Video transcript – Epping Forest leaky dams project

[0:00-0:07] **Music**

[0:07-0:16] **Caroline Haines, Chair, Epping Forest & Commons Committee:**

The leaky dams work happening at Epping Forest is one of the biggest water resilience projects of its kind in the southeast of England.

[0:16 – 0:57] **Ariane Blacher, Carbon Removals Project Officer:**

So to improve drought tolerance, leaky dams in the short term, they slow the flow of water which creates this pooling effect and allows the water to infiltrate into the soil acting as a reserve for drought periods. And in the longer term, this pooling effect creates sedimentation which essentially raises the channel bed. So during high rainfall events, you get that overspilling of water into the flood plane. So leaky dams aim to mimic natural dams that you find normally in the environment like a beaver dam or a fallen tree. The dam slows the flow of water which allows for the sediment to drop on the bottom of the channel and this encourages plants to come back to the channel and creates microhabitats like pools and riffles.

[0:57 - 1:20] **Caroline Haines, Chair, Epping Forest & Commons Committee:**

We have about 374 leaky dams now being built in Epping Forest, largely by volunteers and it's something like 300 hours of volunteering that have fed into the making of the Leaky Dams. The water that they hold back is something akin to four Olympic size swimming pools. About 10,000 cubic meters of water.

[1:20 – 2:27] **Ariane Blacher, Carbon Removals Project Officer:**

To measure the impact of this work on our streams, we'll be looking at water level. So how are leaky dams impacting the water level and flash flooding effect in our streams? Are we seeing vegetation come back? How is the geomorphology changing? Drought stress has a huge impact on the trees and Epping Forest. Without proper soil moisture, trees are unable to photosynthesize properly which is a process necessary for growth and tree health. To monitor the impact of this work on the trees, we'll be looking at the soil moisture available to the trees and how leaky dams are impacting that.

We'll also be looking at uh the internal moisture stress of the trees using monitors that are placed on the tips of branches because that's where drought will first be felt within the trees. Um and we'll also be looking at the size of the trunk. Trees under stress will have their trunks contract. It's also impacting a lot of other ecological features uh that require adequate soil moisture such as fungi. Ain forest has around 1,500 fungi species recorded. So we're seeing them be impacted as well.

[2:27 - 2:46] **Caroline Haines, Chair, Epping Forest & Commons Committee:**

The forest needs to become more resilient in a number of ways but water resilience is one of the key ways. As always, we are hugely grateful to our volunteers and the local community and all the different organizations that they represent for carbon action. This is a win-win.

[2:46 - 2:57] **Music**