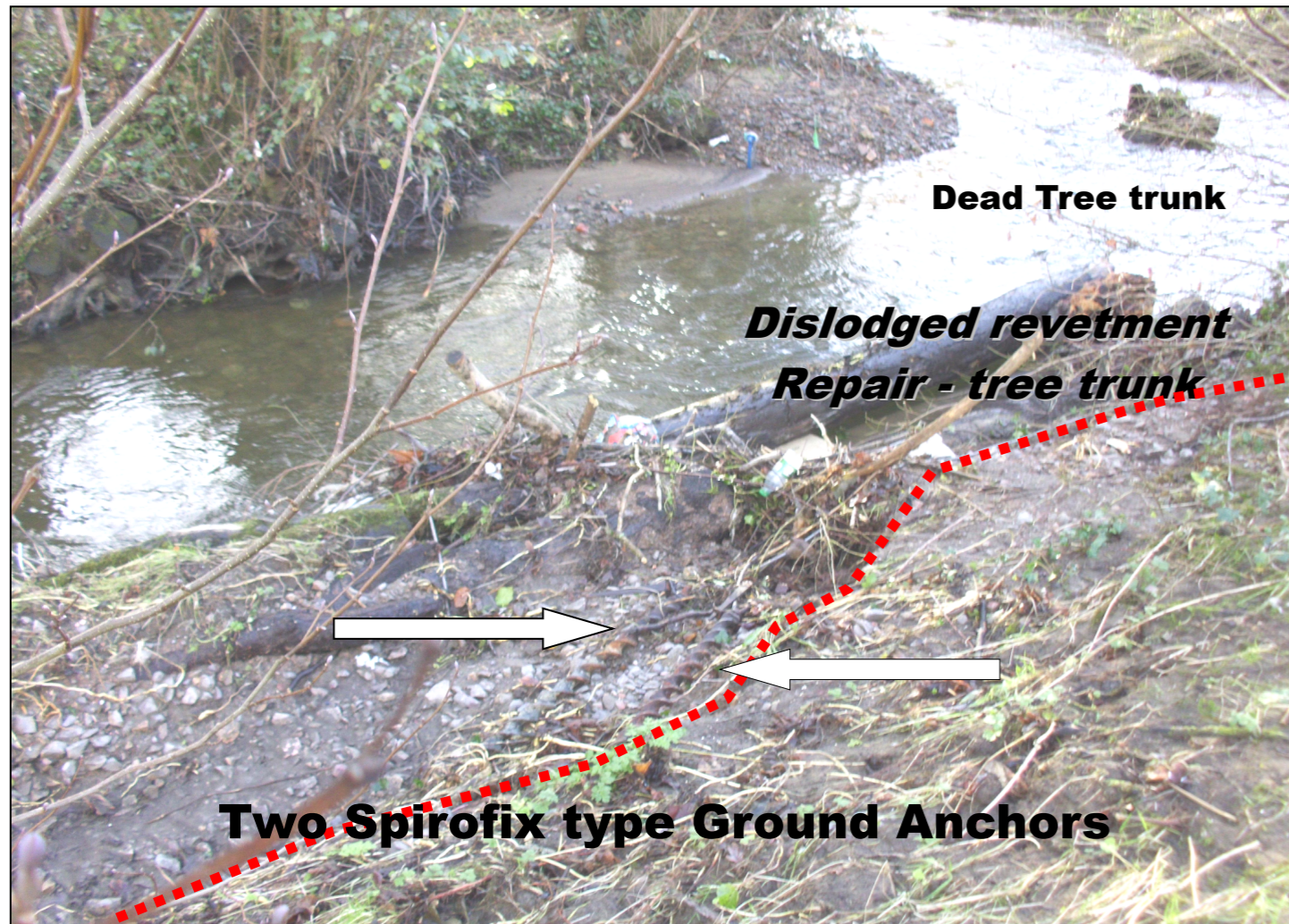
APPROVAL: [] COMMENT: [] INFORMATION: []
DRAFT: [] TEMPER: [] CONTRACT: [] AS CONSTRUCTED: []

- The scenarios of all rivers undergo constant change from variations in weather patterns.
- The Nant Yr Aber River is no different.
- Where bank side erosion occurs to one side, shallows occur on the other.
- Indicators are always present, but if not understood will aggravate planned resolution outcomes.
- The CCBC revetment repair plan drawing alongside reveals errors that were not foreseen or adequately taken into consideration.
1. The western bank side is on a near 90° bend of soft marl that does not appear to have been taken into account, nor the effects of bank side root penetration.
 2. Or the presence of a mid stream dead tree trunk affect on river water flows.
 3. Plus the overall length and height of the revetment repair to repel river overflow.
 4. The security of the anchor bolts used. 14% now failed, places increased pressure on the remaining anchor bolts.
 5. For these reasons there is now a need to extend bank side revetment upstream by both height and length.
 6. These failings may regrettably increase without proactive input from Natural Resources Wales and CCBC corrective remedial action undertaken to rectify all the underlying causes, as far as the downstream Gallagher Park retail estate that includes the removal of the Dead tree trunk and the Aldi store's site drainage construction across the INMC 64 footpath by CAB or CJB builders, that resulted in bank side stones each approx 1m⁽³⁾, left as debris in the river bed to negatively affect the river flows path.

Note. These issues end beyond the of the Gallagher Park retail estate construction, where against the bank side of similar soils are protected by large stone cubes with a total of 4m height against the opposite bank side height of around 1.2m.

The amended plan above indicates the failings that have arisen in the five years following completion of the revetment repair.

Although regrettable through inescapable climate change, where incremental weather conditions will increase. The downside of ignoring the necessary works required will add to the need for repetitive attention and repair as further bank side erosion occurs, with ever growing demands and associated costs upon reducing County council budgets.



To the left of the hatched red line in the picture above, shows evidence of the river revetment bank exposure and backfill erosion depth of around 80cm, of the certified weed free soil plus backfill material.

It would appear that the '*Dislodged revetment repair tree trunk*' that had lain across the river, has been manoeuvred back alongside and re-strapped to the repair.

The two white arrows point to the two of the Spirofix type revetment ground anchor bolts dislodged by the erosive action of the Nant Yr Aber River. Zoom in for clarity.

On the right of the red hatched line, on remaining foreground soil, the over winter dead stalks of Himalayan balsam spread lie flattened from the constant river overflows, where the 2019 planned bank side repair which was then, and even now is still to low.

The author's apologies are offered, as a maculopathic eye condition that relies upon a cameras ability to set both auto focus and exposure timings, that do not appear to be correct for the picture above right.

Yours truly, Chris Moorman
27 Castell Y Fan,
Parc Pontypandy.
Caerphilly, CF83 3JL



In the picture above the central white arrow shows evidence of the riverbank side's marl type of soil, is constantly undermined from the increased river flow forced by dead tree trunk.

That erosion extends around 1000mm backwards under the surface vegetation growth, whose roots dangle down through the eroded bank into the river water, weakening the bank side structure next to the public footpath.

The rate of erosion becomes more intense after heavy rainfall that increases the rivers depth and metres per second flow speed.