

Briefing Note:

Tan Lan Embankments

Purpose

This note is supplied in response to the query raised by Llyr Gruffydd MS in the Climate Change, Environment and Rural Affairs Committee meeting, on 8 November, on the cost of repairs at Tan Lan (Conwy Valley). Please see Annex 1 for the transcript of the query.

Current situation and previous repairs at Tan Lan

NRW is responsible for protecting people and homes most at risk from flooding. In line with Welsh Government priorities, we must take a risk based approach to the way we utilise public funds, prioritise accordingly and ensure that appropriate decisions on investment are made considering economic, technical and environmental factors. We must also take a sustainable approach to flood risk management, and explore opportunities to enable our landscape to adapt to climate change, working within the budget available to us.

The impact of last winter's storms on communities has been felt across the whole of the country, and dealing with their aftermath continues, alongside the challenges of adapting to the impacts of the COVID-19 crisis.

During Storm Ciara on the weekend of 7 February 2020, the Conwy Valley flood scheme successfully defended properties in Llanrwst and Trefriw from flooding from the River Conwy. However, the high river level did, once again, breach the Tan Lan embankment causing agricultural and low-lying land to flood. Damage was identified along a 3km stretch of the Tan Lan embankment in the Conwy Valley, including a substantial breach measuring approximately 17m long, 14m wide and 5m deep. An inspection and assessment of the breach was carried out and an options report was prepared.

The experience of completing previous repairs on this embankment have shown that several considerations must be factored into our design of works and estimated repair costs for this location. Due to the scale of any repairs, any works would need to be carried out under the current Construction (Design & Management) Regulations (CDM 2015). These are the regulations for managing the health, safety and welfare of construction projects that we work to.

Our estimates for full repair of the breach and other damage included the cost of contractors to carry out the work, the sourcing and delivery to site of 1700 tonnes of clay and 300 tonnes of topsoil material, and the hire of appropriate machinery to carry out the repair and welfare facilities for contractors. Alongside this, there are additional costs for temporary works access, fees associated with crossing the Conwy Valley rail line, and an allowance for dealing with land agency issues and risk should weather or ground conditions conspire to work against the contractors. These costs, with risks factored in,

total £150,000. In 2016 we saw a breach slightly larger than that experienced this year – that repair cost £220,000.

Future considerations at Tan Lan

Climate change science indicates and increasing likelihood of frequent storms and heavy rain, as well as rising sea levels. The breaching and damage of the Tan Lan Embankment will, therefore, continue to be an ongoing issue, given its deteriorating condition and relatively low level. We are seeing more frequent damage of this embankment and have recorded at least 11 breaches of varying degrees over the years, each time requiring some sort of repair.

We therefore need to consider the longer-term sustainability of these embankments and the flood risk management role they play locally.

The Tan Lan embankment currently provides a very low-level of flood protection to 6 homes, local businesses (including 49 caravans), agricultural land, the main A470 trunk road and the rail link connecting Conwy Valley communities with the mainline at Llandudno Junction.

It is also a location where we undertake minimal levels of maintenance, because of the low risk to life compared to other locations, and the constraints on our budgets. We are undertaking a viability study to find the best options for the future of the embankment, in relation to the local communities of Maenan and Tan Lan, taking into consideration the impact of the wider Conwy Valley area.

Through this viability study we are keen to work with the community and wider stakeholders, to explore opportunities to create a sustainable flood management solution. This will also give us an opportunity to explore enhancements to the local natural environment.

The study will seek to identify sustainable options for managing the embankment and flood risk to the local communities. The options can typically range from improving and maintaining the existing embankment through temporary or long-term repair work; realigning the flood defence; leaving the embankment to naturally decline and re-connecting the floodplain; providing local flood measures to properties; or a combination of the above. All options will be considered and appropriately appraised using techniques and guidance set out by HM Treasury and Welsh Government

Any decision about the future of the embankment will also take into account the West Wales Shoreline Management Plan, which provides the framework for managing the long-term impact of tidal flooding across Wales and includes the Conwy Valley up to Maenan and Tan Lan. The solution will also need to ensure the Sustainable Management of

Natural Resources in line with the Well-being of Future Generations (Wales) Act (2015) and the Environment (Wales) Act (2016).

NRW will continue to work closely with the local communities and stakeholders throughout the study. Once we have initial information about the flood management options, we will be in touch with the local community in the coming months to discuss ideas and better understand local priorities and aspirations, to help shape the future of the scheme.

In the meantime, you can find further information on the project webpage, which we will continue to update as the project progresses: www.naturalresources.wales/tan-lan

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Annex: Transcript from CCERA session, 8 November 2020

Llyr Gruffydd

Thank you, Chair. Thank you very much. I just want to go back a little bit to where we were when we were talking about investing in more and new infrastructure, be it hard infrastructure or soft infrastructure. There's also the issue, of course, of maintaining and repairing existing infrastructure, which brings substantial cost with it. I'm sure you'll be aware of issues with the Tan Lan embankment in the Conwy valley, where it was breached in February and hundreds of acres flooded, crops lost, livestock lost. I think Natural Resources Wales quoted around about £150,000 to fix the breach, but that wasn't going to happen until a viability study was completed to look at options around the embankment. That isn't going to be completed until at least 2022, and then, of course, the options would be identified, there'd be a preferable option, there'd be a need to resource work, commission work and then complete it. So, you're talking potentially three, maybe more years between the breach and its effectively being addressed. In the meantime, of course, as I'm sure you know, the local community has come together and they've forked out to fix it themselves, using local contractors. It cost £15,000, so there's a question there about making best use of your own investments if a local community can do it for £15,000 and you're quoting a price tag of £150,000. But the question I'm asking is, shouldn't NRW have been in a position to fix that even if it was only on an interim basis, given that the community actually had to do it themselves in the end?⁵³

Clare Pillman 14:18:24

Yes, I'm aware of the Tan Lan embankment and talked to Janet about it. It is not one of our managed assets. We do have around 3,000 assets that we maintain and keep up to standard, invest in and ensure that they operate. But it is a hugely labour-intensive and

difficult cycle, and, as you've demonstrated, Llyr, you can maintain them up to a particular level, but, equally, over time they take more and more investment. So, we always need to look at the viability of that particular asset and the expenditure against it. But I can see Jeremy wants to come in too.⁵⁴

14:20

[Llyr Gruffydd MS](#) 14:20:30

But, in the meantime, it was just going to be left by NRW as it was. Sorry, Jeremy.⁵⁵

[Jeremy Parr](#) 14:20:36

No, not at all. I think you're right, Llyr, in terms of the maintenance legacy from the network of defences that we have, and we have to make decisions about where to prioritise the resources that we've got and the investment that goes in. We have repaired those embankments, as I'm sure you know—we've repaired the embankments at Tan Lan at various points in the past. But this presents some of the challenges and some of the issues in terms of the resource that we've got and the prioritisation, obviously, across Wales. It is done on a risk-to-life basis—it is driven largely by where communities are. Where we don't have communities then, unfortunately, we would like to do more work in locations, but in some locations we can't, or it is harder to do. That's the honest position of where we're at, and part of the consequence of having to prioritise.⁵⁶

We're always keen to work with local stakeholders, we're always keen to look at what the solutions are, including in locations where perhaps the time is—I'm not saying necessarily so in Tan Lan—to step back and put the line of defences somewhere else. Obviously, that comes with massive consequences, not least to the landowners. I stress again that's not what necessarily will happen here, but I think again it goes back to our earlier question about thinking about what all of the options are, and what all of the options are in the long run.⁵⁷

[Llyr Gruffydd MS](#) 14:21:58

So, how could it be, then, that addressing the issue cost £15,000 to a local contractor, when, actually, NRW were telling people locally it would £150,000?⁵⁸

[Jeremy Parr](#) 14:22:08

I don't know the detail, unfortunately, Llyr, in terms of what the cost comparisons are. I don't know whether that's a truly like-for-like comparison, for example.⁵⁹

[Llyr Gruffydd MS](#) 14:22:16

Maybe you could write to committee giving us what exactly—⁶⁰

[Clare Pillman](#) 14:22:19

I think probably we would have been looking at doing it to a different standard.