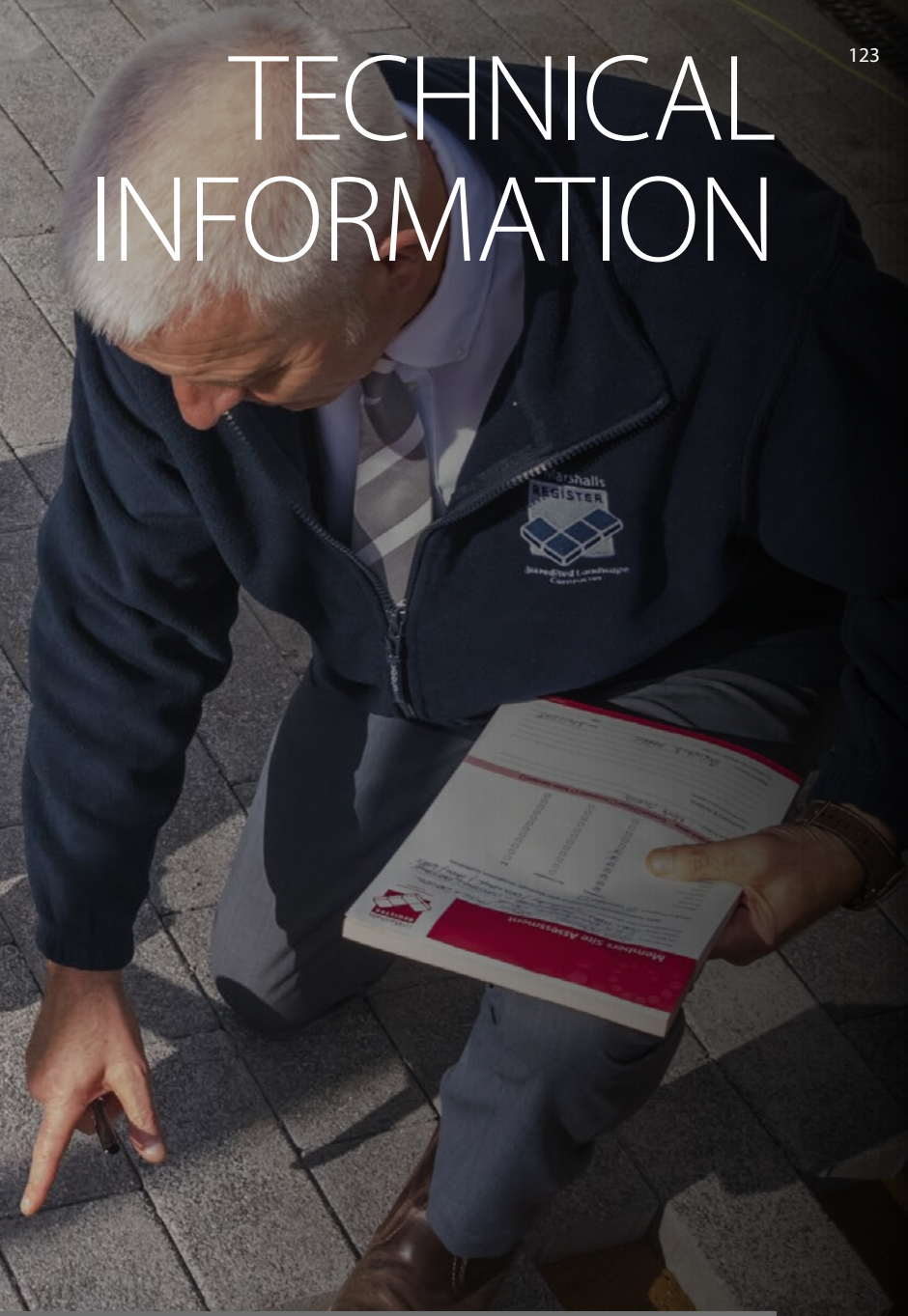


# TECHNICAL INFORMATION



Please note, sizes and coverage for all natural stone are those attained when laid with a joint. All the information held within this brochure was correct at the time of print and are subject to change. We would therefore recommend that you check our website for the latest information and digital brochure. Alternatively, please contact our Group Technical Services on 0333 220 2730.

# General Technical Information

## Efflorescence

Efflorescence is a transient phenomenon of Ordinary Portland cement used in the manufacture of concrete products. The occurrence of efflorescence in the pores of the concrete can lead to the appearance of white patches on the surface or an overall lightening of colour, which is often mistaken for the product fading.

Whilst the appearance of efflorescence may be a concern, it is temporary and does not in any way affect the durability or long term performance of the concrete. Natural exposure to weathering is generally sufficient to erode the efflorescence and indeed it is always recommended that an initial period of weathering be allowed to take place.

Responsibility cannot be accepted for its occurrence. For further information, contact Group Technical Services 0333 220 2730.

## Other Weathering

Weathering and site conditions can occasionally cause other variations in shade to appear. Differential weathering can cause patchy dark discolourations on the surface of individual units. Again this will generally diminish over time and will not affect long term performance. Natural stone may develop added markings, deposits or patches as mineral content oxidises.

All products can develop algae and organic growths under certain environmental conditions and may require cleaning. Areas adjacent to borders, plant pots and trees may discolour from transfer of plant-life; specialist maintenance advice may need to be sought.

Marshalls cannot accept responsibility for any of the above conditions.

## Maintenance

Paving materials require periodic cleaning to maintain their appearance. Regular sweeping to prevent the build-up of detritus is recommended.

Light coloured blocks, whilst structurally sound for driveway use, do emphasise tyre marks and oil spills on the driveway. It must be accepted that these products will need more maintenance if the overall appearance is to be maintained.

Proprietary cleaning agents are widely available. However care should be taken when buying cleaning agents as some varieties contain a concentration of acid, which can adversely affect the appearance of concrete products, clay and natural stone.

A trial on a small section of paving is always recommended prior to using on the full area.

For general cleaning of dirt and algae, vigorous brushing with a stiff yard broom with plenty of hot detergent solution (washing up liquid or non-bio washing powder), thoroughly rinsed with clean water should suffice. Repeated treatment may be required for paved areas sited beneath trees or in

permanent/near permanent shade. In certain circumstances, prolonged contact with wet leaves can result in staining of the paved area. Such contact should be avoided wherever practical.

## Power-washing

Power-washing with high-pressure equipment is not normally required. Should these methods be employed, the following precautions should be observed:

- i. Paving should be thoroughly swept to remove detritus (loose debris) that could act as an abrasive agent when moved by the force of a power jet.
- ii. A trial area should be tested before larger scale power-washing takes place.
- iii. No more than a medium pressure should be applied when washing paving.
- iv. The power-washing lance should be held at an oblique angle to the paving and at least 200mm (8") from the surface.
- v. If excess sand is washed from the joints during the washing exercise, it is important that the joints are re-sanded with similar materials upon completion.
- vi. If mortar joints between pavings are damaged during power-washing they should be re-pointed/made good with fresh pointing as required, to maintain the integrity of the paving.

## Suitability/Application

The paving flags illustrated in this literature are primarily intended for domestic/landscape use only.

Paving flags suitable for areas subject to intense foot traffic, i.e. pedestrian precincts and commercial applications, etc. are detailed in separate literature. This literature is available on request by telephoning: 0333 220 2730.

For areas subject to vehicular overrun (driveways, parking areas, etc.), block paving products are recommended, (see Driveways section). The block paving products illustrated in this literature are intended for pedestrian and light vehicular overrun applications (driveways and similar).

For pavements subject to frequent overrun of heavy vehicles, block paving from our commercial/specification range should be used. These are detailed in separate literature, copies of which are available on request by telephoning: 0333 220 2730. Should customers be in doubt as to the suitability of any Marshalls product for a given application, please obtain guidance from Group Technical Services Tel: 0333 220 2730.

## Colour Variation

The colours shown in this literature are as exact as photographic and printing processes will allow. You can get samples from [www.marshalls.co.uk/homeowners](http://www.marshalls.co.uk/homeowners). We strongly recommend that colours are judged and chosen from actual materials rather than photographic representation depicted herein. Although every effort is made to ensure consistency of

product colour, variations between production batches can occur. We therefore recommend that, when purchasing materials, especially in the case of larger quantities, they all come from the same batch and that products are thoroughly mixed on site by drawing from a minimum of three packs.

## Batch Variation - Concrete

Concrete products are made from naturally occurring materials, which means these materials can vary in colour, resulting in a slight variation in a finished product. Despite the use of quality materials, modern and up to date manufacturing techniques and quality control, variation between production batches can occur. Whilst any differences are generally quite minor, they will be noticeable when units from two production batches are laid consecutively within a single area.

We would always advise that batch codes are checked to reduce the risk of product variation and ensure consistency of finish. To prevent this, when multiple packs are being laid in one consecutive area, please ensure you check that they are all from the same production. The batch label will display the product code, with the first two letters identifying the works of origin and the week number indicating which week of the year the product was produced.

## Batch Variation - Porcelain

Colour variation can occur during the manufacturing process of porcelain products. To minimise any variation issues in our ranges, Marshalls only source from first choice tiles, which means we only take stock from the middle of the product run, leaving the few at the beginning and at the end.

We aim to always send your order from the same batch code, so please check all pack information is consistent before supplying. The batch code will be shown as a letter, followed by the number.

## Batch Variation - Natural stone

The natural origin of stone means that variation in colour, texture and markings is inevitable and is an inherent characteristic of all natural stone.

However, what differentiates Marshalls natural stone from our competitors is that all our stone goes through an agreed selection process for colour, which creates a more subtle and consistent blend across a finished project.

If you have any concerns, please contact our Group Technical Services Team.

## Availability

Details of pack contents are listed for the guidance of stockists. Product dimensions and weight, etc. are nominal and subject to manufacturing tolerances.

## \*Patented Paving System

Priora is patented in UK and EP079168931.

## Natural Stone

In natural stone Iron spots can sometimes be identified, after installation. This is due to oxidation of iron materials within the matrix of the stone. This does not effect the structural integrity of the stone.

## Staining

Certain common garden chemicals such as Ferrrous Sulphate can stain paving. Please check the information given on the container holding the chemical. If chemicals are spilt on the paving remove immediately by rinsing away with clean water.

## Marshalls Commitment to Quality & Innovation

Marshalls is committed to innovative product development and manufacture. To help you obtain maximum enjoyment and long service from any Marshalls product, we would be pleased to make you aware of the following:

The evolution of new product design is continuous and information is subject to change without notice. Customers should check with the stockist to ensure that they have the latest details.

All Marshalls products are manufactured to the appropriate European Standard where applicable. Where products (or intended usage) lie outside the scope of a British (or European) Standard, Marshalls own standard will be employed. All products are supplied subject to Marshalls Standard Conditions of Sale, a copy of which is available on request. Liability in respect of any statements, conditions, warranties and representations made on behalf of the Company is limited in accordance with the terms set out in the Standard Conditions of Sale.

## Health and Safety

Care should be taken when handling and installing Marshalls products. Guidelines on the Control Of Substances Hazardous to Health (COSHH) are available for all Marshalls products, either through our website, [www.marshalls.co.uk/homeowners](http://www.marshalls.co.uk/homeowners) or from Group Technical Services, Tel: 0333 220 2730.

## Marshalls Register

All Marshalls Register members are independent businesses and whilst assessed for their installation skills they are not employed by Marshalls.

Marshalls Register of installers are regularly inspected to ensure they comply with the membership agreement. Marshalls are not a party to the contract between the Registered installer and the customer. Marshalls cannot be held responsible for any installation undertaken by a Marshalls Register installer.

## Register Installer

Details of membership are available from Marshalls Register support team on 0333 220 2730.

# Grass & Paving Notes

## Common to all Marshalls Natural Stone:

- Marshalls endeavour to ensure that all natural stone products are covered by the Fairstone guarantee of quality. If the Fairstone Logo is visible on a product page be assured that this product is processed and supplied only by proven ethical sources (see page 14 for more information).
- All Marshalls Sandstone paving is covered by the Marshalls Stone Standard quality mark of assurance. Where the Marshalls Stone Standard logo is visible on a sandstone page, be assured that this product not only meets but exceeds the base technical levels outlined in the British Standard.
- The natural origin of stone means variation in colour, texture and natural markings is inevitable. Marshalls strive through expert hand selection to ensure the integrity of each natural stone range, however as in all natural products some variation may occur.
- Natural Stone products come with specific installation guidelines. Please contact Group Technical Services on 0333 220 2730 or visit our website [www.marshalls.co.uk](http://www.marshalls.co.uk) prior to installation.
- Please note granite and marble are not suitable for use with WeatherPoint 365.
- Best practice is to use slurry primer on all natural stone and porcelain paving.

If you are laying any Marshalls driveway materials for the first time, please contact Group Technical Services on 0333 220 2730 or visit our website [www.marshalls.co.uk](http://www.marshalls.co.uk) for installation advice.

### p18 SCOUTMOOR

- This pack is made up of random length pieces between 300 – 900mm. 15 linear metres of each gauge supplied. 18m<sup>2</sup> coverage without joints. Depending on the sizes in the pack the coverage with a joint will be between 18.5m<sup>2</sup> and 19m<sup>2</sup>.
- This product is supplied 'direct to site' only.
- Slurry back natural stone to increase adhesion and prevent staining.
- It is recommended that you contact Group Technical Services for best installation advice when laying this paving.

### p19 LAZARO MARBLE

- A marble product which should be installed on full mortar bed, and jointed with a proprietary waterproof grout.
- Ensure cutting is carried out using a power saw with the appropriate quality diamond blade.
- Slurry back natural stone to increase adhesion and prevent staining.

- Not suitable for use around a chlorinated or salt water pool.
- For perfect installation of this exceptional paving Marshalls recommend specific primers and bonding agent. Your Register Installer should refer to their Installation Guide or call Group Technical Services on 0333 220 2730.

### p20 SAWN VERSURO

- Remember if used indoors this paving should be sealed with a proprietary water based acrylic sealant.
- When using Jumbo and King Size, due to the weight of the units mechanically aided lifting is essential.
- Please note Jumbo and King Size can only be delivered direct to site.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG) for smooth only.
- Slurry back natural stone to increase adhesion and prevent staining.

### p22 FLAMED NARIAS

- A lightly flamed natural stone product.
- This paving can be purchased in partial packs through Marshalls Order Select.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).
- Slurry back natural stone to increase adhesion and prevent staining.

### p23 CAPLETON

- We recommend installing on a full mortar bed.
- Joint with a proprietary waterproof grout.
- Use a slurry primer on the reverse of the slab before installing onto the mortar bed.
- Slurry back natural stone to increase adhesion and prevent staining.

### p24 GRANITE ECLIPSE

- As Granite Eclipse is a natural material, varying degrees of quartz veining may be apparent in some pieces.
- Make sure, if used indoors, paving is sealed with a proprietary water-based acrylic sealant.
- Marshalls recommend using a waterproof external grout, some other jointing compounds may stain this product. Weatherpoint 365 Jointing Compound and MEJG are **not suitable**.
- Occasionally small micro-fissures can be apparent within Granite Eclipse Graphite, these are not a sign of weakness and cause no issue technically to the stone.
- Slurry back natural stone to increase adhesion and prevent staining.

### p26 CASARTA SLATE

- Natural slate inevitably shows variation in colour, so viewing the actual samples is always recommended.
- Also dark slate sometimes surface blemishes occur during installation, these will weather in over time.
- If used indoors an appropriate water-based sealant is recommended.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).
- Slurry back natural stone to increase adhesion and prevent staining.

### p27 TOWNGATE

- This paving has not met the rigorous colour tolerance grading given to our premium grade Versuro Sandstone, therefore more colour variation will be apparent when laid.
- Use a slurry primer on the reverse of the slab before installing onto the mortar bed.
- Slurry back natural stone to increase adhesion and prevent staining.

### p28 ANTIQUE ALVERNO

- A natural stone paving product.
- This paving is carefully calibrated to a consistent thickness to ensure speed and precision of installation.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).
- Slurry back natural stone to increase adhesion and prevent staining.

### p29 NATURAL SLATE

- This product is not intended for driveways.
- This is a natural split product, the thickness can therefore vary between 18-24mm.
- Slurry back natural stone to increase adhesion and prevent staining.

### p30 LIMESTONE ALURI

- Please note that Charcoal limestone can lighten through natural weathering.
- Slurry back natural stone to increase adhesion and prevent staining.

### p31 ALVANLEY PAVERS

- This product is not intended for driveways.
- Use a slurry primer on the reverse of the slab before installing onto the mortar bed.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).
- Requires a rigid installation.
- Slurry back natural stone to increase adhesion and prevent staining.

### p32 SYLVERN

- Install on a full mortar bed.
- Joint with a proprietary waterproof grout.
- Please note that this product can lighten slightly over a period time. This is a natural weathering process. Cleaning with acid based products should be avoided because this will cause a rapid lightening of the surface.
- Slurry back natural stone to increase adhesion and prevent staining.

### p33 INDIAN SANDSTONE RIVEN

- A budget natural stone product.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).
- Ironing staining may appear on the surface of this product once installed, this causes no technical issues to the stone.
- Always lay larger face upwards.
- Slurry back natural stone to increase adhesion and prevent staining.

### p35-38 SYMPHONY PLUS

- Prior to handling and installation, check the paving for damage. Complaints about visible damage will not be accepted after installation.
- There may be some colour variation between production batches. Batch codes, quantity and colour should therefore be checked prior to install.
- Please make a note of the shade code of the product you have received. This will be advantageous if you need to place orders at a later date to complete a job as it will allow us to send the best match possible.
- Customers should not mix different sizes of the same colour, as there could be colour/shade variation due to the different batches.
- SYMPHONY® Plus comes with specific installation guidelines. Full installation guideline can be downloaded from our website or contact Group Technical Services on 0333 220 2730.

- When using SYMPHONY® Plus, due to the weight of the units, mechanically aided lifting is essential.
- Sizes and coverage are those attained with a 5-8mm joint.
- For perfect results these products require appropriate cutting tools and correct installation techniques. Consult a Marshalls Register installer or contact Group Technical Services on 0333 220 2730.

#### **p39-46 SYMPHONY**

- Prior to handling and installation, check the paving for damage. Complaints about visible damage will not be accepted after installation.
- There may be some colour variation between production batches. Batch codes, quantity and colour should therefore be checked prior to install.
- A dry lay of this product is recommended before installing onto the full mortar bed to ensure the best colour blend is achieved.
- Please make a note of the shade code of the product you have received. This will be advantageous if you need to place orders at a later date to complete a job as it will allow us to send the best match possible.
- Customers should not mix different sizes of the same colour, as there could be colour/shade variation due to the different batches.
- Porcelain paving, with the exception of the SYMPHONY® Plus range, must be primed with a slurry primer before installing onto a full mortar bed. All building materials should be protected from bad weather, both during storage and after initial installation.
- Packs of SYMPHONY® are supplied with the correct amount SYMPHONY® Jointing Compound.
- Sizes and coverage are those attained with a 5-8mm joint.
- For perfect results these products require appropriate cutting tools and correct installation techniques. Consult a Marshalls Register installer or contact Group Technical Services on 0333 220 2730.

#### **p47 MOTUS**

- Sizes and coverage are those attained with a 5-8mm joint.
- Paving should be installed rigidly.
- Movement joints should be considered for large areas. For further information and full installation advice contact 03704 112233 to speak with our Technical Team.

#### **p48 ARDARA**

- Sizes and coverage are those attained with a 5-8mm joint.
- Paving should be installed rigidly.
- Movement joints should be considered for large areas. For further information and full installation advice contact 03704 112233 to speak with our Technical Team.

#### **p49 ARRENTO**

- Sizes and coverage are those attained with a 5-8mm joint.
- For perfect results Arrento Porcelain products require appropriate cutting tools and correct installation techniques. Consult a Marshalls Register installer or contact Group Technical Services on 0333 220 2730.

#### **p51 WOODSTONE**

- Woodstone are faced on both edges for a realistic look.
- Posts are only faced on 2 sides.

#### **p52 ARGENT**

- Can be laid on sand bed with sand joint max size 450x450mm.
- For a contemporary look choose Argent Smooth, for greater slip skid properties try Argent Textured.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p53 HERITAGE**

- Paving should be bedded on a full bed of mortar.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p54 PERFECTA**

- Yorkstone aggregates, give this product excellent non-slip properties, even when wet.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p55 ORGANA**

- Paving should be installed rigidly.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p56 SAXON**

- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p57 FIREDSTONE**

- Paving should be bedded on a full bed of mortar.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

#### **p58-59 TEXTURED & UTILITY PAVING**

- Although performance is good, sizes and colours will be limited, and finish may be varied.
- Sizes listed assume 10mm joint width.
- This paving is ideal for jointing with Marshalls WeatherPoint 365 Jointing Compound or Marshalls Exterior Jointing Grout (MEJG).

# Driveway Notes

## General Driveway Notes

- All Marshalls driveway products in this brochure are designed for domestic vehicles only, they are not designed for commercial vehicles.
- Driveways must be installed with edge restraints for stability.
- Driveways must be installed in accordance with current legislation to manage and control water run-off.
- Tools to aid installation are now available from Marshalls. Call 0333 220 2730 to discuss in more detail with our sales team.

## Natural Stone Driveway Products

- Marshalls endeavour to ensure that all natural stone products are covered by the Fairstone guarantee of quality. If the Fairstone Logo is visible on a product page be assured that this product is processed and supplied only by proven ethical sources (see page 14 for more information).
- All Marshalls sandstone paving is covered by the Marshalls Stone Standard quality mark of assurance. Where the Marshalls Stone Standard logo is visible on a sandstone page, be assured that this product not only meets but exceeds the base technical levels outlined in the British Standard.
- Due to the nature of this product, you may see some colour variation in natural stone products.

## Marshalls Concrete Driveway Products

- Mix blocks from a minimum of 3 of packs to ensure the correct colour blend.
- Take blocks from vertical columns rather than horizontal layers unless otherwise stated.
- Marshalls concrete block paving is manufactured in different factories. Colour may vary slightly across these works of manufacture.
- Marshalls can supply kiln dried sand, contact your local service centre for more information.
- Jointing sand should be introduced before the initial vibration and a rubber-faced matting on the vibrating plate should be used, except for SYMPHONY plus, where units should not be vibrated.

**\*For specific installation guides, please contact Group Technical Services on 0333 220 2730.**

### p61-68 NATURAL STONE DRIVEWAYS

- Where a full mortar bed install is recommended it is best practise to coat the back of each flag with slurry primer just before laying. This will assist bonding and stop draw through from the bed.

### p61 DRIVEWAY SETTS

- A premium stone driveway product.
- Please note due to the nature of this product significant variation between stones can occur.
- For paths and edging smaller quantities can be ordered via the Order Select service, see p130.
- Slurry back natural stone to increase adhesion and prevent staining.

- The use of the correct installation method is critical for this product, please contact Group Technical Services for more information.

### p62 NATURAL STONE SETTS

- Please note due to the nature of this product significant variation between stones can occur.
- For paths and edging smaller quantities can be ordered via the Order Select service, see p130.
- Slurry back natural stone to increase adhesion and prevent staining.
- The use of the correct installation method is critical for this product, please contact Group Technical Services on 0333 220 2730 for more information.

### p63 SCOUTMOOR SETTS

- Spoiling may occur on a number of units, this is a natural phenomenon.
- Please note due to the nature of this product significant variation between stones can occur.
- Requires a rigid installation.
- Slurry back natural stone to increase adhesion and prevent staining.
- The use of the correct installation method is critical for this product, please contact Group Technical Services on 0333 220 2730 for more information.

### p64 CROPPED PORPHYRY SETTS

- Please note due to the nature of this product significant variation between stones can occur.
- These setts may sometimes be coated with a natural residue; this can be cleaned off with water after installation, or will naturally wear away overtime.
- Slurry back natural stone to increase adhesion and prevent staining.
- The use of the correct installation method is critical for this product, please contact Group Technical Services for more information on 0333 220 2730.

### p65 MAGNASETT

- Please note due to the nature of this product significant variation between stones can occur.
- Slurry back natural stone to increase adhesion and prevent staining.
- The use of the correct installation method is critical for this product, please contact Group Technical Services for more information on 0333 220 2730.

### p66 FARNLEY SETTS

- Please note due to the nature of this product significant variation between stones can occur.
- Designed to be butt jointed when installed.
- Slurry back natural stone to increase adhesion and prevent staining.

- The use of the correct installation method is critical for this product, please contact Group Technical Services for more information on 0333 220 2730.

### p67 GRANITE ECLIPSE SETTS

- As Granite Eclipse is a natural material, varying degrees of quartz veining may be apparent in some pieces.
- Please note due to the nature of this product significant variation between stones can occur.
- The use of the correct installation method is critical for this product.
- Use rubber protector on conductor plate.
- Please note Marshalls WeatherPoint 365 is **not suitable** for use with this product.
- Slurry back natural stone to increase adhesion and prevent staining.

### p68 NEWDALE

- Please note due to the nature of this product significant variation between stones can occur.
- Slurry back natural stone to increase adhesion and prevent staining.
- The use of the correct installation method is critical for this product, please contact Group Technical Services for more information on 0333 220 2730.

### p70 SYMPHONY PLUS DRIVE

- This product comes with specific installation guidelines. Full installation guideline can be downloaded from our website or contact Group Technical Services on 0333 220 2730.
- When using SYMPHONY\* Plus, due to the weight of the units, mechanically aided lifting is essential.

### p72-75 DRIVESYS ORIGINAL COBBLE, RIVEN STONE, FLAMED STONE & SPLIT STONE

#### ! IMPORTANT LAYING INFORMATION

- It is essential that the Drivesys installation guidelines are followed.
- A soil test to check ground and permeability conditions should be completed prior to installation.
- The Drivesys system is not always suitable for poor ground conditions, such as heavy clay areas. We would recommend that you contact us prior to installation for further advice if ground conditions are not ideal.
- Drivesys Jointing Compound is guaranteed for a period of 12 months, or 2 years if the customer has purchased a Marshalls Register Hard Landscaping Guarantee.
- Drivesys must be installed with a solid edge restraint around the perimeter to retain the driveway.
- Drivesys units must come into full contact with the adjoining block when laid.
- Marshalls does not recommend installing Drivesys on a radius.
- Drivesys blocks come with a protective transportation seal which wears off to reveal the slightly, lighter true colour.

- The correct amount of jointing compound is supplied with every pack of Drivesys.
- After installation, scratches may be visible in the transportation seal. This will weather as the seal dissipates but care should be taken to reduce this during installation.
- For driveways with an incline of 15° or more or that has specific installation design requirements, please contact Group Technical Services 0333 220 2730.

**For more technical information or assistance, please contact Group Technical Services 0333 220 2730.**

### p76 DRIVELINE METRO

- Lay a standard driveway sub-base as a flexible installation.
- Driveline Metro can be a single colour driveway, or you can purchase a number of different colour packs to create a unique effect.
- 80mm block will ensure structural stability but absolutely no commercial vehicle should traffic this product.
- A full layer of kiln dried sand should be deposited before any compaction takes place, making sure all blocks are completely covered.
- When cutting, it is important to make sure that once cut with water the block has been perfectly cleaned before installing, or staining will occur.

### p77 DRIVESETT ARGENT

- Lay a standard driveway sub-base as a flexible installation.
- Drivesett Argent is also available as a Sustainable Drainage system, see Drivesett Argent Priora p87.
- When cutting, it is important to make sure that once cut with water the block has been perfectly cleaned before installing.

### p78 DRIVESETT NATRALE

- Lay a standard driveway sub-base as a flexible installation.
- Supplied in single size packs for choice, laying pattern options can be found on the Marshalls/ Homeowners website.

### p79 DRIVESETT TEGULA

- Tegula is a trademark of SF Kooperation GmbH.
- Lay a standard driveway sub-base as a flexible installation.
- Perfect for driveways, paths and patios.
- This product is manufactured across the country. Colour may vary slightly across the manufacturing sites.
- Due to the manufacturing process, it is not recommended to mix project packs with single size packs.

## p80 DRIVESETT COPPICE

- Lay a standard driveway sub-base as a flexible installation.
- Take product from across a layer of the pack to achieve the correct colour blend.
- When laid randomly, colours will give the illusion of multiple block sizes.
- Potential to lay in different patterns, see website for details.

## p81 DRIVELINE NOVA

- Lay a standard driveway sub-base as a flexible installation.
- The colours blend throughout the packs so please ensure appropriate mix is installed across the area.
- The two textures can be laid together or individually.
- Lay in different laying patterns, see website for recommended options.

## p82 DRIVESETT SAVANNA

- Lay a standard driveway sub-base as a flexible installation.
- Supplied in single size packs for choice, laying patterns on website, [marshalls.co.uk/homeowners](http://marshalls.co.uk/homeowners).

## p83 DRIVELINE 50

- Lay a standard driveway sub-base as a flexible installation.
- An upgrade to Standard CBP Driveline 50 is an improved driveway product.
- This product is manufactured across the country. Colour may vary slightly across the works of manufacture.
- Lay in different laying patterns, see website for options.

## p84 STANDARD BLOCK PAVING

- Lay a standard driveway sub-base as a flexible installation.
- A standard block paving product, made in different factories in England, Scotland and Wales therefore variations in colour and tone may occur.
- See Driveline 50 for a more quality block paver.
- Keykerb range, see p113, provides standard edge restraint for this range.

## p86 DRIVELINE DRAIN

- Excavate a suitable concrete strip footing, normally 100mm lean mix, to support the Driveline Drain units, outfall and Rodding Boxes.
- Driveline Drain outfalls and Rodding Boxes should be installed first along with relevant pipework to existing underground pipework, soakaway or SuDs compliant system.
- Before installing the Driveline Drain units apply a 5mm bead of adhesive around the bottom half of the drainage hole avoiding the top of the aperture. Lay the units onto a freshly mixed workable concrete bed, making sure you achieve a tight connection between each unit.
- Haunch the units using a bedding concrete of an appropriate thickness and depth.
- On a flexible install lay the paving 3-5mm above the Driveline Drain units. On a rigid install lay the paving flush to the Driveline Drain units.

- For cleaning Driveline Drain please speak to Group Technical Services. If laying this product for the first time please contact Group Technical Services for an Installation Guide on 0333 220 2730.

## p87 DRIVESETT ARGENT PRIORA

## p88 DRIVESETT TEGULA PRIORA

- Priora is a trademark of UNI-International Bausysteme GmbH.
- Tegula is a trademark of SF Kooperation GmbH.
- Each 60mm block features the Marshalls unique, patented Priora nib.
- No drainage or soakaways required if installed correctly.
- Priora must be laid with 20mm and 6mm clean crushed stone aggregate to BS EN 13242 and BS EN 12620 to ensure compliance.
- Argent Only: – Supplied in mixed size packs, blocks are designed to be laid in a coursed laying pattern.
- Argent Only: – When cutting, it is important to make sure that once cut with water the block has been perfectly cleaned before installing.

## p89 DRIVELINE PRIORA

- Priora is a trademark of UNI-International Bausysteme GmbH.
- Each 60mm block features the Marshalls unique, patented Priora nib.
- No drainage, tarmac or soakaways required if installed correctly.
- Priora must be laid with 20mm and 6mm clean crushed stone aggregate to BS EN 13242 and BS EN 12620 to ensure compliance.
- Numerous laying patterns available; contact Group Technical Services or see website.

## PERMEABLE PAVING LEGISLATION

The increased risk of flooding has led to changes in government legislation, meaning that the environmental consequences of creating hard landscaped areas for vehicle parking must now be taken into consideration when planning your driveway project. Visit [www.communities.gov.uk](http://www.communities.gov.uk) for further information.

New and replacement driveways of any size are exempt from planning permission requirements when they use Sustainable Drainage Systems (SuDS).

Marshalls offers a full range of driveway products requiring no planning permission and having a positive impact on the environment.

The Priora Sustainable Drainage Systems (SuDS) has been specifically designed to manage heavy rainfall events. Each 60mm block features the Marshalls patented Priora nib design, which allows surface water to pass between the blocks into a specially calculated sub-base without compromising the structural performance of the driveway.

## CONDITIONS REQUIRED FOR PRIORA

### Common to all Priora Driveways:

The Priora design drains water away safely in heavy rainfall without burdening the community drainage system.

If installed with the correct sub-base this permeable paving solution can be used in a front garden without obtaining planning permission.

Specific installation guidance must be followed.

The Priora System should not be attempted by the DIY enthusiast or untrained installer. It requires the careful calculation of a soil permeability test and appropriate use of specially graded sub-base aggregates.\*\* Should an installer wish to undertake training for the installation of this product please call the Marshalls Helpline on 0333 220 2730 for further information.

Visit the Marshalls website to find your nearest Marshalls Register Installers trained to install Priora Systems, or call 0333 220 2730.

The grade of Priora featured in this brochure is only intended for normal domestic vehicles and pedestrian traffic, though occasional delivery vehicles over 3.5 tonnes gross weight can be tolerated.\*

The Domestic Priora System is only intended for driveways or paths where infiltration is required only in the immediate Priora paved area and not from other surrounding paved or roofed areas (see rainwater catchment area guideline opposite).

In some parts of the country there are ground conditions where infiltration could adversely affect foundations to houses, therefore, if in doubt seek advice from a specialist or the local authority building control department.

Properties constructed pre 1920 may not have been built on traditional concrete foundation, therefore in this case, Marshalls Domestic Priora System should not be installed.

Check for services, Priora must not be installed if gas or electric services run through intended Priora areas.

Priora is a trademark of UNI-International Bausysteme GmbH.

## GUIDELINES FOR INSTALLING PRIORA

### Surface Gradient

The intended Priora area must fall away from the owner's house and any other buildings in the immediate vicinity.

If the driveway exceeds 20m in length and/or has a gradient greater than 1 in 100 then please contact Group Technical Services.\*

The top surface of the driveway should finish at least 150mm below any adjoining wall DPC level.

### Existing Foundations

If your house lies adjacent to or less than 600mm from the proposed Domestic Priora driveway area, establish depth of house foundation before undertaking any soil test/Priora installation. The house foundation top surface must be 600mm (minimum) below the finished level of the top of the proposed Priora driveway.

### Soil Strength and Permeability

Marshalls Domestic Priora System must be laid on a subgrade which has previously had an established and adequate existing driveway and an area which has a subgrade soil strength greater than 5%.

The Domestic Priora System is only suitable for soil areas where infiltration applies and the test criteria have been met as per the standard permeability test.

For the standard permeability a test hole should be dug for every 20m<sup>2</sup> of driveway. There should be a minimum of two holes. Holes/pits should be spaced evenly in relation to the proposed Priora area.\*

### Discharge onto Roadway

The Domestic Priora area must not discharge onto surrounding public roadway and pathways and towards any buildings.

### Rainwater Catchment Area

No adjoining surface areas (rainwater pipes, roof areas, etc) must drain onto and into the proposed Domestic Priora driveway area, however, small areas such as door steps and garage areas are acceptable providing they do not exceed 5% of the driveway area.

Guideline: Catchment area = driveway area.  
Catchment area = drained surface area.

### Aggregates

Priora must be laid with 20mm and 6mm clean crushed stone aggregate to BS EN13242 and BS EN12620 to ensure compliance.

### Trees

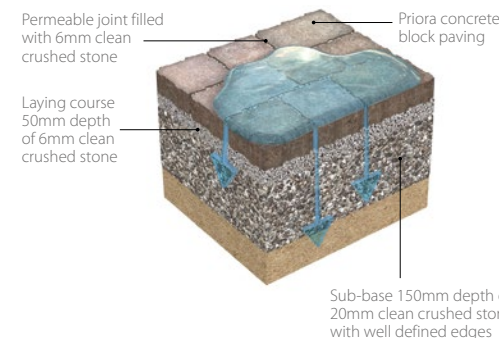
When installing in close proximity to existing trees, tree roots smaller than 25mm diameter may be pruned back, preferably to a side branch, using a suitable pair of secateurs or hand saw. Roots larger than 25mm should only be severed following consultation with an arboriculturist, as they may be essential to the tree's health and stability. Protection of the pavement will also be required, hence the requirement of a permeable root barrier system such as the Geoweb bio barrier system ([www.Fiberweb.com](http://www.Fiberweb.com)) or similar which is non surface protruding, and therefore, does not present a trip hazard once installed.

### Health and Safety

It is possible that more excavation for a Priora driveway may be required than that of a driveway constructed of traditional block paving, therefore, care must be taken when excavating ground to a deeper level. Particular care must be taken to protect the sites from children and partially sighted persons and for collapse of adjoining features such as boundary walls/fences.

Check for services, if they run through intended Priora areas, the service provider must be consulted before work commences.

Care must be taken when constructing over sewer, rainwater pipes and water pipes to ensure that the services remain supported for their full length by undisturbed material and are surrounded on the remaining sides by a minimum of 150mm of 6mm material to protect the service.



# Walling, Steps & Finishing Notes

**Note:** No product can be maintenance-free. Requirement will depend on product use, location and weather.

## Common to all Marshalls Walling Products:

- Marshalls recommends the use of Coping and Caps with all Walling Products. Copings and Caps protect walls against the staining effect of rain for a period of time.

## Common to all face Veneer Walling Products:

- Where a facing/veneer wall is used with a garden/soil/planting/aggregates behind it, a membrane must be installed at the rear of the wall to stop moisture draw through.
- Walls over 1.5m high need mechanical fixing.
- The correct drainage (such as weepholes) should be considered for any walling retaining soil.

### p91 SAWN VERSURO WALLING

- Faced on all sides.
- An external thin bed adhesive is recommended.

### p92 TRADITIONAL NATURAL STONE WALLING

- A 10mm joint width is recommended with this product.
- Due to tolerance of product, some sorting will be required before commencing installation.

### p93 STONEFACE TEXTURED WALLING

- Due to tolerance of product, some sorting will be required before commencing installation.
- Thickness is calibrated to 15mm +/- 1.5mm.

### p94 STONEFACE SAWN VENEER WALLING

- This product is supplied with the correct amount of adhesive and primer.
- 1.5m height before mechanical fixing is needed.

### p95 STONEFACE DRYSTACK VENEER WALLING

- Panels are in a Z cut format to hide joints, for a seamless finish. Please note there is a slight tolerance in this.
- This product is supplied with the correct amount of adhesive and primer.
- The mirrored inserts used in Nero Quartzite Mirror are made from brushed steel.
- 1.5m height before mechanical fixing is needed.

### p97 ARGENT WALLING

- Corner Quoin Ends can be ordered via Marshalls Order Select.
- Please note this walling is only faced on one side.
- An external thin bed adhesive is recommended.

### p98 CROFT STONE WALLING

- This walling is ideal for retaining walls up to 6 courses, but should never be used as a freestanding or dividing wall.
- Minimum radius int/left 750mm on base layer.

### p99 MARSHALITE WALLING

- A 10mm joint width is recommended with this product.
- Product is faced on 1 side, Quoin ends are not available.

### p100 TEGULA WALLING

- A 10mm joint width is recommended with this product.

### p101 OLD MILL BRICK WALLING

- A traditional clay walling product.
- A 10mm joint width is recommended with this product.

### p102 COPINGS & CAPS

- No drip grooves included on our range of copings.

### p104 BULLNOSE STEPS

- Marshalls has a broad range of high performance natural stone steps, ranging from sandstone to marble and granite.
- They can be used to match Marshalls natural stone paving products or to complement concrete paving products.

### p107-108 ALWAYS GREEN ARTIFICIAL GRASS

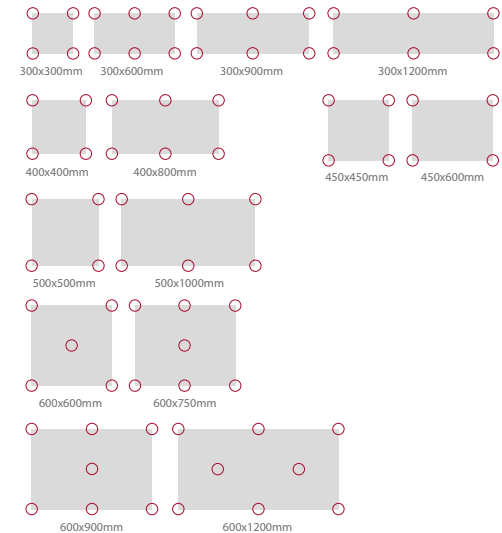
- Grades of grass supplied in 4m widths and can be cut to any length up to 25m (minimum 8m<sup>2</sup>).
- Recommend installing a driveway quality sub-base before laying Always Green for stability.
- Please see supporting diagram below.

### p110 KERBS & EDGING

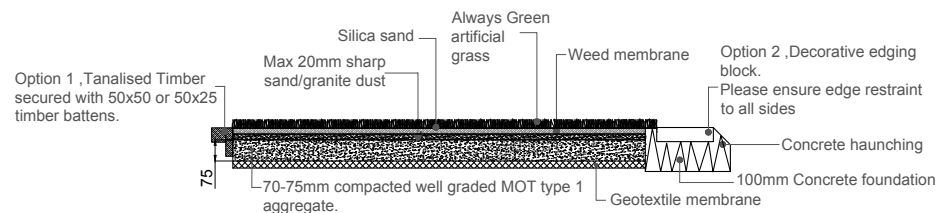
- The perfect edge restraints to co-ordinate with the Driveway products or contrast with other products within the Driveways range.
- Tegula and Savanna Kerb have a 45° splay.
- Smallest radius for an internal kerb is 0.46m.
- Smallest radius for external kerb is 0.62m.
- When laying Keykerb, KL protrudes 100-125mm and KS by 25-50mm.
- Specific installation guidance must be followed. Consult a Marshalls Register Installer. Or for further guidance contact Group Technical Services.

### p120 MARSHALLS PEDESTALS

- For best results, ensure you use the rubber base pads on the sub-base to keep the pedestals in place and rubber head pads on the head of the pedestal to reduce noise and minimise movement of the paving units.
- If laying porcelain paving onto a roof terrace or where wind loading may be a concern, apply a small dab of Sika EBT onto both sides of the rubber head pads before installing the paving unit to minimise movement.
- Roughly lay out sufficient pedestals for 4 or 5 paving units at a time.
- For corner units, or when a cut would otherwise reduce the paving unit to half of its original size, reduce the pedestal size by cutting along the bottom of the base unit.
- Lay the paving units, ensuring the pedestals are placed in the correct formation to fully support the unit. For the correct number of pedestals for each plan size, see diagram below:



- Ensure correct falls are incorporated into your design to remove any surface water.



9 Typical section through an Always Green Lawn installed in accordance with Marshalls Register Installation Procedures  
D03 Scale 1:20 @ A3

# Hard Landscape Guarantee

## Hard Landscape Guarantee Conditions

Marshalls products are manufactured to the highest standards. The Hard Landscape Guarantee is only available for domestic projects installed by a Marshalls Register Installer where a guarantee has been purchased; the cost of the guarantee is £50 + VAT up to the first £5,000 of installed value and £50 + vat for each £5,000 thereafter. The Hard Landscape Guarantee can only be issued by Marshalls upon receipt of a correctly completed Guarantee Request Form and the relevant fee. The Guarantee Request Form is available from your Marshalls Register installer and the relevant sections must be completed by both homeowner and installer. The Hard Landscape Guarantee covers Marshalls branded products. Marshalls hereby warrants, that in the event of the failure of Marshalls products used in the construction of a domestic driveway or patio installed at the address named on the Guarantee, replacement products will be supplied free of charge for a period of 10 years commencing from the installation date. **For products produced with Surface Performance Technology this period is extended for a further 10 years.** Additionally, the labour costs incurred during the replacement of these faulty materials, and/or labour costs arising from faulty workmanship, will be free of charge for a period of 5 years commencing from the installation date. This guarantee is subject to the terms and conditions detailed on the Marshalls website. This guarantee is offered as an additional benefit by Marshalls and in no way affects any parties' statutory rights.

The house owner is responsible for applications for any relevant planning permission. Marshalls do not accept liability for application of planning permission on any project covered by the Marshalls Hard Landscape Guarantee or otherwise.

In the unlikely event of products reaching you in less than satisfactory condition, you should notify the stockist immediately with details of the product and batch codes printed on the packaging. In addition to this, responsibility for costs incurred for uplifting and relaying defective products may be prejudiced if, upon reasonable inspection, the defect ought to have been apparent prior to laying.

Pendle, Textured Utility, Utility and Richmond pavings are intended to serve the 'budget' end of the market and as such should not be confused with premium products such as Heritage or Saxon. In addition to this, because of their limited protection in transit, there is a significant probability of pavings bearing scratch marks to the face. Due to local manufacturing, precise colours and face finishes may vary and it is recommended that pavings from different factories are not mixed on site. Pendle, Textured Utility, Utility and Richmond therefore fall outside the scope of The Hard Landscape Guarantee.

For the avoidance of doubt the performance of Marshalls jointing compounds are excluded from the Hard Landscape Guarantee.

# Order Select Service

When designing your garden or driveway there may be times when you do not need a full pack of product, for example when:

- Finishing an area of paving.
- Creating a decorative border.
- Adding to an existing project.

Marshalls 'Order Select' service means that Marshalls stockists and installers can order less than full-pack quantities for most of the products in this brochure.

- Check that the product you need has the Order Select Logo (✓) on the information page in the brochure.
- Carefully calculate the number of each item required, making an allowance for cutting and wastage, however, some may be mixed size packs and although you can order less than pack quantity, this will still be of mixed sizes but just less square metres than in a normal pack.
- Give this to your local stockist who will place your order direct with Marshalls for delivery by express carrier.

A premium is charged for this service, so it may be more economical to adjust the amount to the nearest full pack – especially if you are considering extending the project at a later date. Please note: If ordering a product to extend an existing project, it is likely that batch numbers will be different and the colour may vary.

Please note, on some Project Pack products there may be a limit on the number of single size flags available to order via Order Select. The maximum number will not exceed the amount of that single size contained in the Project Pack.

Our Order Select Service charge is £75 as standard.



# Acknowledgements

We are grateful for the help of the following people and organisations in the production of this brochure:

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## How to contact Marshalls

**Call: 0333 220 2730**

*(Calls may be monitored or recorded)*

Whether you would like product or technical advice, an update on your order, to find out more about our registered installers or to make a complaint, we can help.

**Website: [www.marshalls.co.uk/gardens-and-driveways](http://www.marshalls.co.uk/gardens-and-driveways)**

For ideas and inspiration, product information and to order samples and products online, please visit our website.

**Address: Landscape House, Premier Way,  
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