



LONGRIDGE

EST. 1998

Setting Up or Expanding a Grove

HARRISON ROWNTREE



About Longridge Olives

- First high-density orchard planted in 1998.
- Super high-density orchard planted in 2008.
- Olive mill operational in 2018.
- Three on the ground workers (Jim, Lachlan and Harrison)
- 86 ha of olives.





The Next Planting

About Harrison

- Studied Math, Physics, Computer Science and Teaching.
- Came back in 2018 to help build the olive mill.
- Integrating sensors and monitoring technology.
- Skills in networking, planning and infrastructure.
- Passionate about flying.





Major Considerations



WATER



LOCATION



PLANNING FOR LOW
MAINTENANCE



PLANTING

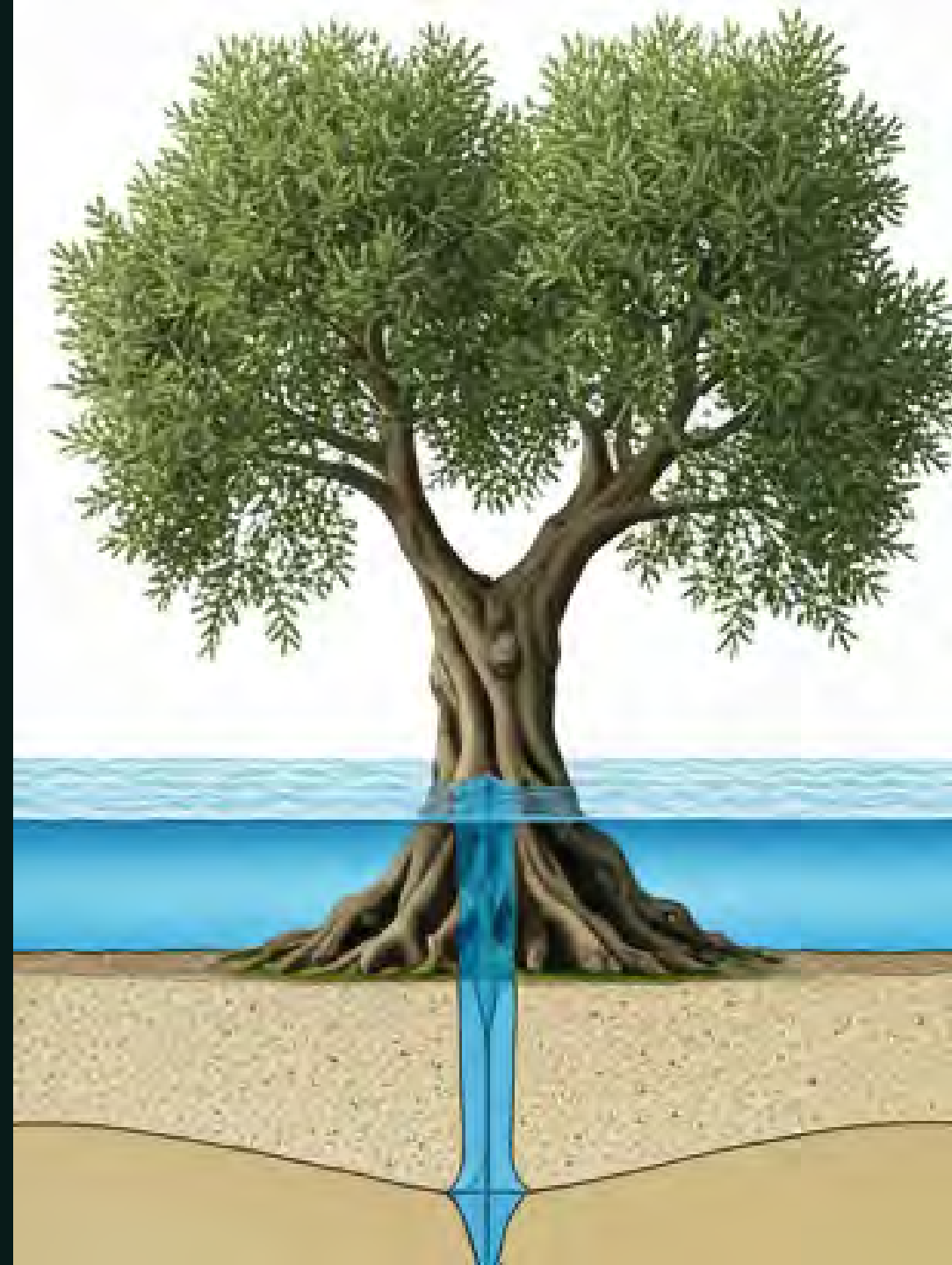
A black garden hose is shown spraying water onto a dark, wet ground surface. The water is being directed from the right side of the frame towards the center. The ground is covered with a layer of dark, possibly wet, soil or mulch. Surrounding the central area is a dense layer of dry, brown grass and twigs, which appear to be part of a natural or landscaped area. The overall scene is dimly lit, suggesting an outdoor setting in low light conditions.

Water



Water

- Olive trees do require a lot of water.
- 10 Megalitres per hectare, annually.
- 1 full metre of water over the entire grove.



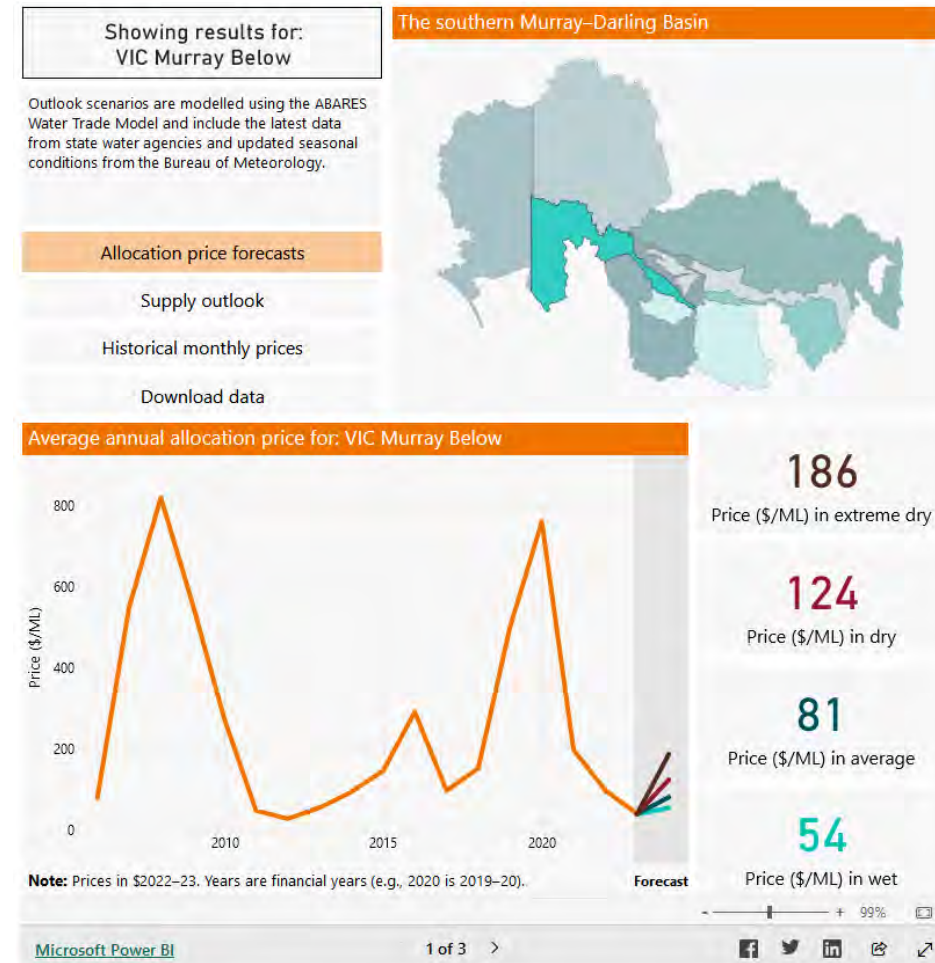
Water

- The price of river water is a cost you cannot control.
- Use bore water where you can.

Water Market Outlook – April 2023

Authors: John Walsh, Rhys Downham, Jordan Rose and Mihir Gupta

Data visualisation





336.0

705.40

2

560'9ha

Bore

Location

87.675

201.0

38.00

29.57

10.00

55.0

72.0

144.0

3.0

234.0

30.00

102.00

100.0

65

275.82

396.83

361.0

306.00

342.83

282.96

Frosts

- Location is the most important factor.



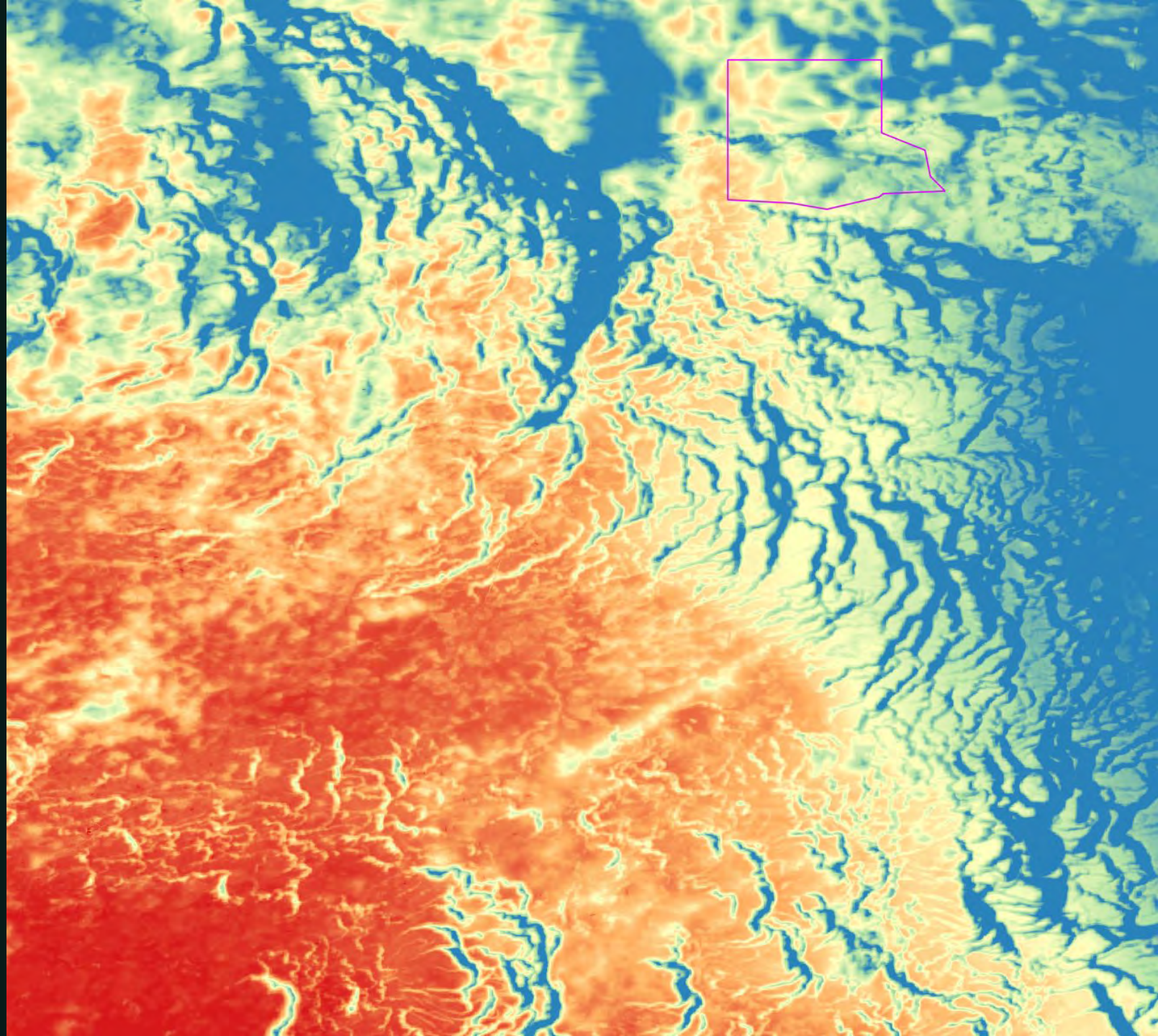


Find and use elevation data to plan your orchard



Starting Fresh

- Buy land on higher ground.
- Longridge is lucky as we didn't know this when we started.



Frost Fans

- May work better in different topography.







Order Data

Draw Manual Load File

Select 'Draw' to draw an area in which to search, click 'Clear' to cancel drawing.

Box Circle Polygon Freehand

Clear

Search

Free and Open Source

Spatial without Compromise

Spatial visualization and decision-making tools for everyone

Download

Available on Windows, Mac, Linux



Location –
Solar
Irrigation





Low Maintenance

Reasons for Low Maintenance



You can maintain more or enjoy your life more.



A lack of money and time.



Be profitable with a low bulk oil price.

Design for mechanical pruning and harvesting

- Our pruning regime is cut the trees, so they have space to grow new wood and fit in the harvester.
- These trees have already been harvested.



Design for mechanical pruning and harvesting

- This was August 2023.
- No fruit in harvest 2024.



Design for mechanical pruning and harvesting

- Unsure if it's the best idea, but it's the only affordable and practical one for us.
- Roughly 50c per tree.



Design for mechanical pruning and harvesting

- Very good flowering
for 2025



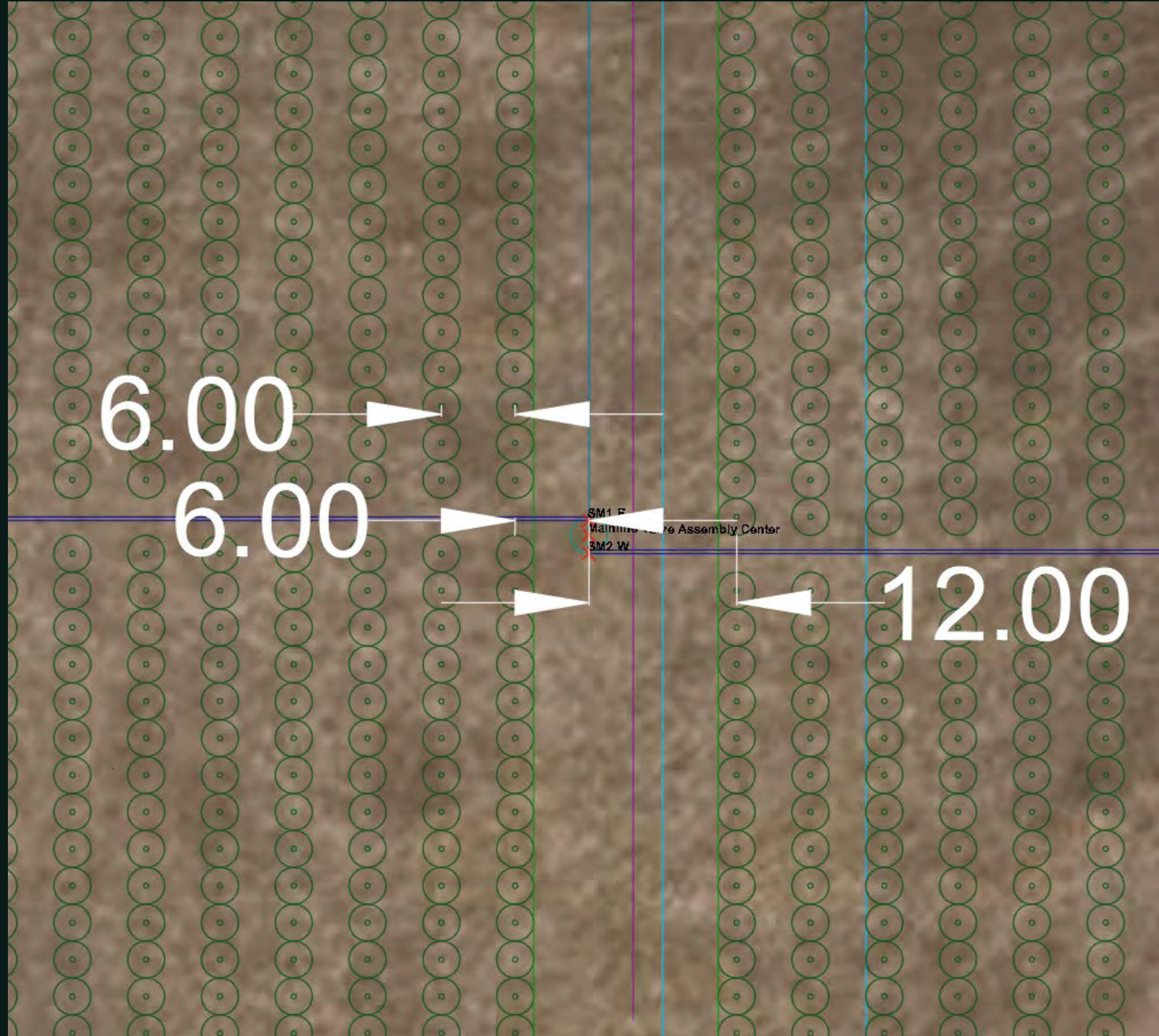
Low Irrigation Maintenance - Valves

- Irrigation design software works to best hydraulic solution, not most practical solution.
- Cluster your valves for easy maintenance and control.
- Get self flushing filters if you can afford them.



Low Irrigation Maintenance - Valves

- Keep valves a multiple of the row spacing from the rows so slashing/spraying machinery fits past them.



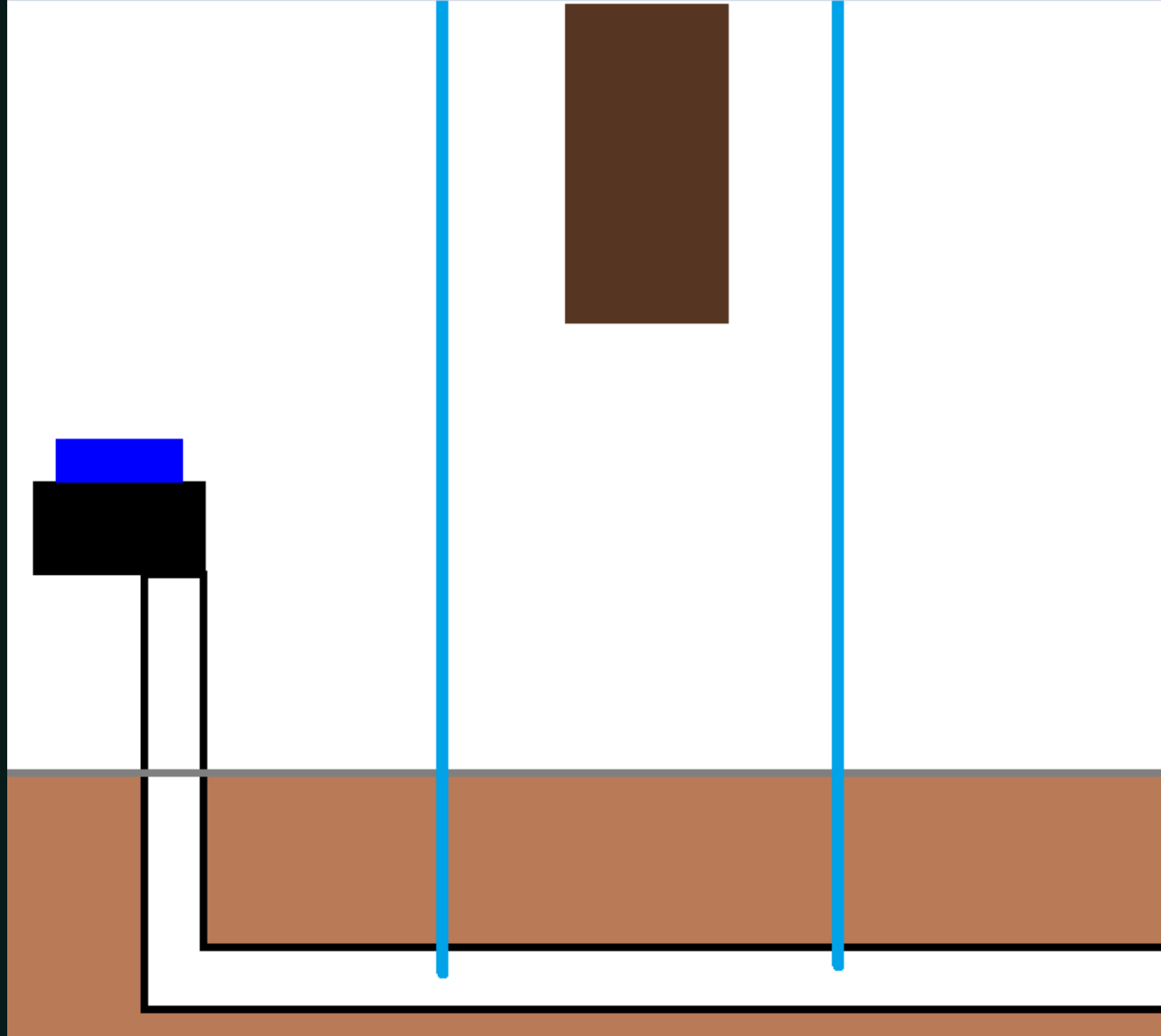
Low Irrigation Maintenance - Valves

- Our water is salty, and poly taps don't rust.
- Kangaroos were opening the taps if their handles were left on, so we removed them.
- Make sure your taps are in line with the trees. They'll be snapped off by harvesters otherwise.
- The right-angle fitting makes it nicer to close under pressure.



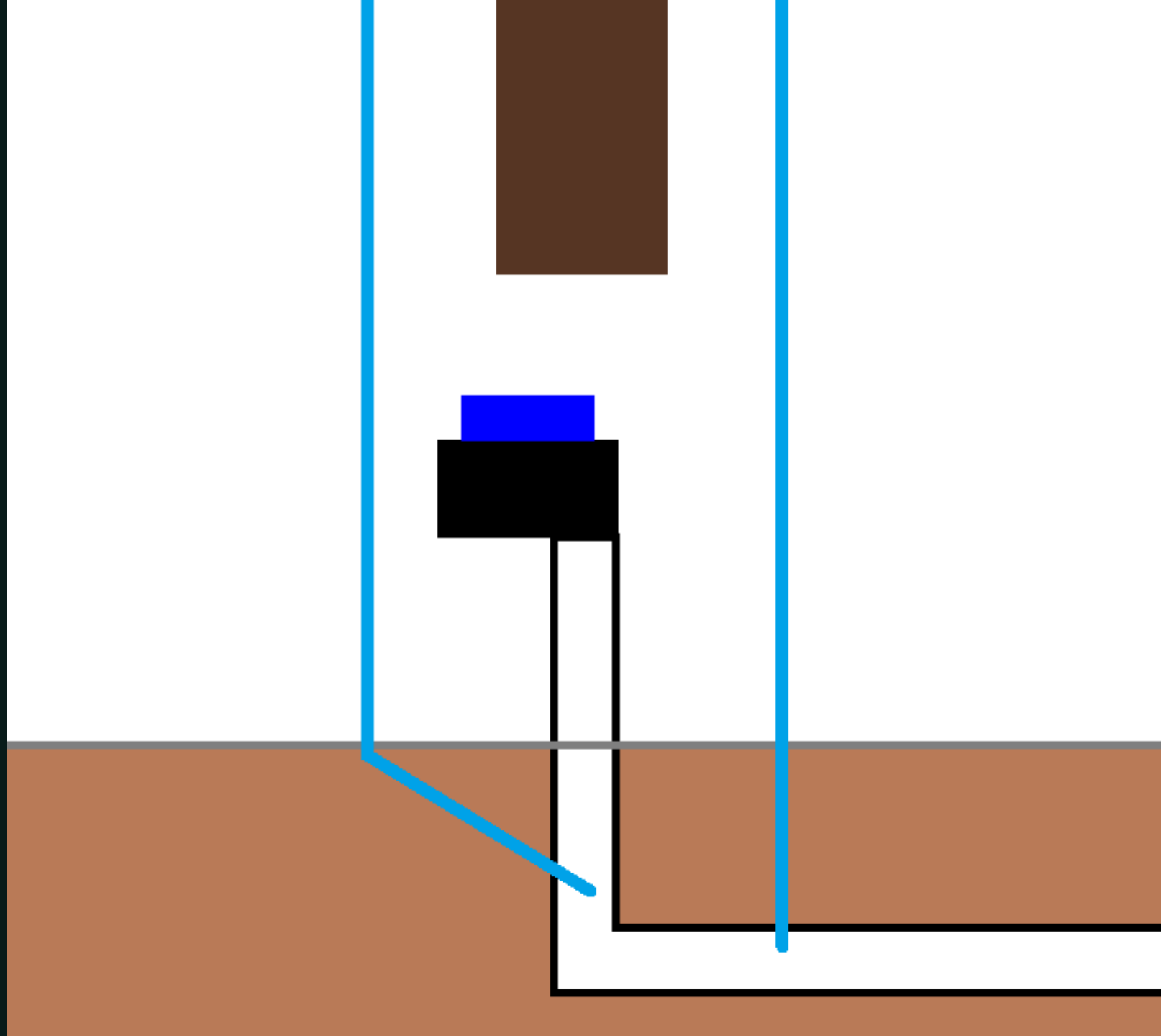
Low Irrigation Maintenance - Valves

- Pay close attention to the irrigation design you are supplied.
- This is what we were supplied.



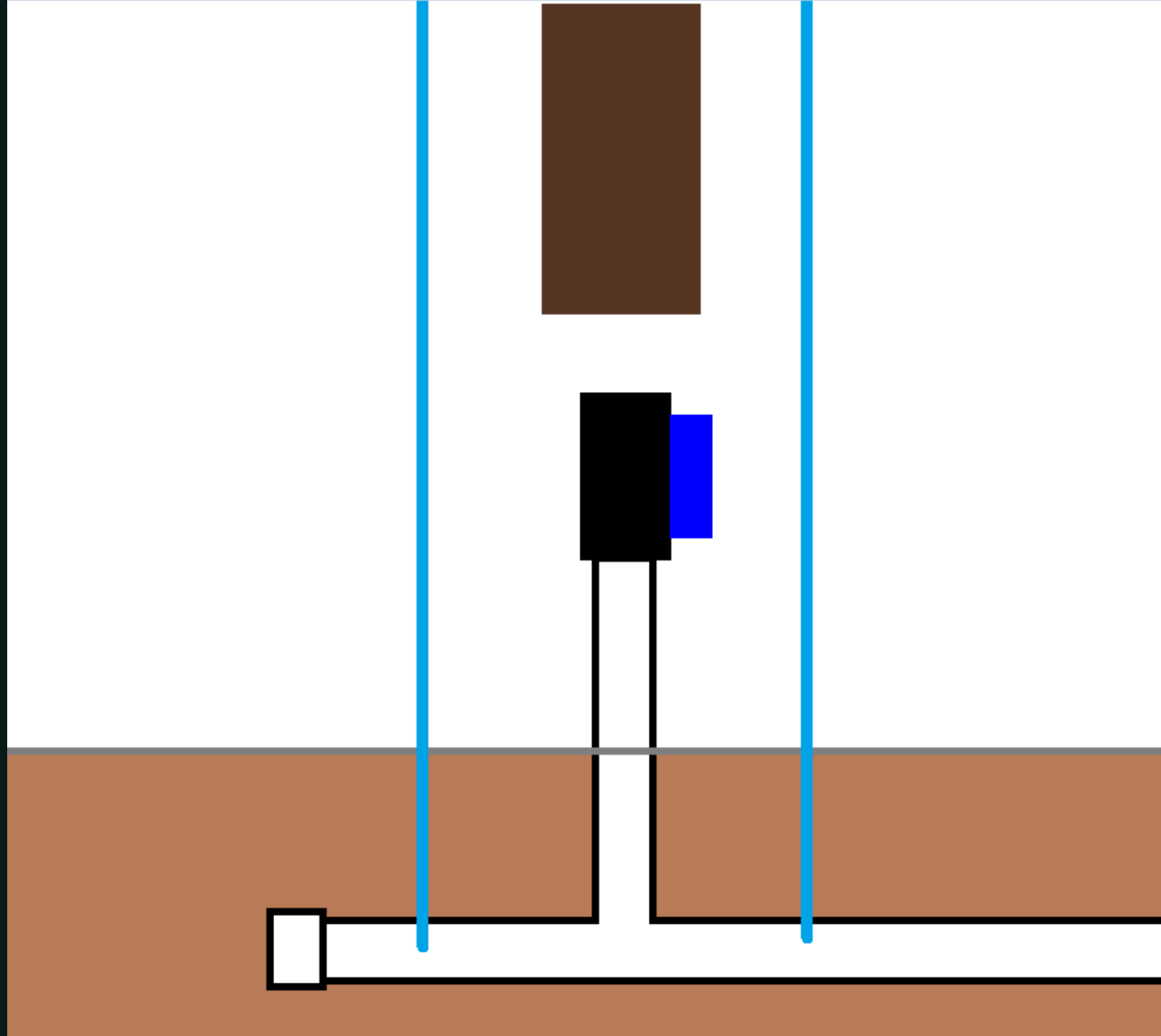
Low Irrigation Maintenance - Valves

- This was a suggested solution.



Low Irrigation Maintenance - Valves

- This is what we did.



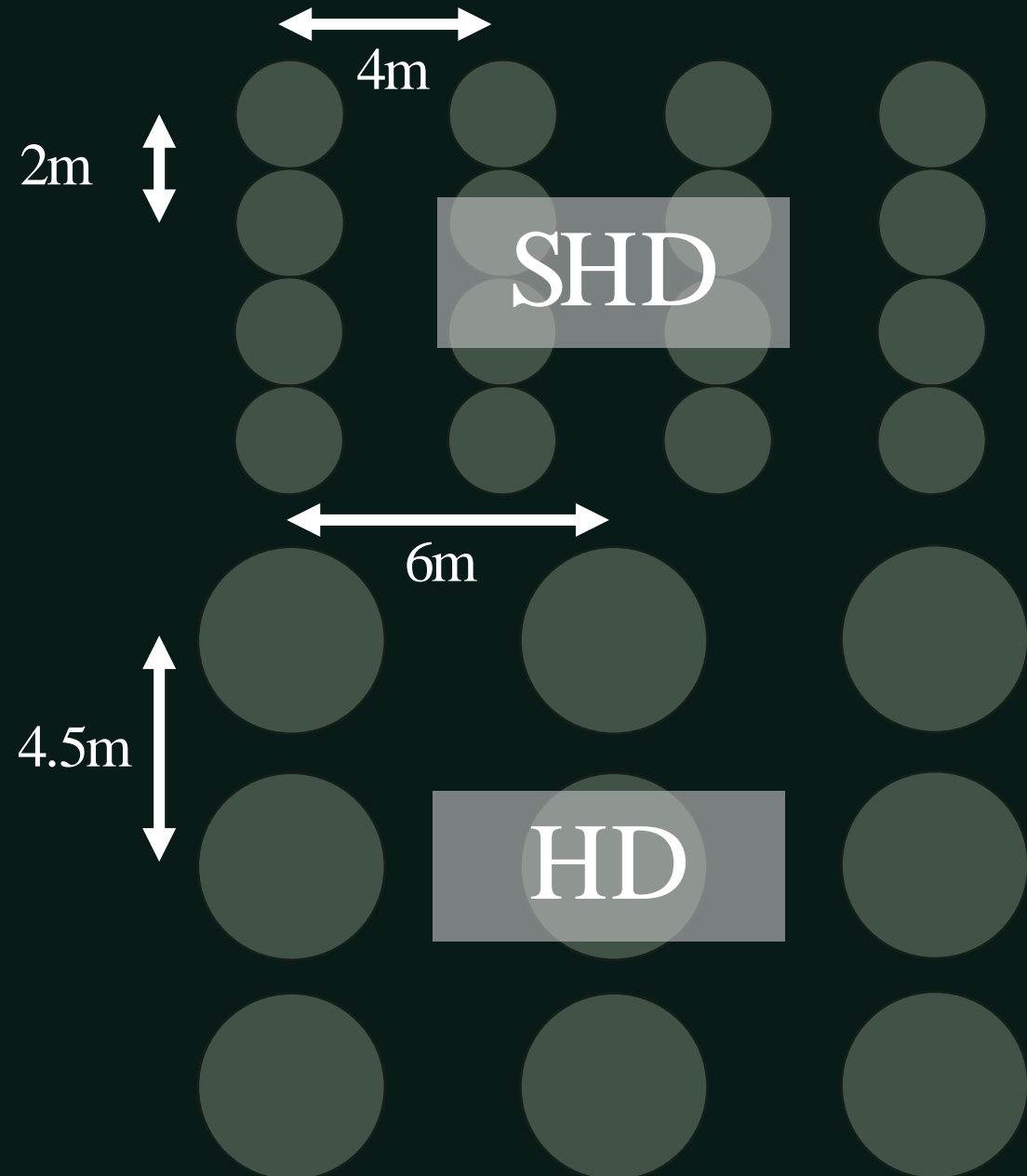
Low Irrigation Maintenance - Driplines

- Foxes will mince your driplines.
- Regular baiting does reduce the number of bites.



Low Irrigation Maintenance - Driplines

- Both our Super High Density (SHD) and High Density (HD) are irrigated on a single dripline.
- SHD was sized to irrigate with one dripline with higher flow.
- HD orchard would do better with two.
- Some varieties do better than others on one.





Low Irrigation Maintenance - Driplines



Low Irrigation Maintenance - Driplines

- Arbosana left
- Koreniki right



Low Irrigation Maintenance - Driplines

- Pick varieties that work well one dripline for SHD
- Use two driplines for larger tree sizes.





General Low Maintenance Tips



If a bird can perch next to a wire, it will chew that wire.





Run the wires inside antenna masts and leave minimal exposure. Use bird spikes in perching points.



If you bet on 1 in 1000, it will
happen 80 times per pass at
Longridge.





The orchard is rough on machinery. Tidy up loose and protruding features.





Our wooden posts are over 60 years old. All iron posts have rusted off. Talk to your neighbors about what works in your area



A wide-angle photograph of a newly planted orchard. The field is filled with rows of young trees, each marked with a white stake. The ground is dark brown soil, and the sky is a clear, bright blue. The trees are planted in a grid pattern, extending far into the distance. The text "Planting Your Orchard" is overlaid in the lower-left quadrant of the image.

Planting Your Orchard

Using Labour



Planting may only take 1 to 3 weeks depending on your size.



Very intense labour requirement for a short period.



Where can you find the people? Where do you house them? How do you feed them?



Transportable buildings fore hire are very expensive for a short term.



Alternative Option

- Ripping the plants into the ground is very fast
- Three people on the ripper could plant 5000 or more trees per day comfortably. Limited here by preparation speed.
- Trees have their guards put on and are tied to the stakes in the shed.
- Tractor can autosteer a straight line
- Tree spacing is typically done with a wheel along the ground.
- GPS spacing may be possible for your unit but in the realm of \$20-\$30k.
- Not suitable for trellised trees.

I'd love to say it's a success...

- We haven't gotten to use it yet.
- Clay soils will need multiple passes ahead of time.
- A grader blade ahead of the press wheels would help keep dirt under them and add pressure. In our design, this takes pressure off the ripper tine.
- This tractor's 3PL has no downward pressure hence the trailer and weights. A bigger tractor with down pressure would be a better starting point for such a system.

General Planting Tips

- Plant deeper than recommended in sandy soils to avoid the potting mix from drying out.



General Planting Tips

- Ensure submain top hat holes are clean smooth and clean of burs.



Top Hats

- A small bur in the hole makes a bad seal.
- A small water jet picks up sand and cuts a bigger hole
- The sand jet can cut adjacent pipes.
- Sand is sucked back into the mainline after every shift.
- Shows up 5-10 years later.





Final Tips

- Aim to be profitable with the bulk price as it has been the last few years.
- Olives are much harder and slower to harvest than grapes.
- Plan to own your own harvesters and crushing mill (or co-op a crushing mill).
- Harvest time coincides with seeding time for broadacre farmers, so labour is short.
- Invest in monitoring technology as issues are generally fast to fix and slow to find.
- Use a reputable nursery for your tree supply to ensure a good rate of survival.



Thanks for listening!

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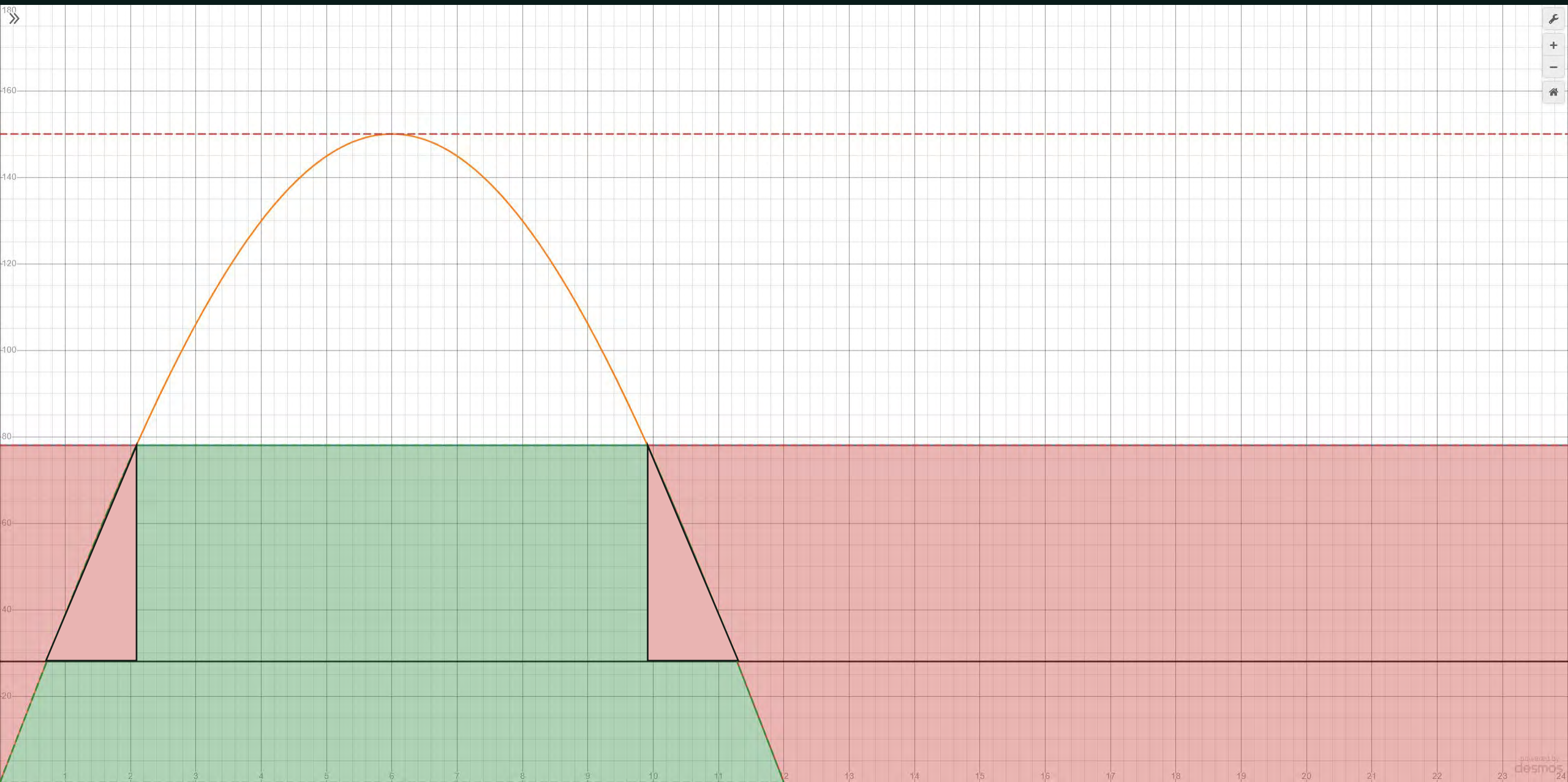


More?



Location –
Solar
Irrigation







Cost Comparison

Assuming

- 38c/ kwh
- \$1.20/ L Diesel (After rebate)

48H
Pumping at
Longridge

- \$1422 with Grid Power
- \$1500 with Diesel Power

No Line Fees with Generator Only