

Land Leveler

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Aim of the Project

The Aim of my project is to fabricate a land leveler that requires the least number of passes over the ground in order to leave a suitable seedbed. I also wanted to use a design which is unique and not often used for a land leveler.

Concept

The concept of the standard land leveler concentrates on using its weight to move the soil in a forward direction only. With my design of land leveler, the flow of soil is managed and distributed throughout the land leveler as opposed to constantly moving it in a forward direction. Managing the flow of soil through the leveler will reduce the number of passes required in order to leave a suitable seedbed for seeding.

Design

The land leveler is made completely out of mild steel. The Main frame consists of 120x120mm box iron. Welded up underneath the main frame is 100x200mm H irons. These are used as leveling parts. A triangular point is the first point of contact for the soil, then two singular H irons on the left and right of the main frame direct the soil to another triangular point before finally meeting the last H iron which runs horizontally across the full width of the main frame.

Conclusion

With my land leveler still to receive finishing touches I am confident that my design and concept used to level the soil will work. In the future I hope to add more features to the leveler. This includes a system where an item such as a packer roller or tine bar could be lowered at the back of the leveler in order to leave an appealing finish on the soil.

Background

Before deciding on my final design, I spoke to farmers and contractors to get their opinion on what they thought would make a good land leveler. The Feedback I received greatly influenced my final decision. Contractors' idea of a good leveler was one that could leave a level finish on the ground in the least number of passes over the field. I learned that the size of the land leveler was not as important as I thought, but what mattered the most was the finish the leveler left after one pass. Reducing the number of passes on the ground will also reduce time spent levelling which is important if you are contracting or carrying out hire work, which in my case the land leveler would be carrying out hire and contract work.

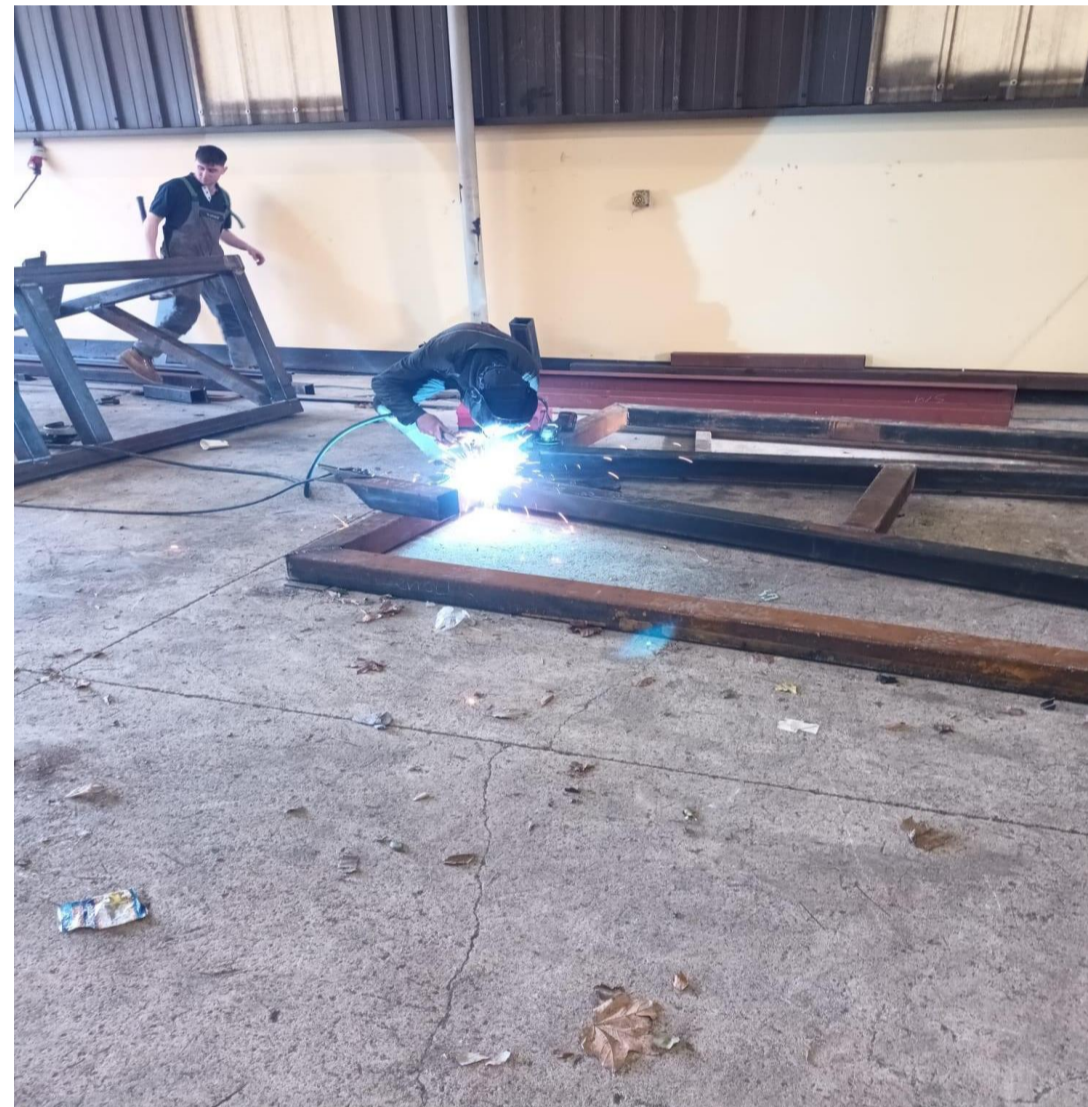


Photo of: Welding the main Frame

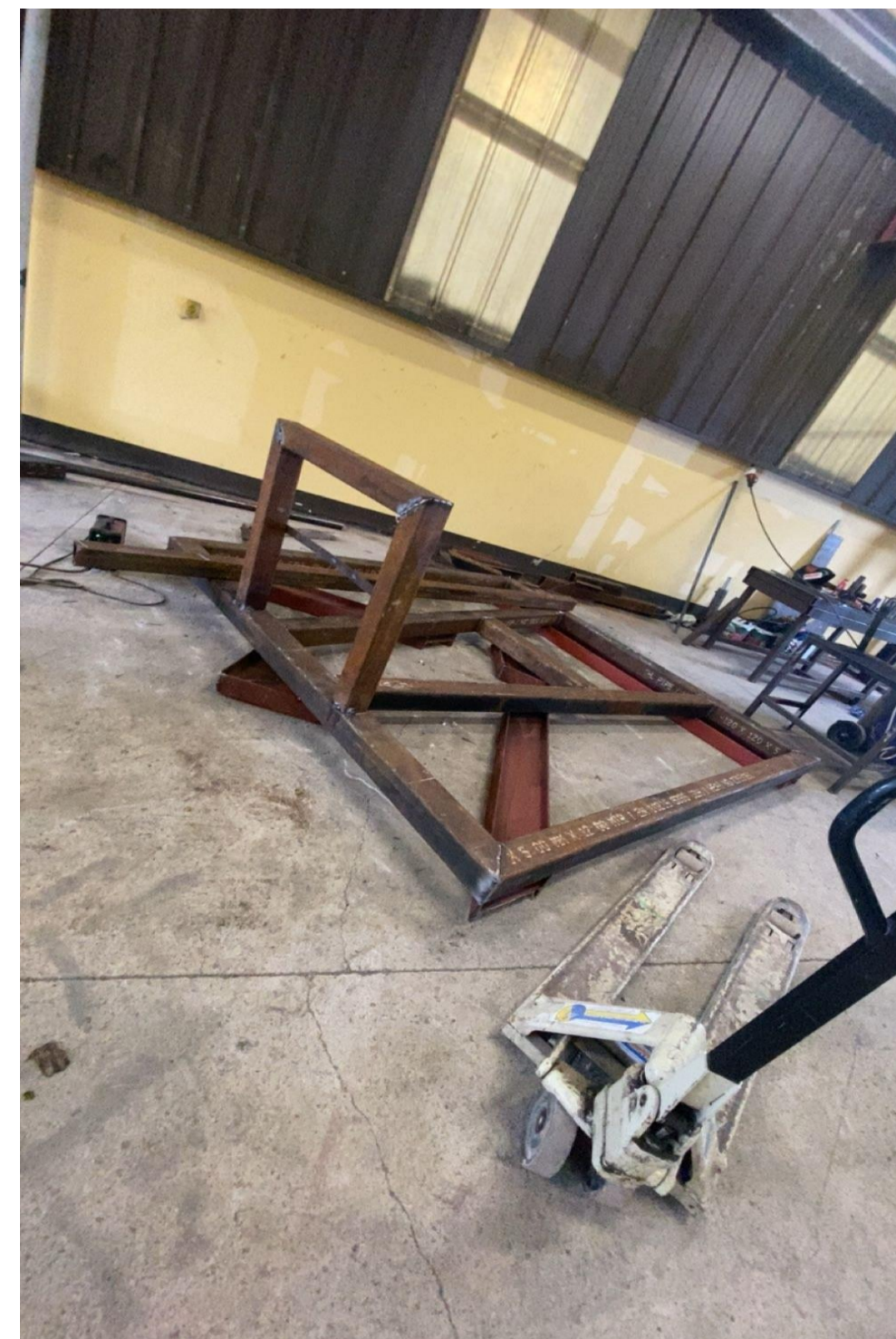


Photo of: Main Frame, Leveling parts and Headstock



Photo of: A field after Land Levelling

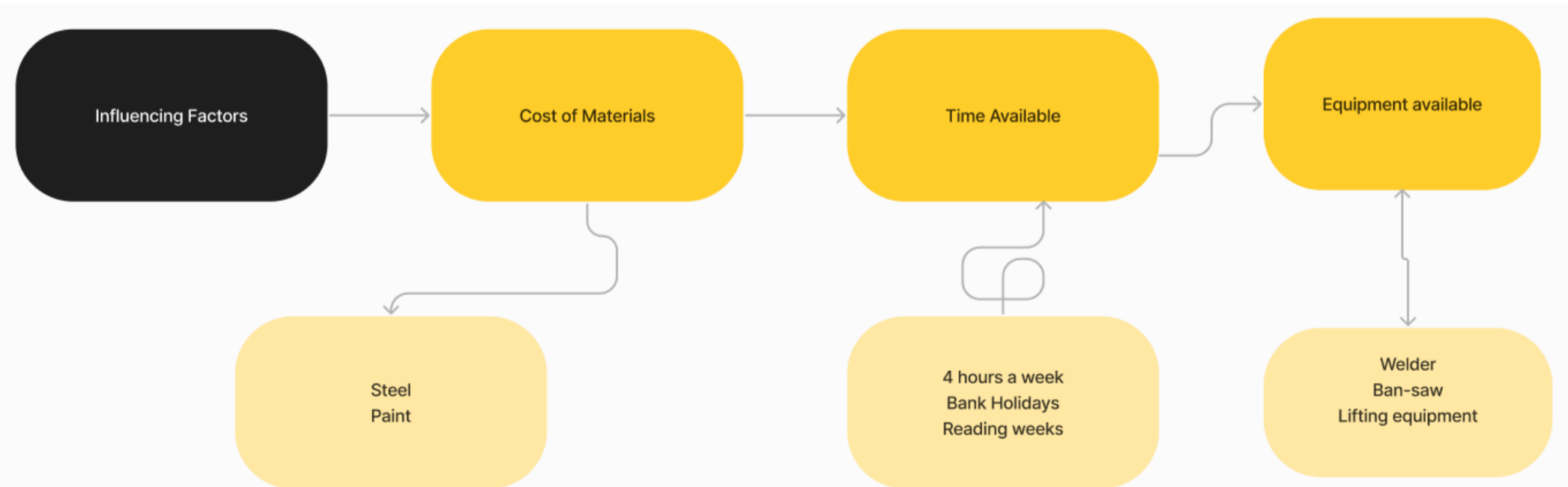


Table of : Factors accounted for when researching land leveler designs

References

Oliver Taaffe Ltd