

Brashly Improving Water Quality:

Innovative brash management to enhance water quality
following peatland restoration and forestry operations

Anna McWilliam



Brash



Aged needles

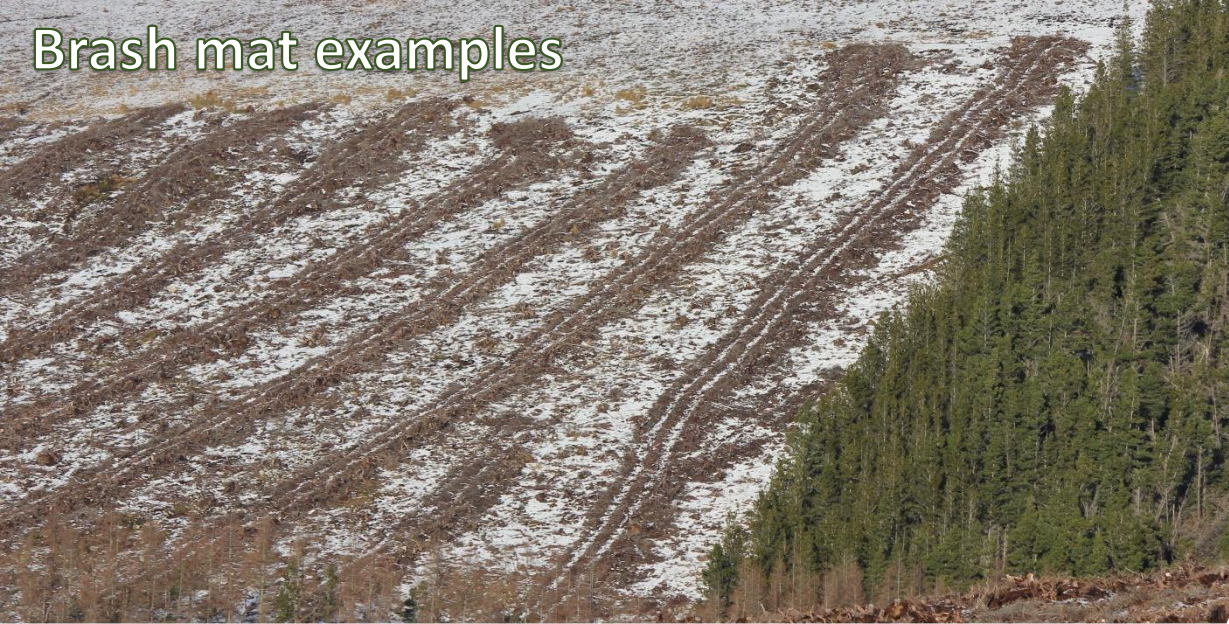


Creating a brash mat



Fresh brash mat

Brash mat examples



Brash Management

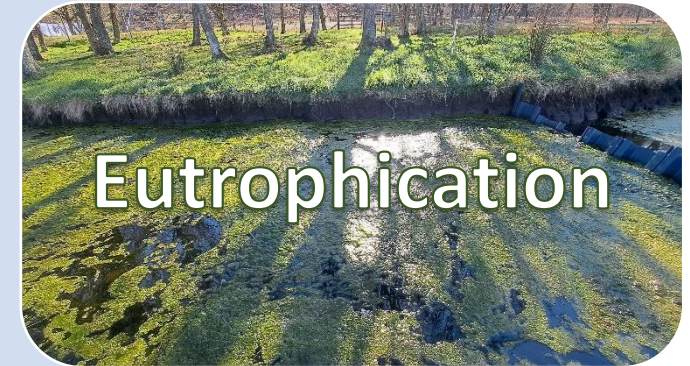
Brash mats left in situ



Brash bale going for chipping



Why manage brash?



Negative impacts of decomposing brash

Project Aims

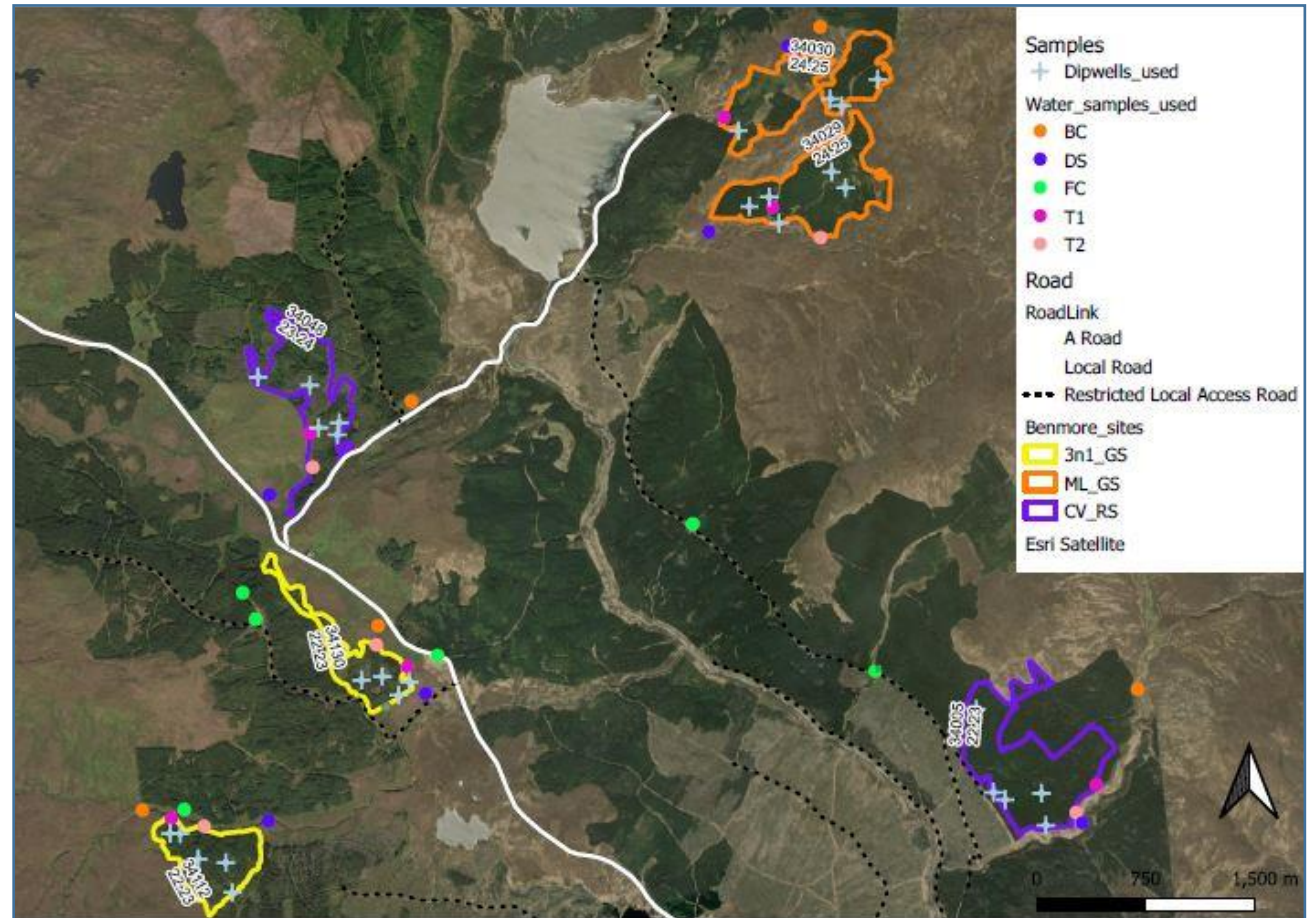
1. How can we best manage brash on forestry and peatland restoration sites?
2. Assess rapidly evolving techniques in felling and peatland restoration.
3. Can we repurpose brash - creating a brash biochar based water filtration material?

Benmore Forest, Forestry and Land Scotland

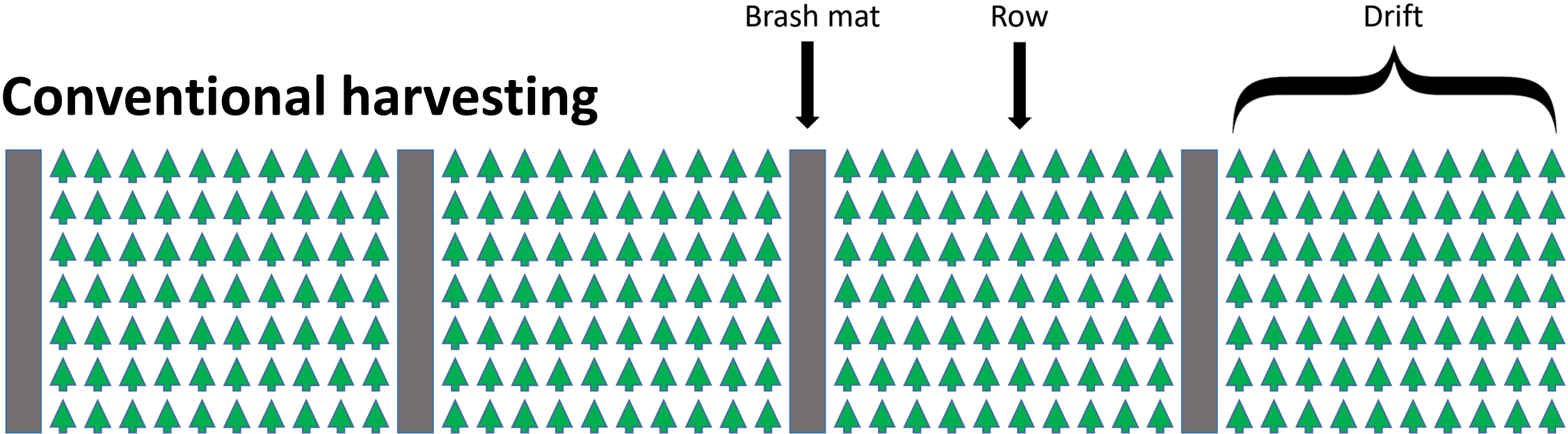
3 paired sites.

Management techniques:

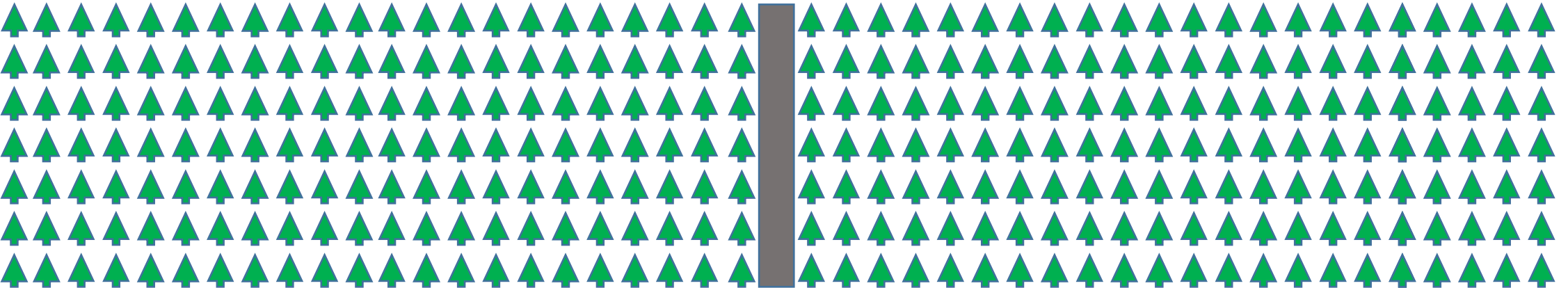
1. Mulching & ground smoothing.
2. Multiple drifts felled into one & ground smoothing.
3. Conventional harvesting.



Conventional harvesting



Multiple drifts felled into one brush mat



Process of felling multiple drifts into one

1. Access route cut conventionally



Results in...

Low stumps, no visible damage

2. Excavator cuts whole trees with shears

Widely spaced brash mats & ground smoothing



10ha



5ha



Peatland Restoration

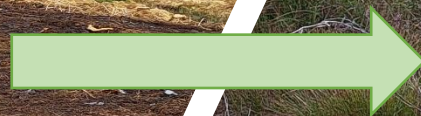
Mulching



Ground smoothing



Multiple drifts into one

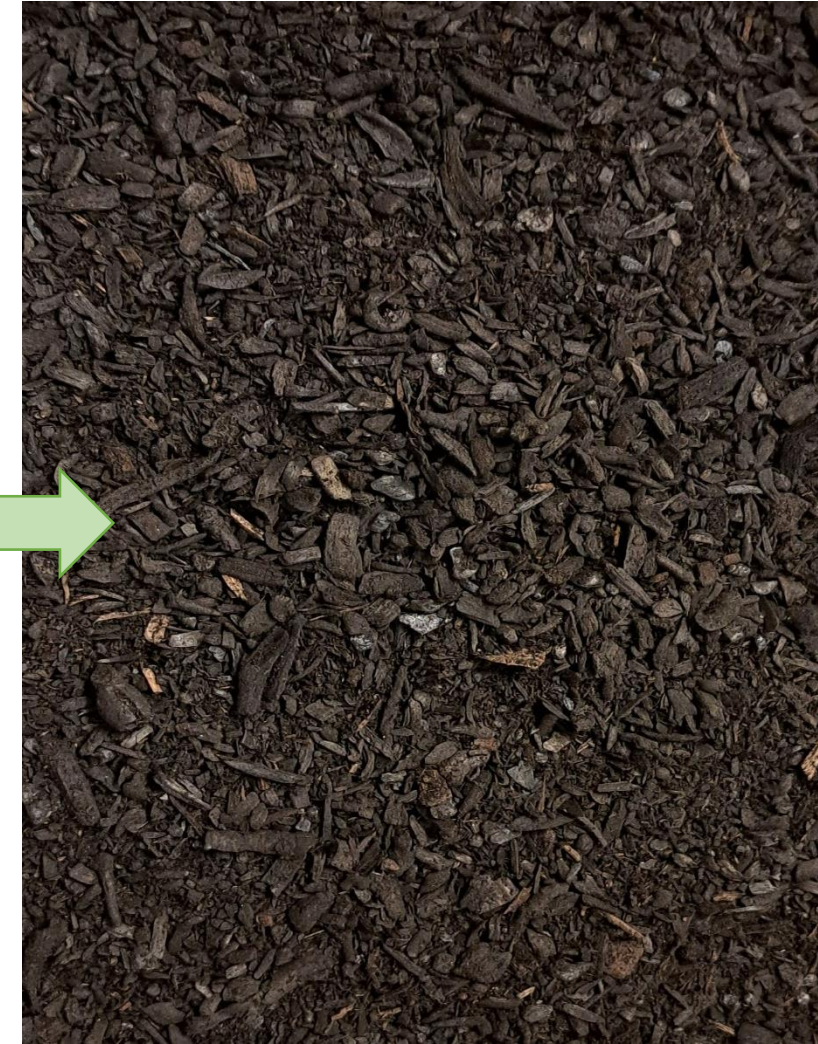
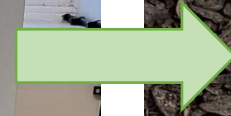
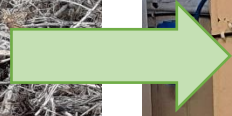


4 years post ground smoothing

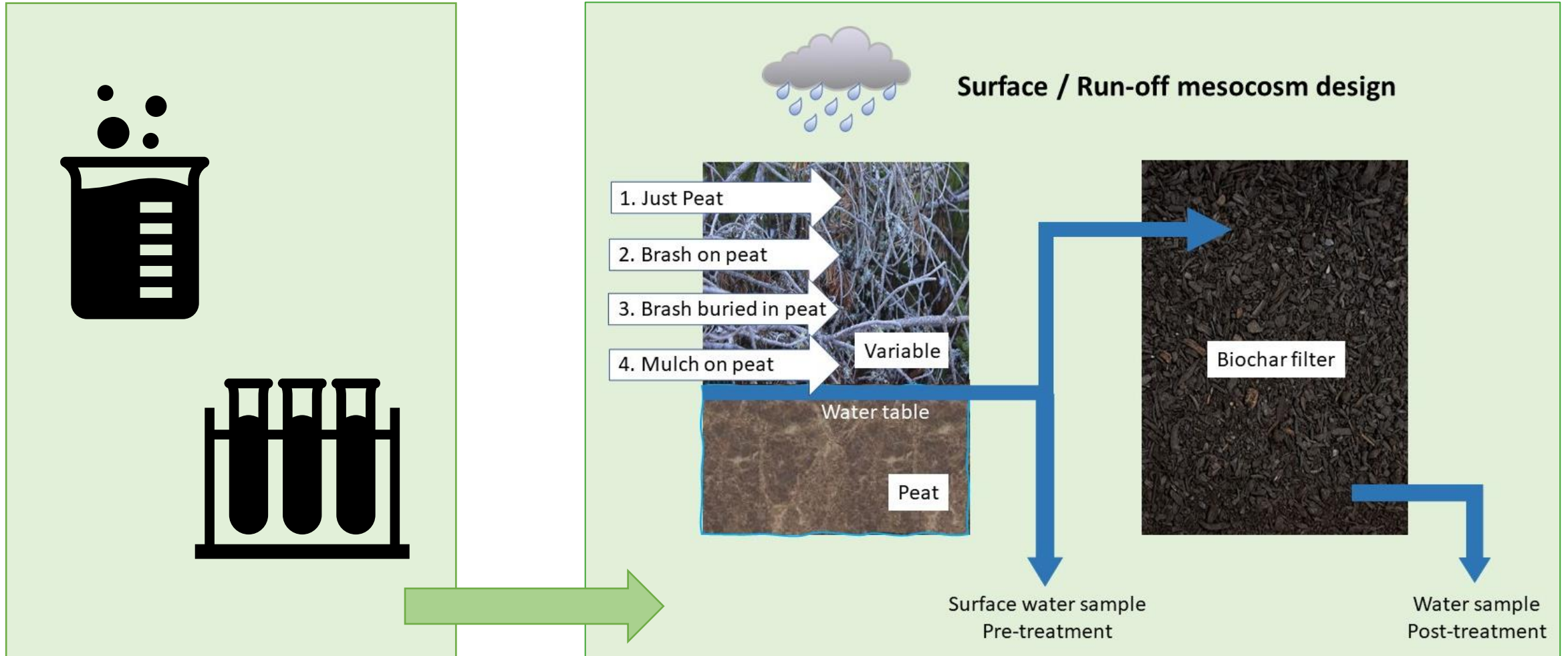




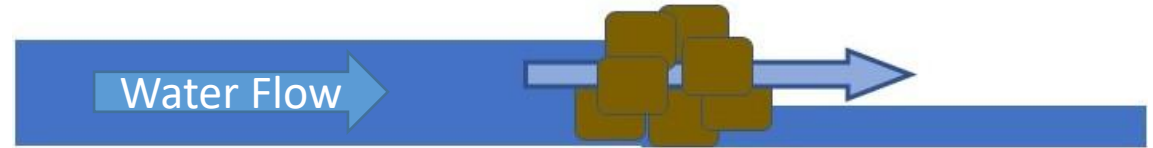
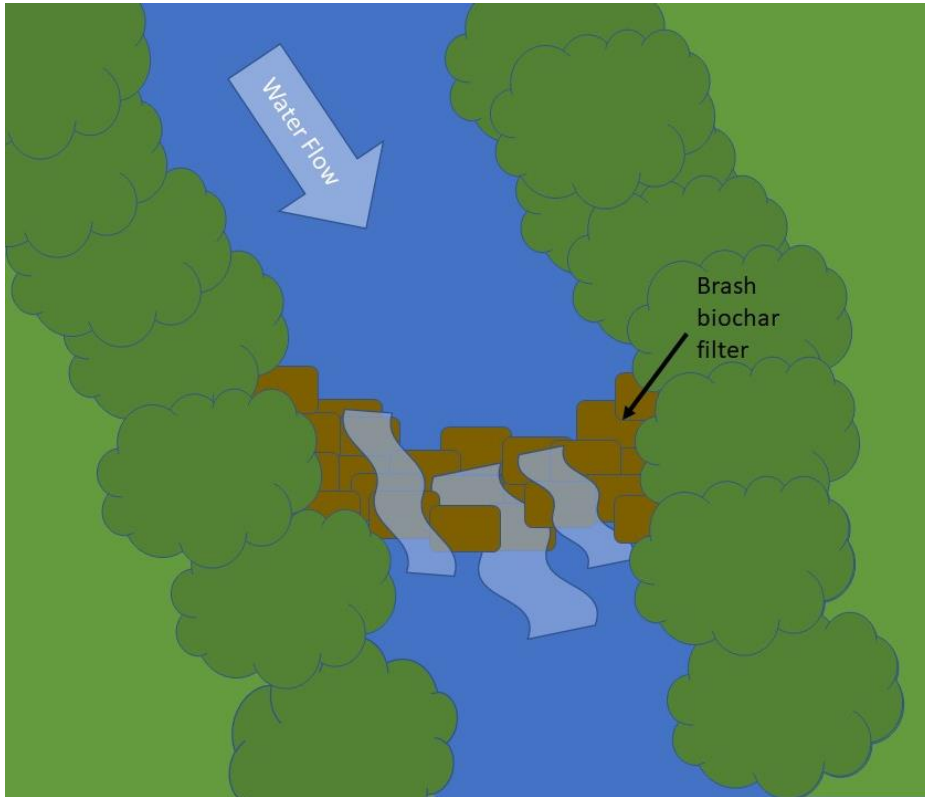
Brash Biochar Water Filter

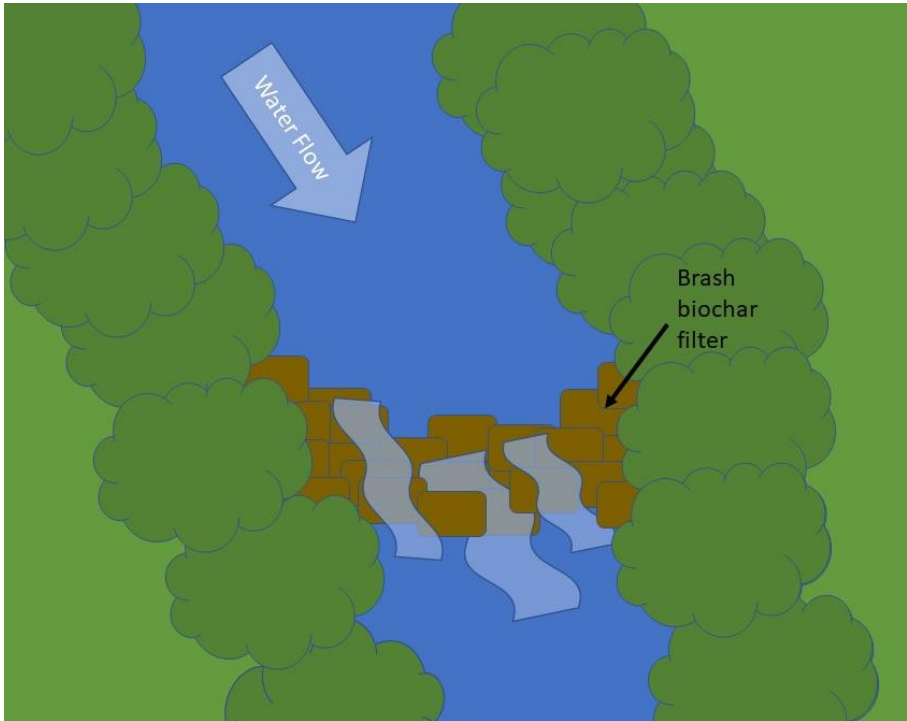


Brash Biochar Batch Testing & Mesocosms



Brash Biochar Leaky Dam





Fix the problem and the symptom!



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