
The UK's first Low Fire Stoneware
Est. 2025
LoStone
BY VALENTINE CLAYS

Introducing LoStone BY VALENTINE CLAYS a breakthrough in ceramics.

Crafted for the conscious maker, **LoStone** is the **UK's first low-fire stoneware** offering all the strength and beauty of traditional stoneware, but with the ability to be fired at a lower temperature.

For years stoneware has required high firing temperatures, but at Valentine Clays we have re-defined what was once thought impossible. **LoStone** offers a surface that makers value while avoiding the cost of high temperature firing. This breakthrough supports creativity, protects kilns and helps the planet. For those using low temperature kilns in home studios, schools or shared spaces, LoStone makes stoneware accessible for the first time.

*"At Valentine Clays we believe innovation in clay **can shape more than pots**, it can shape a better future"*

Low firing temperatures

Six natural mixable colourways

Save energy, reduce costs

Lower carbon emissions

Extend the life of your kiln

Join the revolution

Valentine Clays

MANUFACTURED IN THE HEART OF THE POTTERIES

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Frost

Frost is a smooth, **off-white** clay body that offers a crisp refined surface ideal for both functional and decorative work.

Prices available online at cromartiehobbycraft.co.uk

Please note, colours may differ from how they appear on screen or in print.

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Dune

Dune is a warm, **buff firing** stoneware clay based on fireclay ingredients, it has a natural, earthy tone with good workability.

Prices available online at cromartiehobbycraft.co.uk

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Drift

Drift is an **off-white speckled clay** with a clean, natural surface and subtle variation, it's attractive light speckling, bringing depth and character to the potters work.

Prices available online at cromartiehobbycraft.co.uk

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Shale

Shale is a rich, **dark grey clay** with subtle lilac undertones at lower temperatures, offering a striking surface character that enhances both functional and decorative forms.

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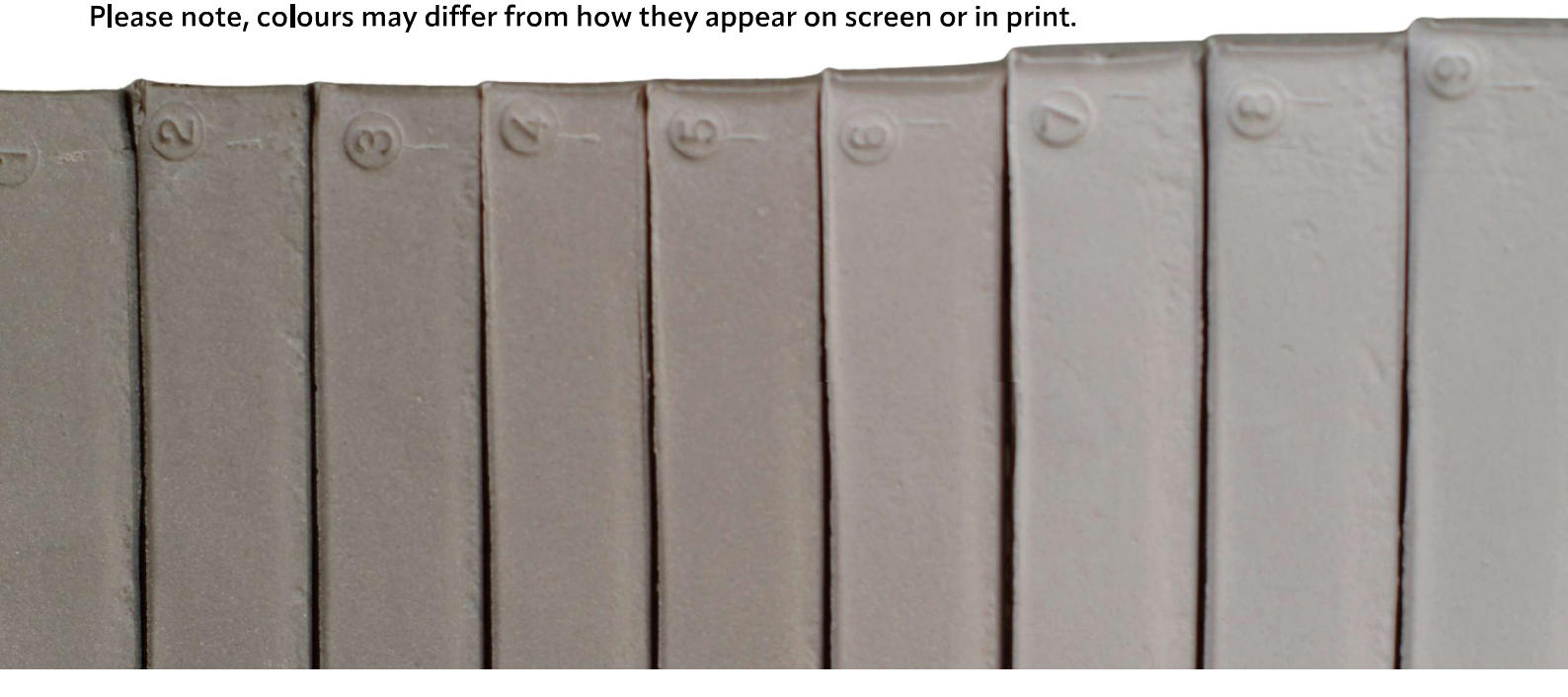

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Sea-Mist

Sea Mist is a delicate **light grey clay** with soft pale blue undertones at lower temperatures, lending a cool, tranquil quality to both functional and decorative ceramics.

Prices available online at cromartiehobbycraft.co.uk

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Ember

Ember is a **warm burnt red clay** with subtle salmon undertones at lower temperatures, creating an earthy surface ideal for expressive ceramic forms.

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Firing Range

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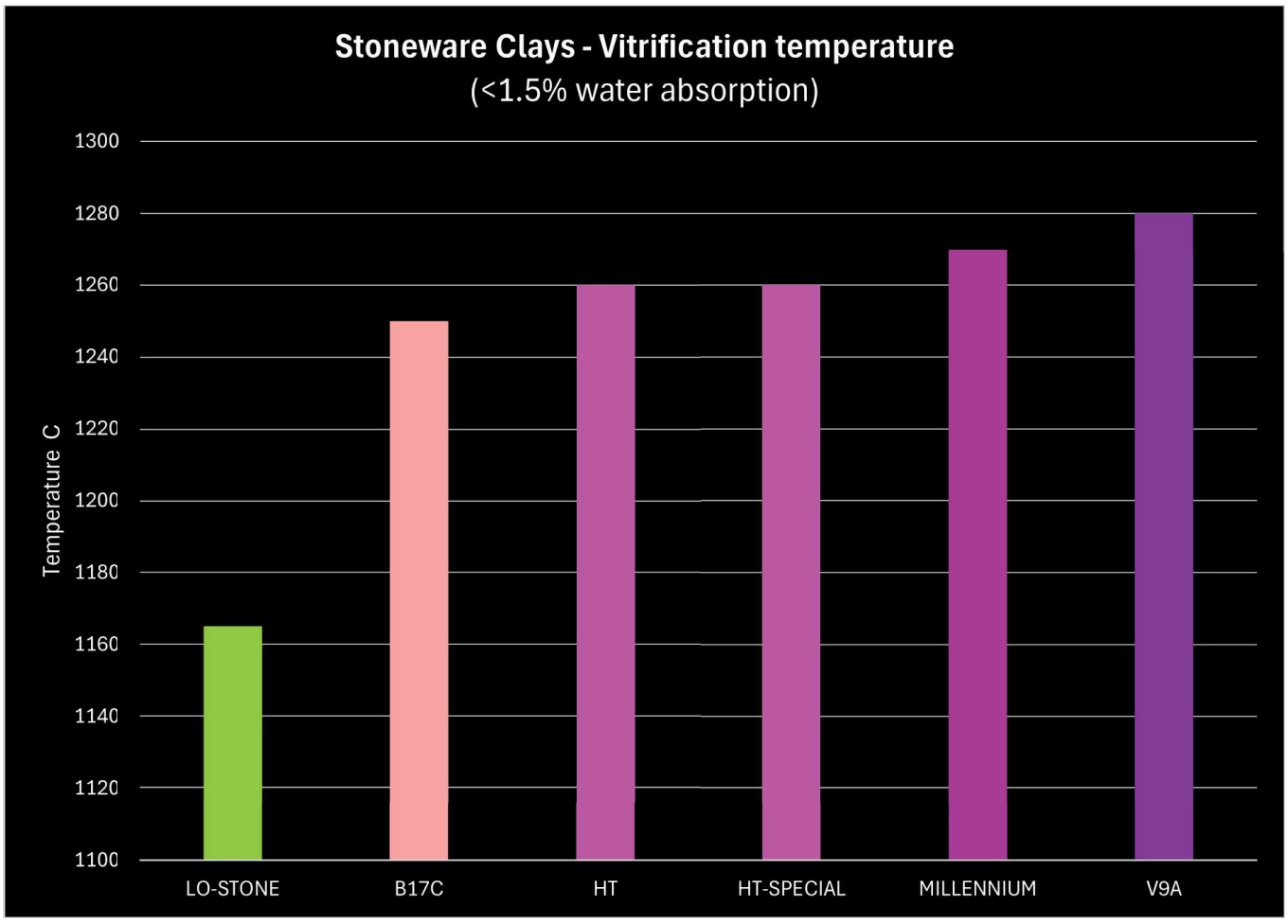
Firing Range

To create a vitrified and durable product, traditional stoneware clays are fired at temperatures ranging from cone 6 (1220°c) to cone 9 (1280°c). Only a select few stoneware clays can achieve vitrification at cone 5.

LoStone is a versatile range of clays which can be **fired as low as cone 3** (1165°c) to achieve a **vitrified stoneware product.**

If we take a look at some of our more popular stoneware clays, we can see that many require temperatures in excess of 1240°c (cone 7) to become fully vitrified. LoStone will be fully vitrified at cone 3 or (1165°c).



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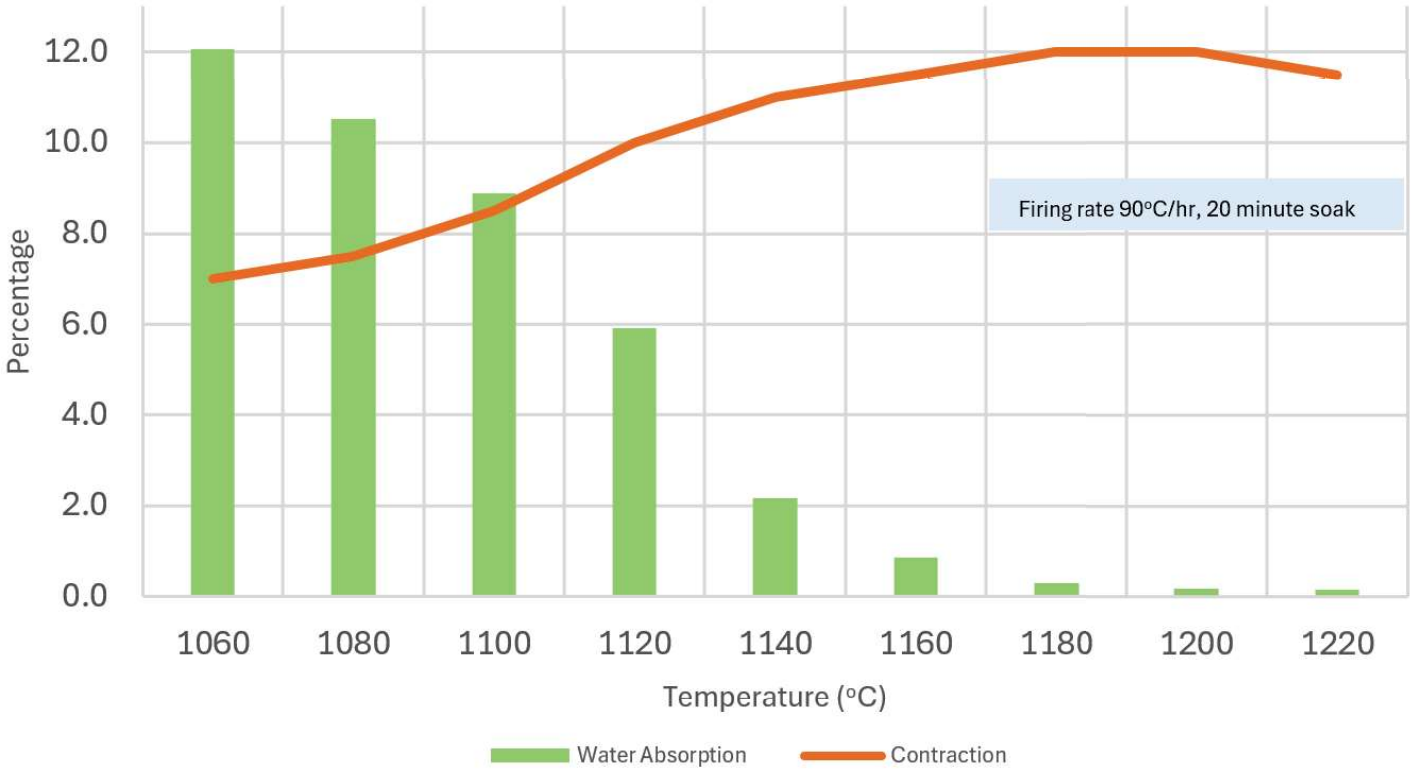
Vitrification Curve

Examining the LoStone vitrification curve reveals that at lower temperatures, specifically between 1060°c and 1140°c, the LoStone clays exhibit some porosity and can be categorised as earthenware clay.

Interestingly, they mature slightly earlier than many other earthenware clays.

However, once the temperature reaches 1165°c, vitrification occurs up to 1220°c, indicating that they are fully vitrified from cone 3 to cone 6. As you can see on page 14, the fired colour gradually darkens with the process of vitrification.



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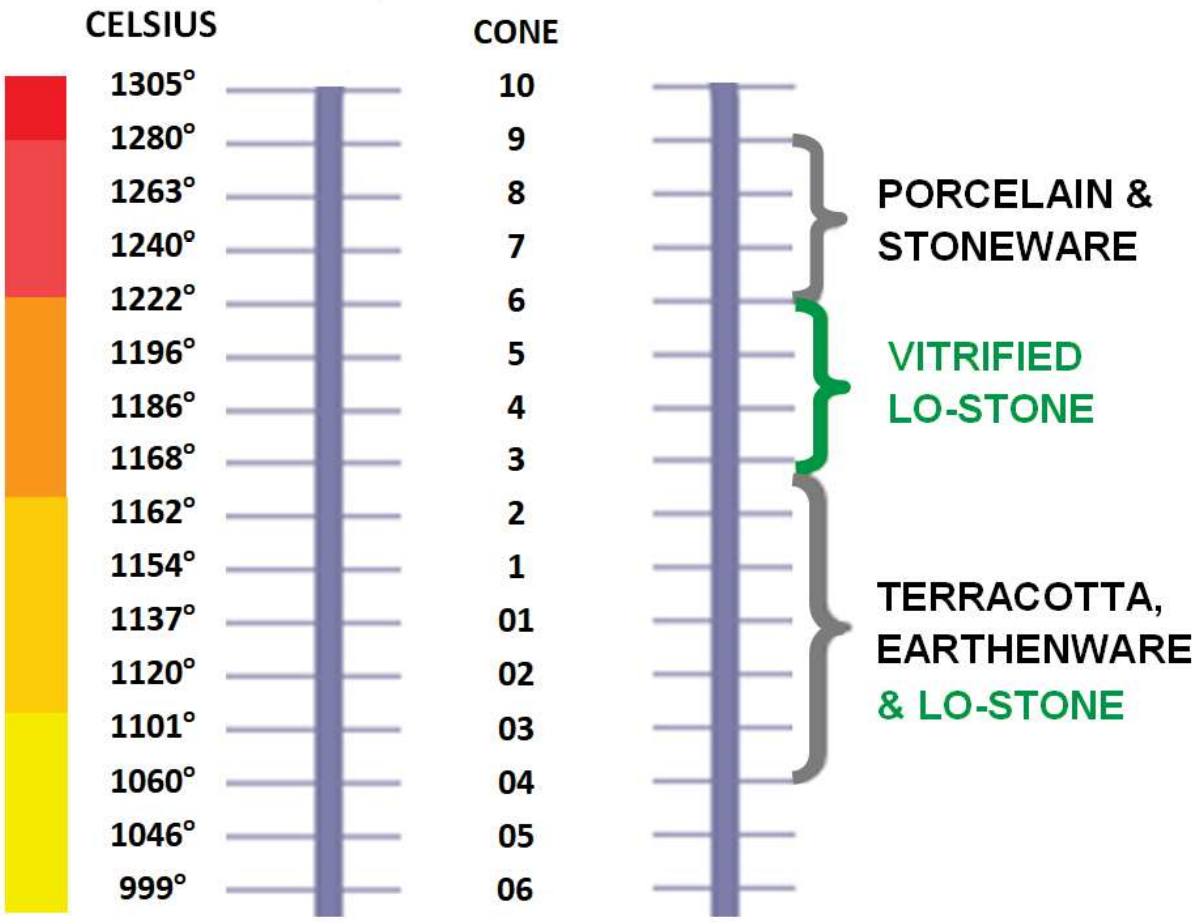
Firing Range Comparison



This chart compares the firing ranges of LoStone with those of earthenware and stoneware clays. It is evident that vitrified LoStone falls between the lower end of the stoneware range and the upper end of the earthenware range. Furthermore, LoStone also fits within the earthenware firing range.

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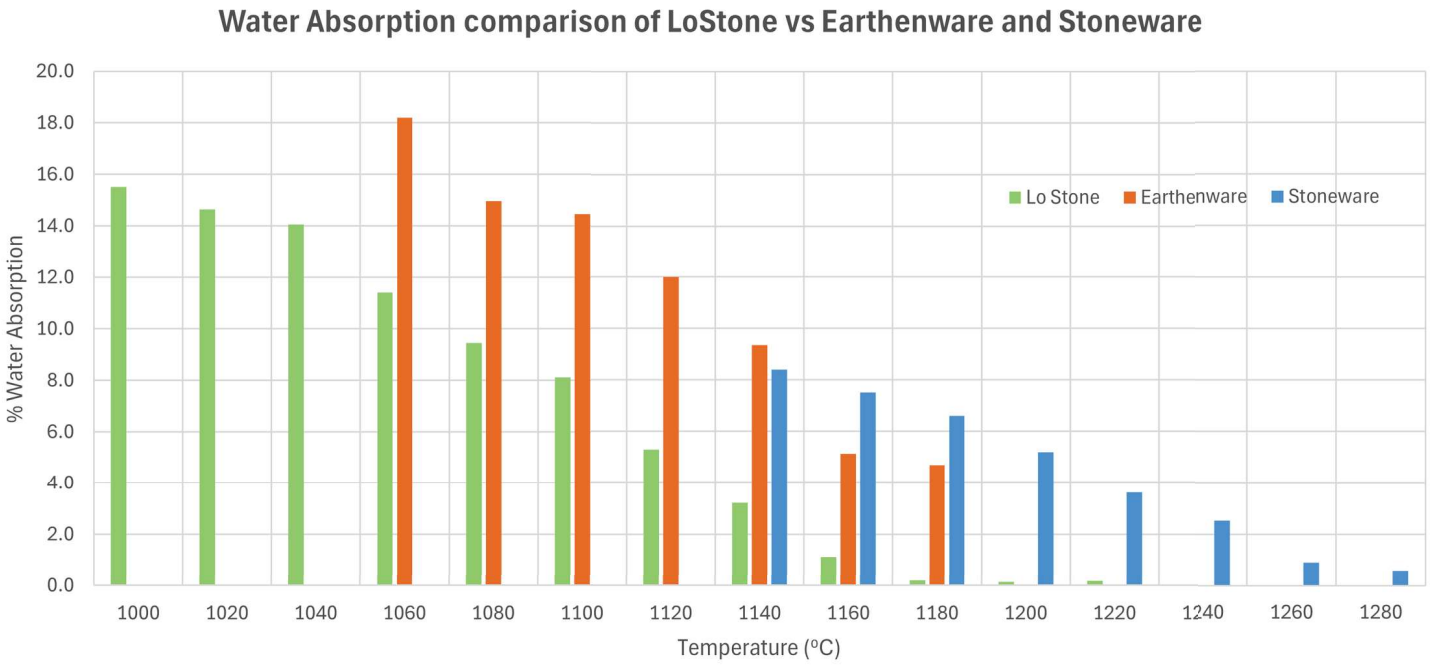
Water Absorption Comparison



This graph illustrating water absorption provides additional insights, shows that LoStone clay matures more quickly than both earthenware and stoneware clay firing ranges.

In fact, even at a temperature of 1000°c, LoStone clay exhibits a water absorption rate of only 15%, which is quite favourable compared to certain earthenware clays fired at 1100°c.

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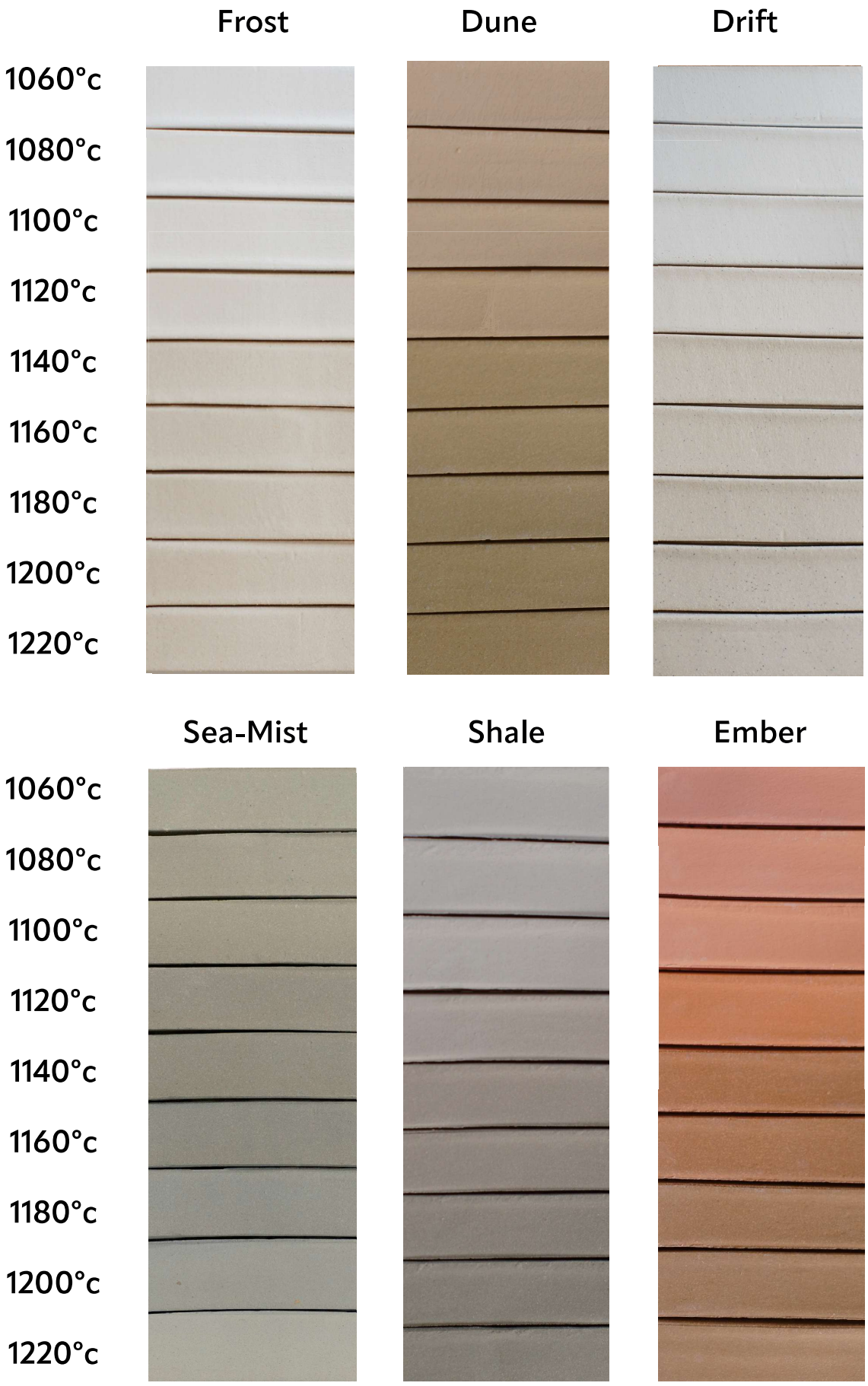
Firing Gradients



Cost Savings

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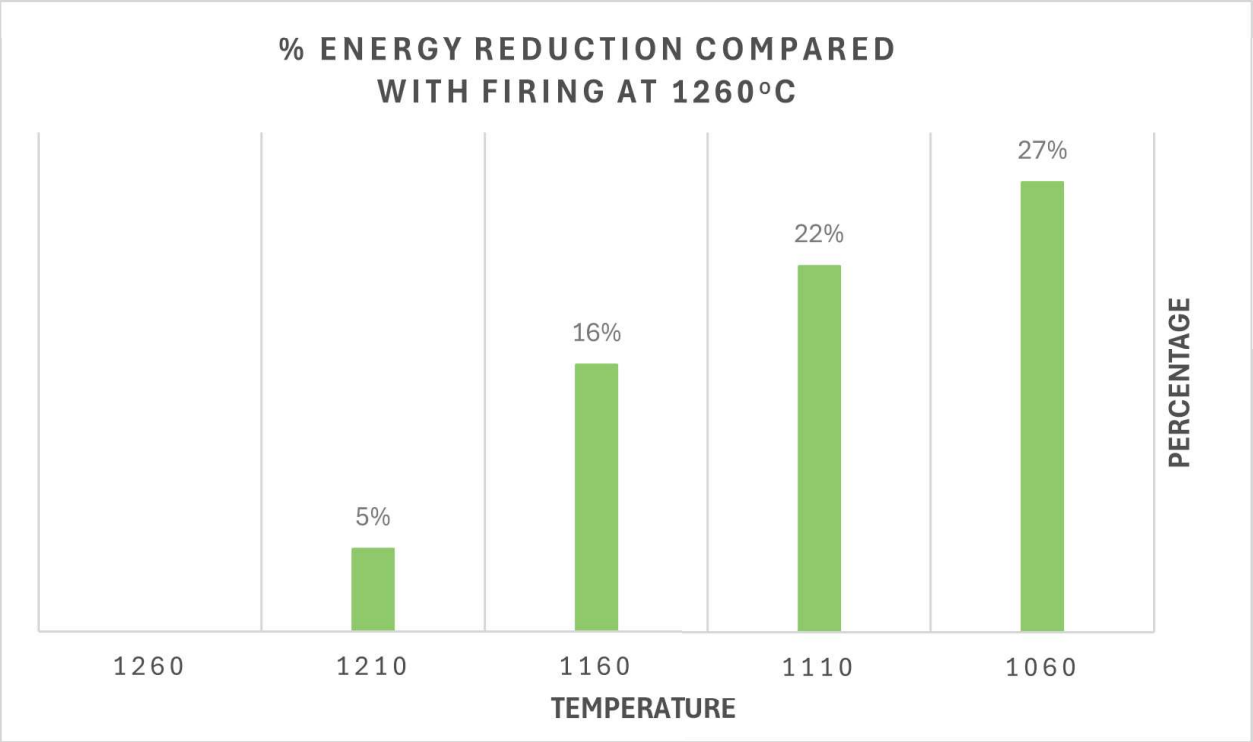
Energy Reduction Comparison



LoStone is regarded as a more sustainable option compared to traditional stoneware clays, as it requires 60 to 100°c less energy to achieve vitrification.

The graph above illustrates the energy savings when firing at 1260°c.

It's important to note that several factors influence energy consumption during kiln firings, such as the density of the kiln load and the condition of the heating elements. However, consistent testing in our electric lab kilns under similar loading conditions and across various temperatures has demonstrated **a 16% reduction in energy consumption at 1160°c compared to firing at 1260°c.**

Firing at 1160°c, the kiln elements and structure will be put under less load and we anticipate that kiln maintenance costs will be significantly lowered. It is estimated that **a kiln fired at 1150°c will have double the life of elements fired at 1200°c and around 3 times the life of elements fired at 1260°c.**

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Kiln Element Life-Cycle

Each time a kiln is fired, the metallic heating elements degrade a little due to the heating and cooling cycle. Over time, the elements can warp, sag and thin, with each firing cycle increasing electrical resistance in the thinner sections resulting in uneven heating. Higher kiln temperatures accelerate this element wear rate, hindering smooth electrical flow and resulting in a drop in heat output. This lengthens the firing cycle as the kiln struggles to reach the target temperature, increasing the cost of firing.

Operating a kiln at a lower working temperature will significantly extend the life of the kiln elements as they have to work less intensely and will degrade at a much slower rate, saving energy and money.

Tips to extend the life of kilns and their elements include:
·Firing at lower temperatures slows the rate of element degradation and minimises firing cycle time.

·Avoid corrosive vapours from some clays and glazes which might attack the elements by ensuring adequate ventilation particularly up to 600°c

·Avoid prolonged firing at or close to the kilns maximum operating temperature.

·Newly replaced elements should first be fired to 1050°c in an empty, vented kiln. This allows a protective oxide layer to form evenly around the alloy element during this first firing.

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Mixable Clays

The LoStone range of clays have the same **vitrification and shrinkage rates.**

They can be **easily mixed together** in different combinations.

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Accessible

LoStone is especially appealing to potters who may be working in smaller studios, community spaces, or with more compact, low firing kilns.

By lowering the technical and financial barriers, this clay allows a far wider group of makers to explore the durability, strength, and creative flexibility of stoneware.

In this way, it not only opens up new opportunities for experimentation but also helps build an inclusive ceramic community where more people can share in the joy of making.

Sustainable

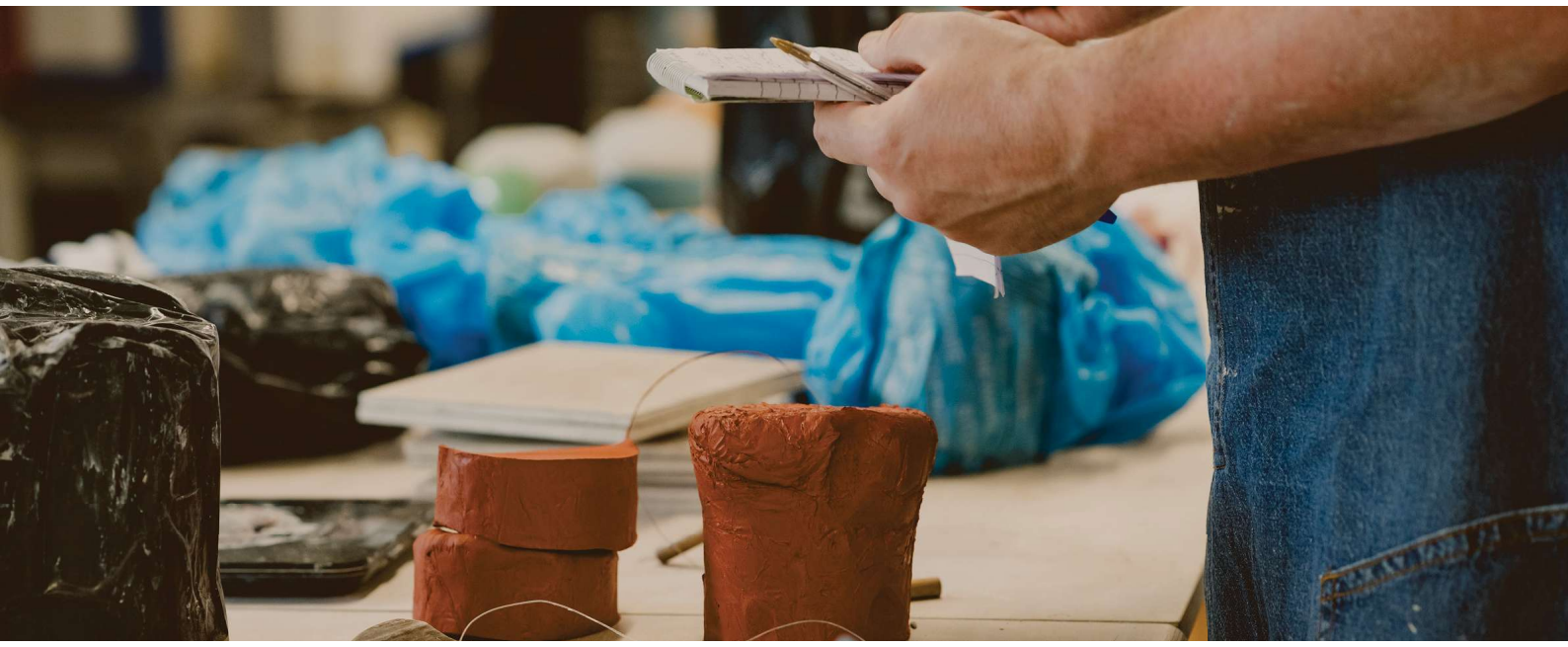
LoStone clay requires less electricity to fire, which makes a real difference both environmentally and practically.

By maturing at a lower firing range, it reduces the overall energy consumption needed in the kiln cutting costs for makers while also lowering its carbon footprint.

This energy efficiency means that potters can create durable, high-quality stoneware while being mindful of their environmental impact.

For many, this becomes more than just a technical advantage; it creates a meaningful unique selling point. In today's market, where buyers are increasingly drawn to sustainable and responsibly made products, being able to emphasise the eco-conscious nature of your ceramics adds extra value.

Choosing LoStone clay allows makers to align their practice with sustainability, while also offering customers the reassurance that their pieces are kinder to the planet.



Glazes

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Glaze Options

There are an extensive range of commercially available glazes on the market, making it impossible to test them all.

The glazes we have tested so far have performed very well.
These include glazes from Botz, Scarva, and Potterycrafts.

We're also delighted to share that we are collaborating with a leading UK glaze manufacturer to develop a range of glazes specifically formulated for the LoStone range. These will be launched in the coming months.

For best results and to achieve a vitrified finish, LoStone clays should be fired to cone 3.

When selecting a compatible glaze, please consider the following temperature ranges:

- **Cone 5–6** (1200–1220°c): Stoneware glazes
- **Cone 1–4** (1140–1180°c): Mid-fire glazes
- **Cone 04–01** (1060–1120°c): Earthenware glazes