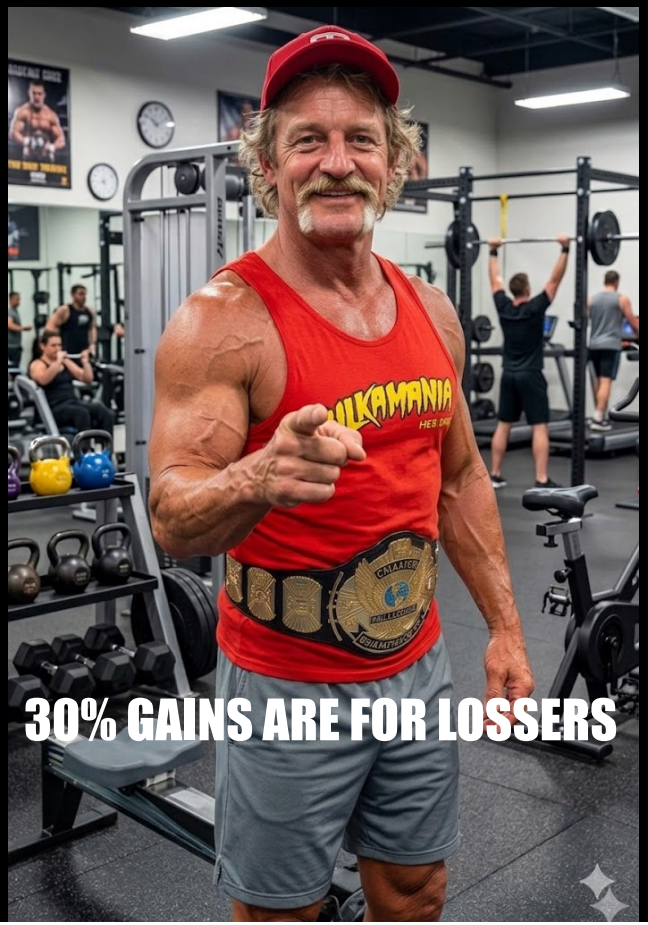
Foundation failures during flood

My first prototypes were strong in test but a nightmare to install


Test foundation have now
been in the field for 5 years

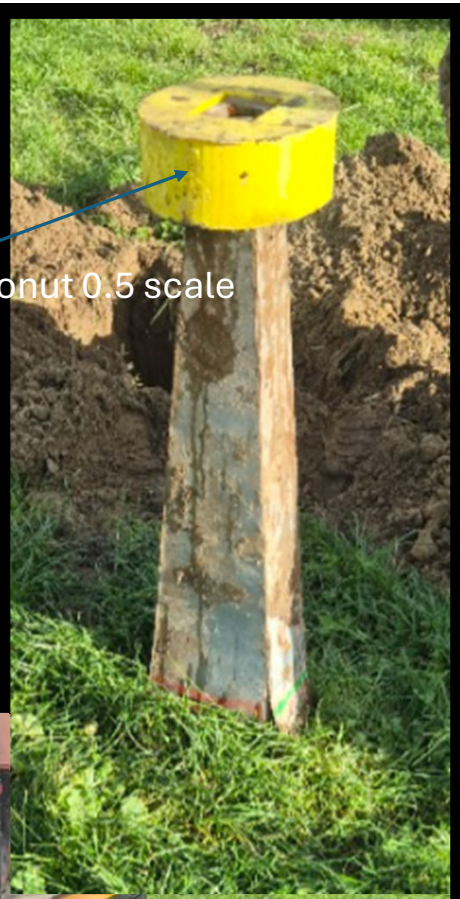
My early prototype had one other floor
1st permanent lean moment when the pole would not return to original positions, only had only a 30% gain over the standard control method.



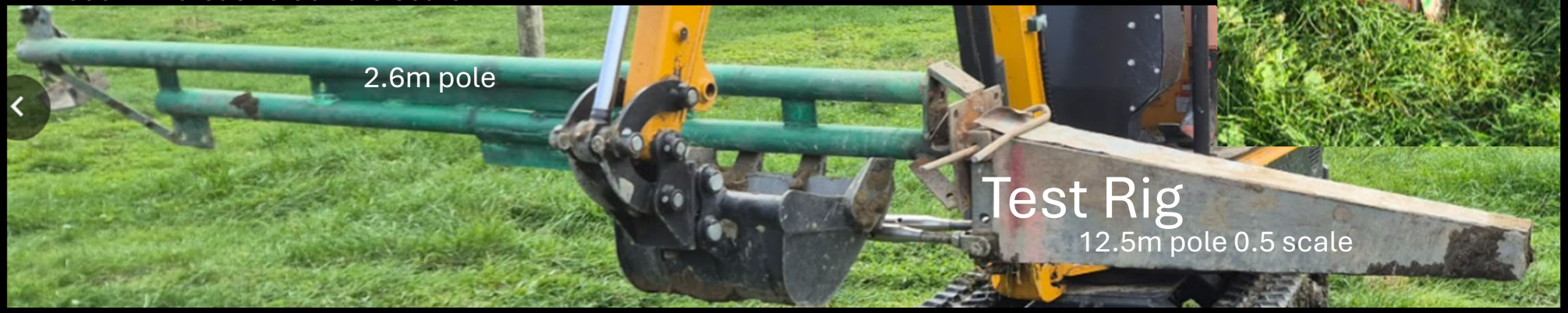
*AI MAY HAVE CREATED THIS PHOTO

How much testing did I do?

SHIT LOADS!



600mm breast block 0.5 scale



Tests must be realistic of real-world load events
But controlled to make fair comparison

Two types of excavation method was tested
Auger and bucket excavated

The test procedure goes as follows...
pull hold record
Release load record
Increase load by
0.5kn....rinse and repeat

If the soil moisture changed the control method was retested and any new test within 24hrs of that test

Standard control test of a 12.5m pole with 600mm breast block in moist sandy cohesive volcanic soil will on average require....

1.6kN to permanently lean

5.24kN to overturn

So what did my best performing foundation on average get?

3.0kN to permanently lean

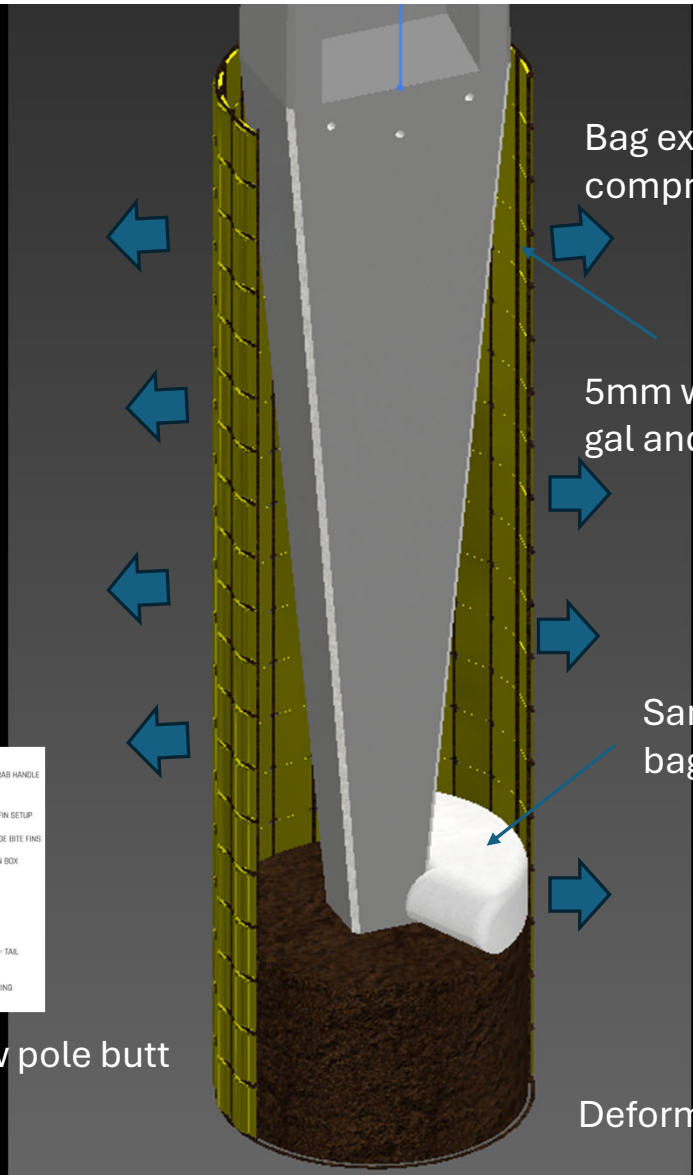
13.8kn to overturn

Nobody does foundations better than Jed

But how?

1. Hoop stress
2. A little more depth
3. More grip
3. And a shit load of holes

600mm below pole butt



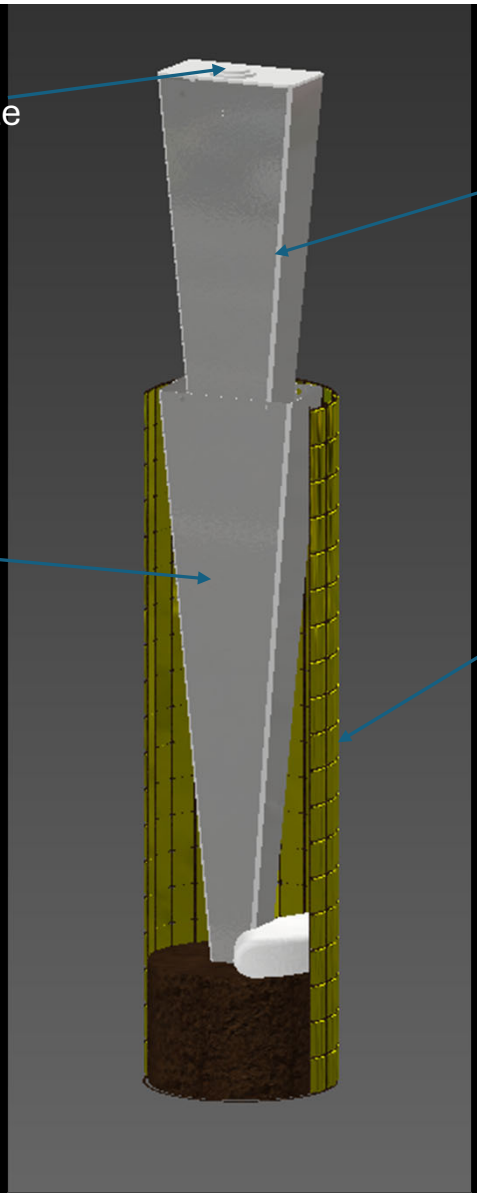
Bag expands when filled and compresses outer soil

5mm welded mesh hot dipped gal and hot dipped TPU

Sand bag

Deformed fabric and mesh create extra grip

Pre install your foundation before your shut down



I filed for my first ever patent
That makes me a big boy inventor now