Product Data Sheet – Grange

Material	**Grange Riven Yorkstone.**
Description	Grange is a Yorkshire sandstone pale yellow/grey/brown, laminated, non-calcareous, fine grained sandstone. It tends to darken to a richer colour as it ages.
Country of Origin	UK

Typical Properties – Indicative Summary see note below.

Water Absorption	2.8% by weight	Slip Resistance	78(Wet)
Flexural Strength	17.0 Mpa	Resistance to salt	-1.38%
Compressive Strength	160 Mpa	Apparent Density	2347 Kg/m3
Freeze Thaw Performance	Failure due to frost action unlikely		

Please note: Loose material left as a result of the riving process may detach in the first few months after laying. This is normal.
Sandstone is a natural product and all results are indicative and subject to variations.
Production tolerances expect up to +-10mm

Above Information is extracted from a Building Research Establishment Ltd (BRE) Report – Tests carried out May 2000. However, we extract stone for our Grange paving from multiple local Yorkshire quarries these figures can only be considered indicative.

Aftercare
Natural stone can age gracefully with time. It is often considered that natural stone is at its best when mature, aged and naturally 'bedded in' to its environment. With this in mind you might consider leaving the stone in its natural form to allow time, use and the elements to impart the aesthetic that makes a natural product unique. On the other hand, consideration might be given to ways of maintaining the original, newly quarried form for as long as possible and also to safety such as reduced slip resistance from the build-up of organic growth.

Moss, Lichens Algae etc.
If you have concerns over reduced slip resistance due to the build-up of a green substance on your paving or setts then we suggest removal via a hosepipe or careful use of high pressure water jet. Green growth will usually appear in areas of low traffic and high planting, also in areas subject to damp and with little or no direct sunlight. The growth cannot be stopped entirely by applying a sealant as it can still grow on top of the sealant. Certain products such as moss inhibitors may alleviate the problem, careful use and application on test areas would be recommended

Stain Protection
If you wish to retain the newly quarried colouring of your natural stone and reduce the effect of natural ageing then you can apply products that will offer protection against staining. There are many products on the market offering various different properties. Be sure to conduct a thorough test sample prior to applying as some products can have an effect on colouring, appearance and slip resistance of the natural materials.

Cleaning
We suggest the best method of cleaning is to wash down with a hose pipe. Careful use a high pressure water jet if a more intensive clean is required being mindful not to wash out the aggregate or pointing that may be in the joints. We do not recommend the use of acid based cleaners due to their invasive actions. Discolouration will likely occur with the use of acid based patio and brick cleaners. Other natural stone cleaners should be used with care and sufficient tests carried out in an inconspicuous area prior to widespread application.

Frost / Chemical Protection

All natural stone is porous to some degree. A combination of deep frost and absorbed water content can be harmful to the stone. Prevention of this kind of damage is best dealt with by means of sealing the stone to prevent moisture ingress. Rock salt or other salts can be invasive to natural stone. Use of rock salt is likely to shorten the lifespan of the product due to accelerated erosion. If salt or other invasive chemicals are to be used in the proximity we suggest at the very least sealing the stone with a product that is salt resistant and re-applying at the specified intervals, applying the salt sparingly and not in concentrated heaps. In some circumstances it may be worth considering alternative, none natural materials for these areas.