

# Marshalls

## News

AUTUMN  
WINTER '88

Published for stockists, specifiers and users of precast concrete products

### Rosedale — what's new for 1989

Five new designs in the Rosedale Collection of hardwood outdoor furniture demonstrate very clearly that it is possible to reconcile the desire for stylish and up-market garden furniture with the space limitations of conservatories and the smaller patio garden.

The new designs have the space-saving dimensions to suit both situations and the weights which allow them to be moved from patio to conservatory as the mood — and the weather — changes.

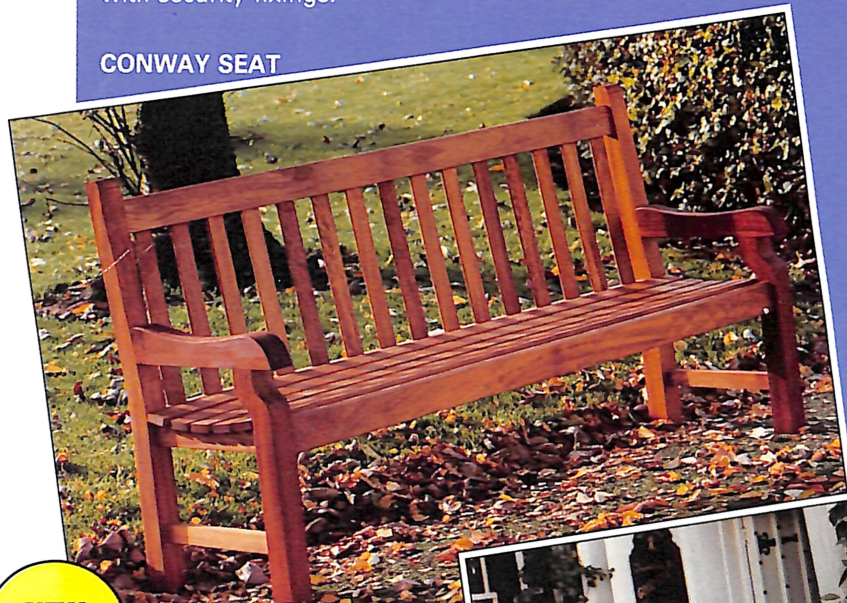
As with so many existing Rosedale designs, the new items can be mixed and matched at will. A complete patio set can be whatever the consumer wishes it to be, as all units can be bought as individual items.

#### New designs for landscapers

Like so many Rosedale designs for the landscape market, the Conway seat will be equally at home in a garden setting. The curved front posts add a distinctly classical style.

The Conway is eminently suitable for use in parks, sports grounds and landscaped public areas — and is sure to be in demand as a commemorative seat. The sturdy constructed two metre seat can be supplied with security fixings.

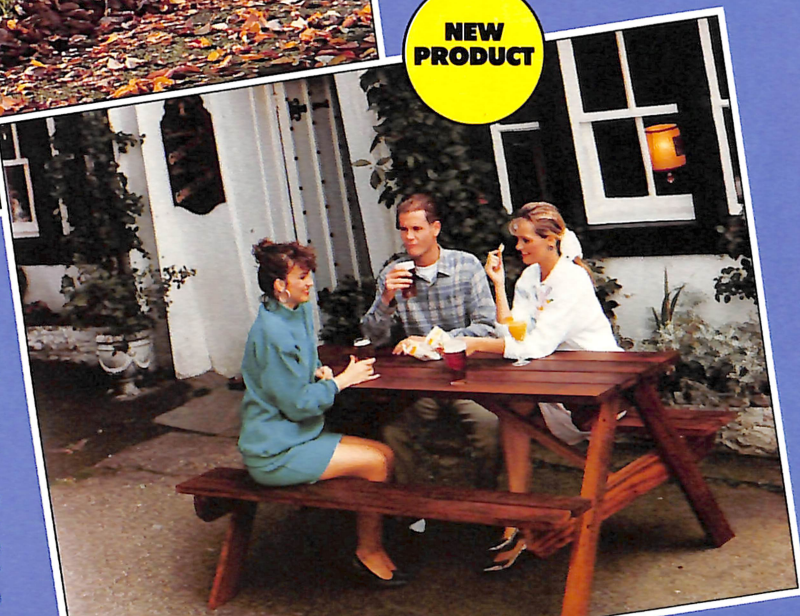
#### CONWAY SEAT



NEW  
PRODUCT

There isn't anything revolutionary about the design of the new Rosedale barbecue tables. Where they differ from others is in the solid construction and the use of quality hardwood to give a long life expectancy and resistance to outdoor conditions.

The robust construction is sure to appeal to local authority, leisure amenity and licensed trade specifiers who are looking for outdoor furniture that will keep its good looks season after season. There is an extra heavy duty 6' table and a 4'6" table.



6' BARBECUE TABLE

NEW  
PRODUCT



Five new  
designs for  
the public

1. **Caernarvon Coffee Table** (Self-assembly)  
This coffee or occasional table is ideal for informal eating out in the garden. It's compact and easy to move around — but still with over half a square metre of useful space.
2. **Stirling Hexagonal Table** (self-assembly)  
A stylish design and also a very stable one with its distinctive cruciform base. The Stirling Table is economical with space but seats six comfortably.
3. **Stirling Chair** (ready-assembled)  
This is a simple, timeless design that will be at home in any setting. It has a close-slatted seat and comfortable horizontal slatted backrest.
4. **Stirling Carver** (ready-assembled)  
All the solid craftsmanship of the Stirling Chair but with comfortable armrests.
5. **Braemar Seat** (self-assembly)  
A bench that seats three but takes only one to move it is something of a rarity. The Braemar can be moved from garden to patio to conservatory at will.

NEW  
PRODUCT

## SHARED STRENGTHS



### Armitage paver sales will benefit from Marshalls expertise

The growth of Marshalls in the last decade has been spectacular by any standards but it hasn't been growth for growth's sake. The objectives have been the many benefits that can be offered to the end user by a group of companies embracing all aspects of construction products.

In that context the acquisition of George Armitage & Sons plc is part of the design. The company is highly respected for its clay brick and paver products, knows its market well and is forward looking — in short, an ideal partner for Marshalls.

Acquisition doesn't mean loss of identity or direction but it does mean that strengths can be shared. For example, Marshalls, as the block paving market leader, will contribute a great deal to the marketing of clay pavers. Just one example of the way that the companies will operate powerfully together — for your benefit.

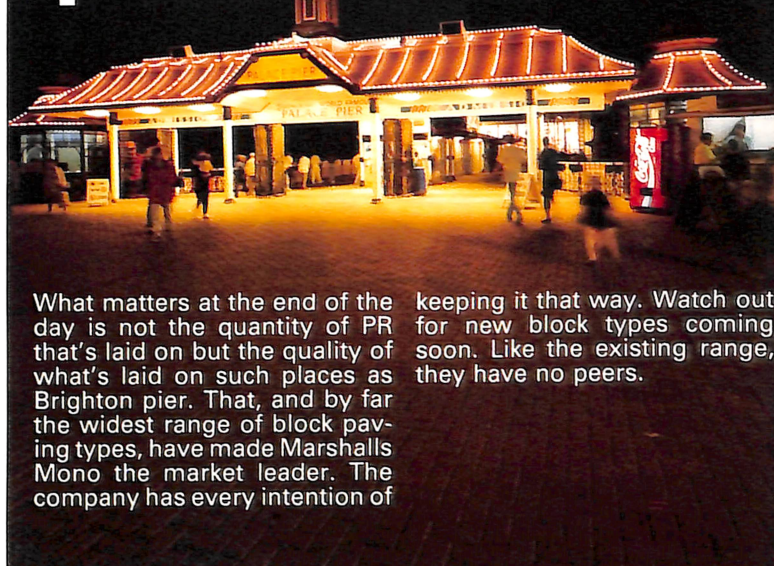
## Expansion in North America

As part of Marshalls' planned expansion programme in the U.S., the company has bought the assets of two Nashville, Tennessee concrete block manufacturing companies. The assets acquired include a ten acre site near the city centre and two well-equipped blockmaking plants (cbp and walling).

The company believes that

Nashville is an expanding centre for building materials and intends to use its production and marketing expertise to obtain an improved market share. The business will be operated by Marshalls' expanding subsidiary in Chattanooga — the first acquisition a year ago — which has already installed a new block plant on a specially acquired site.

## PR didn't make us number one — the products did



What matters at the end of the day is not the quantity of PR that's laid on but the quality of what's laid on such places as Brighton pier. That, and by far the widest range of block paving types, have made Marshalls Mono the market leader. The company has every intention of

keeping it that way. Watch out for new block types coming soon. Like the existing range, they have no peers.



# Keyblok for bus bays — by request

Concrete block paving has demonstrated its cost effectiveness clearly enough in the last few years for Calderdale Borough Council, in Halifax, to adopt it as a widely used surfacing material for bus bays and vehicular crossings. Apart from concrete block paving (cbp) looking good in the conservation areas around Halifax, Calderdale engineers have also discovered that its physical properties are as well-suited to this small scale use as they are on more typical cbp applications.

Installation of Marshalls' Keyblok in the small areas involved has been a simple matter, requiring low labour and plant input. It also has the advantage of being ready for immediate use as soon as laying has been completed. Alternative methods require either expensive plant to black-top such small areas or return visits for the different construction phases of insitu, followed by curing time.

In long-term use the blocks are unaffected by the oil spillage to which bus bays are prone (dark



coloured blocks can also disguise any staining). So maintenance requirements are very low.

In the case of vehicular crossings Calderdale engineers have found that the small plan size of cbp is far easier to detail than

paving slabs for the contours of crossings. There are also the same installation advantages over other materials which apply to bus bays and the additional advantage that blocks are aesthetically pleasing alongside footway paving slabs.



## Marshalls fence wins vital points

Putting a fence around the ground, building a stand and having clubhouse facilities are not just desirable for football clubs in the County and Premier "feeder" leagues — the Football Association now insists on them. This strict requirement explains why Huddersfield-based Bradley Rangers A.F.C. has, on a limited budget, installed Marshalls post and panel concrete fencing (180 posts and 1000 panels) around the entire ground.

Says club secretary, David Platt, "We could have used cheaper wire mesh fencing or made a far less permanent job with timber but with the post and panel system we scored more points". He's not talking about the league position — although Bradley Rangers are in the promotion stakes for the Premier league — but the scale of points awarded by the F.A. for different building methods and materials.

High points won with the Marshalls fence (24 against 10 for a mesh fence) means that lower points are needed on other obligatory improvements. "But that wasn't the main reason for our choice of perimeter fence", adds club manager, Alan Sweeney, ex-Huddersfield Town right full-back. "A see-through fence isn't allowed in the Premier Division and, as we always aimed for promotion, we decided on the Marshalls system."

The fence was erected with a mixture of some paid labour and some un-paid work (cleverly disguised as circuit training) by the team and committee members. Five gateways have been left in the perimeter fence and, when asked if they are for turnstiles, the club's groundsman, George Wyke, says, "Two are for turnstiles and three are for when the ball goes out of the ground and someone has to go for it."

## Library speaks volumes about the vernacular

You don't need to ask anyone in Barnoldswick what they think about their new library — just stand outside with a camera and they will walk right up and tell you that "it's grand." There isn't a better compliment for any architect, or for Marshalls' Cromwell Walling, which has been used for the external walls.

Much of the library's success is that it is already part of the town, reflecting the mill engine houses and Methodist chapels that are such an architectural feature of the Pennines. That was a conscious act by Lancashire County Council's Department of Property Services, whose architects, engineers and quantity surveyors were responsible for the project. The brief was for a quality civic building, to replace a derelict cinema on the site.

The library lies between two streets, so it actually has two fronts, both equally pleasing. The arched windows and door and the strongly curving wall against the main road, are part of a radial theme which has been carried through to the elegant but very functional interior.

The architect wanted real stone for the exterior but, with cost in mind, he considered that "Cromwell was the best alternative." The contractor for the library was P. S. Turner (Construction) Ltd., of Crosshills, Keighley.



## Median — a safe middle of the road solution

The Median concrete safety barrier is a new product from Marshalls with wide-ranging benefits in the segregation of traffic — either in permanent installations or as a temporary measure during road works. Unlike steel barriers, the Median is not designed to absorb energy itself but to deflect a vehicle by its wheels — so that impact energy can be more safely absorbed by the suspension and the vehicle can be re-directed on its original path.

The Median barrier is for traffic speeds up to 50 mph, (a higher speed version is under development). In permanent or temporary

situations it is obviously superior to cone marking and has a number of benefits over steel barriers. Less space is needed than with steel barriers, because the Median is designed not to deform, even with relatively severe impact.

In temporary installations the Median is simply lifted into position (there are lifting holes) and each section links with its neighbours by male and female joints. For permanent installation, dowels are set in the bottom of the barrier which are then concreted into the road base.



NEW PRODUCT '88

## Rialta — what else for an ex cinema?

"Bygone Days," in Haworth, recreates period shopping streets, complete with artefacts, antiques and memorabilia — including many items used in famous TV productions. Hard to believe that this fascinating museum and restaurant has been created inside an old cinema by two enthusiasts. Bygone Days must be one of the very few private enterprise museums and one that has all the ingredients for success.

Part of its old world charm comes from the Heritage Paving and Rialta setts used to pave the ground floor. They are both vintage 1988.



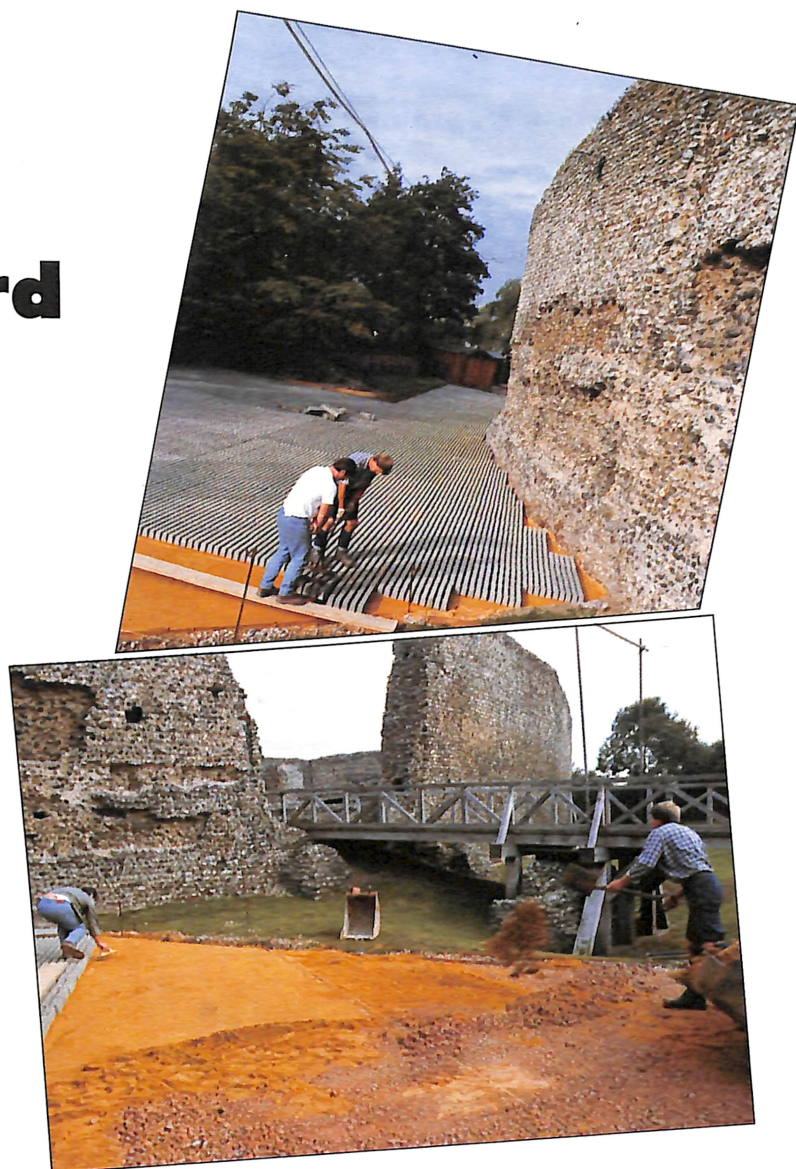


# It's down for keeps at Eynsford Castle

Part of the dry moat of Kent's Eynsford Castle has been used as an overspill car park in modern times but the gravel surfacing has never really been in keeping with this venerable Norman pile. English Heritage changed all that with the decision to resurface the area with Monoslab grass/concrete units and restore the moat to a natural appearance.

To avoid disturbance to archaeological remains, not all of the existing gravel surfacing was removed before the laying of a 150mm MOT Type 1 sub-base. This was followed by a 25mm laying course of sharp sand and the Type F Monoslabs.

The Type F, for heavy duty use, is one of seven different Monoslabs which are designed for a variety of applications. Once the 350 square metre area had been laid, the Monoslabs were filled to within 30mm of surface level with good quality topsoil. This was then seeded and covered with a further 10mm of soil. Being below surface level the seed was able to germinate, undisturbed by any trafficking, and begin to create the strong green thatch that will greet next year's visitors.



The work was carried out by W. Gothard, sub-contractor to W. F. Whitten. The company even improvised its own lifting device

for handling the units. But hopes of a patent are ill-founded—Archimedes got there first!

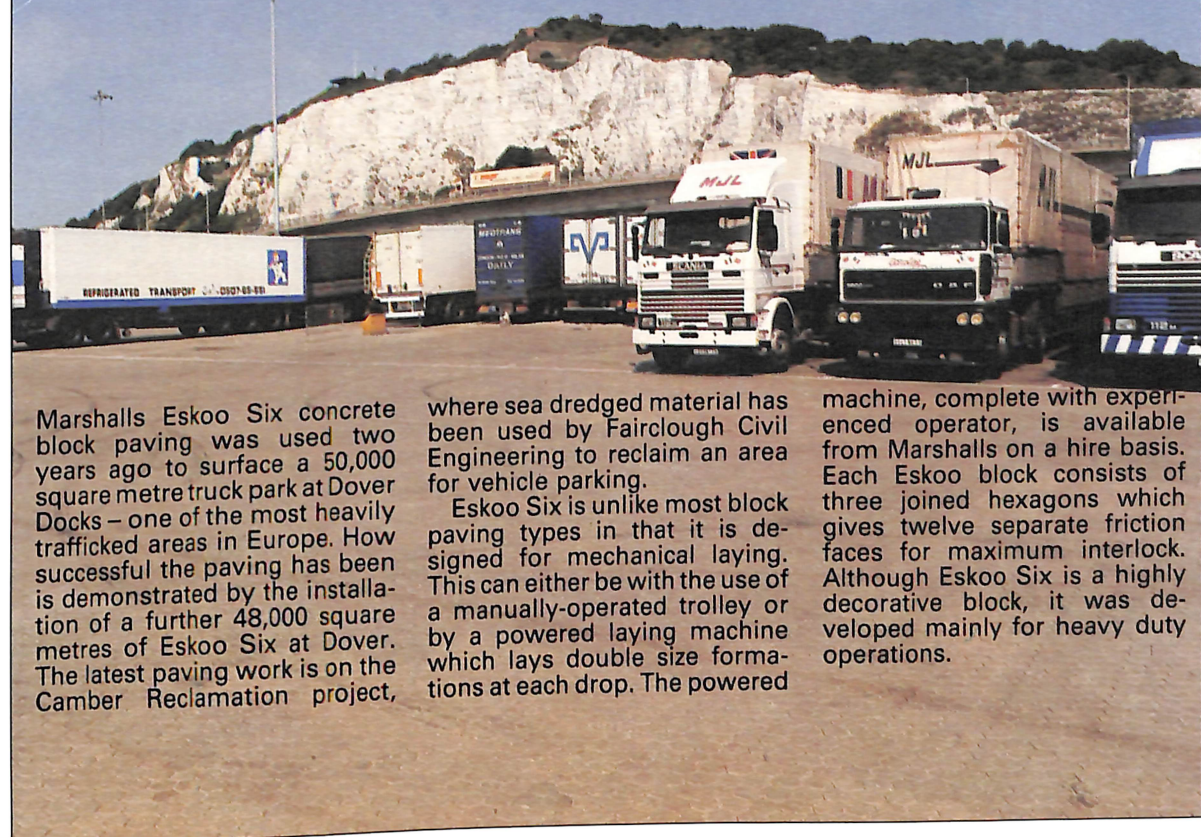
## Paving for the blind

Textured pavings, laid in a 'T' formation at pedestrian crossings, are proving to be a boon to the blind and the partially-sighted in locating crossings and the push button on controlled crossings. The red pavings manufactured for this purpose by Marshalls (450mm or 400mm square) have the pronounced dimpled pattern developed by the Transport & Road Research Laboratory as a tactile indicator. This socially useful paving is another result of the Institution of Highways & Transportation's guidelines "Providing for People with a Mobility Handicap." Marshalls already manufactures Millbank bollards as an aid to the blind.



NEW  
PRODUCT  
'88

## Marshalls chalks up another at Dover



Marshalls Eskoo Six concrete block paving was used two years ago to surface a 50,000 square metre truck park at Dover Docks — one of the most heavily trafficked areas in Europe. How successful the paving has been is demonstrated by the installation of a further 48,000 square metres of Eskoo Six at Dover. The latest paving work is on the Camber Reclamation project,

where sea dredged material has been used by Fairclough Civil Engineering to reclaim an area for vehicle parking.

Eskoo Six is unlike most block paving types in that it is designed for mechanical laying. This can either be with the use of a manually-operated trolley or by a powered laying machine which lays double size formations at each drop. The powered

machine, complete with experienced operator, is available from Marshalls on a hire basis. Each Eskoo block consists of three joined hexagons which gives twelve separate friction faces for maximum interlock. Although Eskoo Six is a highly decorative block, it was developed mainly for heavy duty operations.

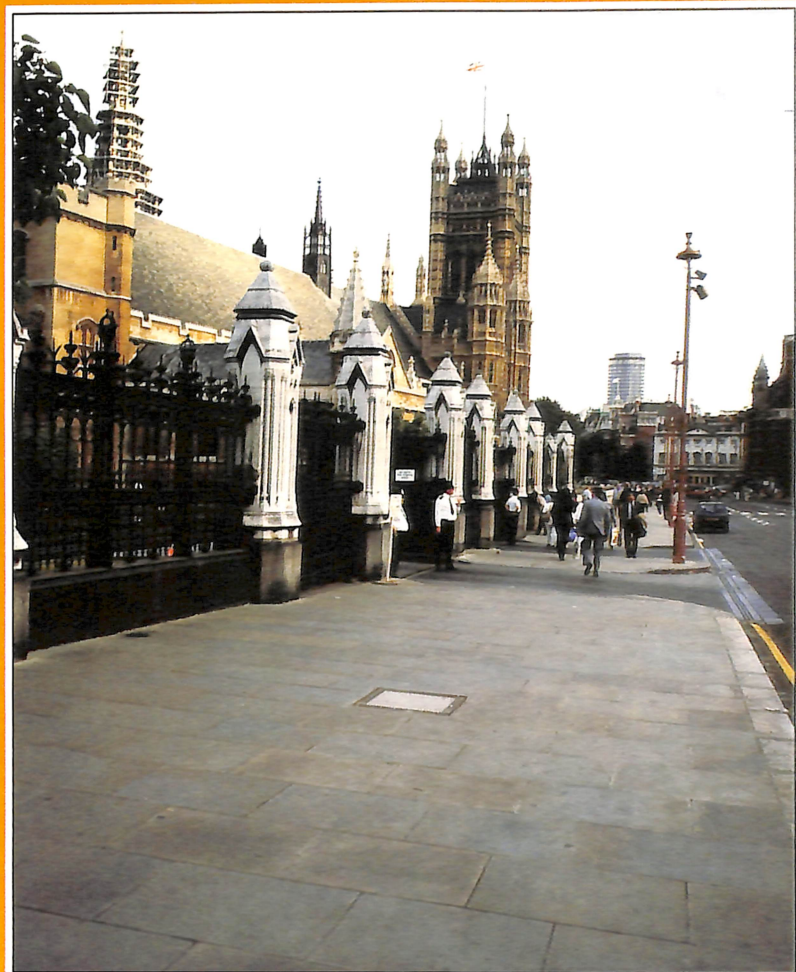
## Laid before Parliament

Natural stone paving, quarried by Marshalls in Halifax and Ramsbottom, has been used exclusively for a Westminster City Council re-paving scheme in-

volving Parliament Square and Great George Street.

York stone and Lancashire flagstone pavings have been mixed throughout the scheme, not for any political reasons but simply because the different colourings are very effective together. The 2½ inch thick pavings, with smooth-sawn finish, are all two feet wide and in random lengths.

By something of a Parliamentary coincidence the York stone comes from Marshalls' Cromwell Quarries.



## THE A518 IS BLOCKED — BUT THAT'S GOOD

There have been three reinstatements in as many months to a 280 metre stretch of the A518 through Uttoxeter — but everyone is delighted. Because the road was block-paved with Marshalls Keyblok, in early Summer, the subsequent reinstatements don't show as patches.

Like so many of our older towns, Uttoxeter has heavy traffic flow and the result is a high incidence of repairs to underlying services in the town centre. In fact a sixth of a mile section of concrete base carriageway had been reinstated and patched so often that resurfacing was essential. Concrete block paving was specified by Staffordshire Highways Department, both for its ability to accept differential set-

tlements between the concrete and the many old reinstatements, but also to facilitate future reinstatements in a road crammed with services.

The blocks were laid in the normal manner with the contractor, Triact Civil Engineers, utilising the existing concrete road base as the sub-base. Local inhabitants, seeing the blocks dry-laid on sand, told the laying sub-contractor, Ashbrook Ltd., that it would never work with all the traffic in Uttoxeter.

The six thousand plus vehicles using the road daily — a thousand of them HGVs — have proved them wrong. And Staffordshire CC engineers are particularly pleased with the "invisible mending" of the reinstatements.





## Nursery is as smooth as a baby's...

The connection between Stansted Airport and Brian Crosby's bedding plant nursery in Cheshire may not be immediately obvious but both are very smooth running. That's thanks to pencil edge Keyblok, Marshalls' development of a rectangular paving block with a very fine rounded edge. Both installations show that the potential of the new block goes much further than its use around supermarkets.

In Brian Crosby's case, pencil edge blocks provide the smooth surface he needs to move small-wheeled "Danish" trolleys around the nursery. The trolleys are used to carry trays of very delicate bedding plant seedlings around the nursery. Normal chamfered blocks would set up



enough vibration to loosen the roots. Pencil edge provides the smooth running surface he needs – but still with the strength of block paving in vehicle loading areas.

In the case of Stansted Airport, grey pencil edge has been used for an apron area and taxiway in front of Qualitair Aviation's hangar. Because of the low rolling

resistance of pencil edge blocks – important when moving aircraft for maintenance – Costain Construction has used them to surface a 27,000 square metre area. The work includes setting the Qualitair logo and an aircraft motif in the paved area, using charcoal blocks. Both are designed to be plainly visible from the air.



## A new kind of pavement art

It wasn't so many years ago that grey concrete slabs served for every occasion. They did a practical job – they still do – but what is different today is that Marshalls has developed hundreds of new paving types, with different sizes, thicknesses, colours, textures and shapes. Pavings are now recognised as important landscaping elements. They still do a practical job – but they do it with a smile.

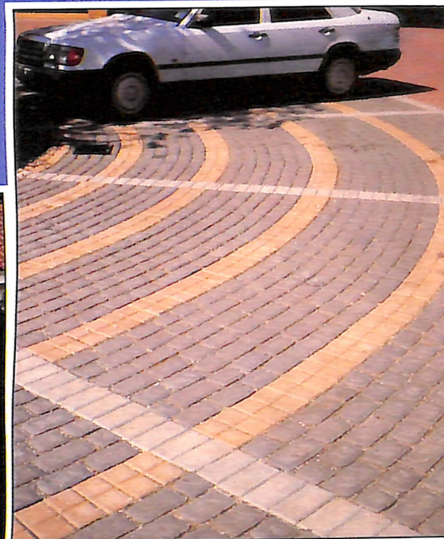
With this choice available, architects and landscapers are designing paving schemes in a way that was the exception even a few years ago. It is no longer the norm to calculate the total area and order that number of standard slabs.

Now the paving is quite likely to be a work of art in its own right,

reflecting or complementing the surrounding building styles. There is much more mixing of materials, to introduce pattern or prevent paved areas from be-

coming monotonous expanses.

Marshalls tend to feature in these better examples simply because the company has such a wide range of slab and block paving types to draw on. These pictures show just a few of the paving ideas, and the all-important detailing, that are creating a new kind of pavement art.



It's part of a car parking area alongside a high-tech office unit development in Newbury. The effect of the grey Rialta, buff V-groove and grey Keyblok, is striking and modern. The installation also demonstrates the versatility of Rialta. It fits easily into a modern scheme, while still being Britain's most widely specified block paving for conservation areas.



Because the paving is simple and unobtrusive it highlights the charm of the buildings in Worcester's Friar Street. Marshalls' natural York stone riven pavings marry well with the Perfecta pavings used to pave the old carriageway.



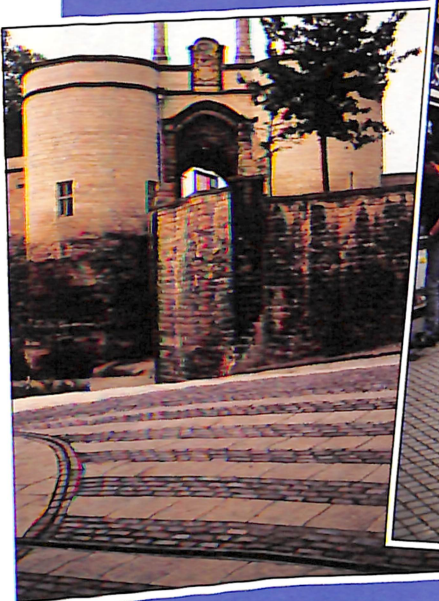
Just an urban corner site formed by a road junction. Why go to these decorative lengths? Well, why not? Certainly more appealing to pedestrians with this arrangement of Keyblok and Saxon pavings, than an expanse of conventional paving.



Visitors to the Glasgow Garden Festival had the choice of being euphoric about the Doric or raving about the paving – and if that's all Greek to you, the paving is actually sawn natural York stone, from Marshalls. Its colour banding and random lengths contrast nicely with the regularity and pristine white of the portico.



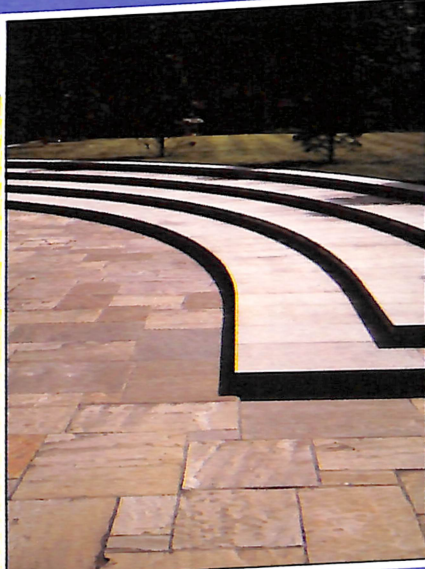
They didn't need to include the red banding or the grey Keyblok – but they did and so the post-modernist architecture has been carried through into the surrounding space.



A happy combination of a functional rumble strip and an attractive paving design. The old granite setts and new Saxon pavings are exactly right for Nottingham Castle.



Marshalls V-groove Keyblok is actually 200 x 100 block paving but, because each block has a false joint, the overall effect is of cubed setts. The small plan size visually widens this back road in Colchester.



The paving in the Pirelli Garden at the Victoria & Albert Museum is all about contrast between Marshalls' riven-faced and sawn-faced natural York stone. Further contrast comes from the random sizes of the riven paving and the regular size of the sawn.



This part of a Co-op development in Coventry could just as easily have been an expanse of bland surfacing, but someone had the inspired idea of making a decorative feature of the paving. Panels of Standard 400 x 400 paving are framed by warm Brown Keyblok to mirror the framing of the roof. The slab colour lightens the scene.



Chelsea Harbour looks exclusive, one of the places to live and work in London – and that's the general idea. It's interesting that the mixture of architectural styles look well together. Although it is a new scheme it looks as if it has developed over the years, just like any favourite square. Marshalls Rialta setts provide the unifying link between all the styles – and the stamp of exclusivity.



# Marshalls

## News

SPRING  
SUMMER '88

Published for stockists, specifiers and users of precast concrete products

## MORE OF THE SAME FOR STOCKISTS

This time last year we told our stockists that 1987 would be another year of growth in the market for decorative concrete products. It was – our results proved the point. We're telling you now that there will be even more of the same this year. Trust us.

If we did well last year, then so did you. Either that or some stockists did exceptionally well! It's all down to the products being clearly on show and backed up with Marshalls point of sale material.

For our part we are heavily promoting paving and walling products to back up all our stockists. Full colour ads, in quality home interest magazines, will be running through the prime buying months. And we predict a very high response rate.

Other than conventional advertising the company is heavily involved in other activities with a high publicity value, including major exhibitions. You stock up – we'll back up.

## The Public wants choice — we've got it!

First there was the backyard and a strip of standard paving to the dustbin and the coal bunker. If you were a teeny bit up-market there were more under the washing line – what decadence!

Then came the patio and the general public never looked back. The watchword today is "choice" which means a constant flow of new paving designs. This season alone Marshalls has added three. They are not replacements – they are extra to the seven paving types already on the market for Home & Garden use.

Athenian, with its distinctive and very appealing cobble-effect, comes in the choice of two designs – square or radius – which can be used separately or together to create imaginative paving designs. Circles, swirls and Greek key designs are possible with the radius design. Both types are in a 450 x 450 x 40mm size and Buff colour.

Pendle has the riven-faced features of natural stone but is lower in price than other reproduction pavings and much lower in price than the real thing. It is available in two sizes to give the option of laying in a regular square pattern or with the staggered bond pattern which is typical of natural stone. Pendle is a "pressed" paving and comes in natural, red or buff colours.



NEW  
PRODUCT  
'88



NEW  
PRODUCT  
'88



## Around the Home & Garden

Marshalls' informative and lavishly illustrated publication "Around the Home & Garden" has been increased to 44 pages this season. Still with the same popular mix of product details, design ideas and building tips, copies are available for you to issue to customers – along with handy counter-top dispensers to display them in.

## HERITAGE STEPPING STONES



NEW  
PRODUCT  
'88

Added to the Heritage paving range this season are 15" diameter stepping stones, with Heritage's authentic riven-faced features and Yorkstone and Old Yorkstone colours. They are ideal for use across lawned areas, either separately or in conjunction with a Heritage patio.



NEW  
PRODUCT  
'88

With Palma, the latest Superscreen design from Marshalls, a number of pattern permutations are possible. Blocks can be arranged to form a series of circular motifs, wave effects or repeating arcs. This latest design is probably the most versatile yet, in a Superscreen range that already includes six distinctive pattern blocks.

With Palma it is possible to create stylish walls for shelter and privacy but without the closed-in feeling of conventional walls. The new design is compatible with the existing pilasters, copings and caps in the Superscreen range.

## New videos

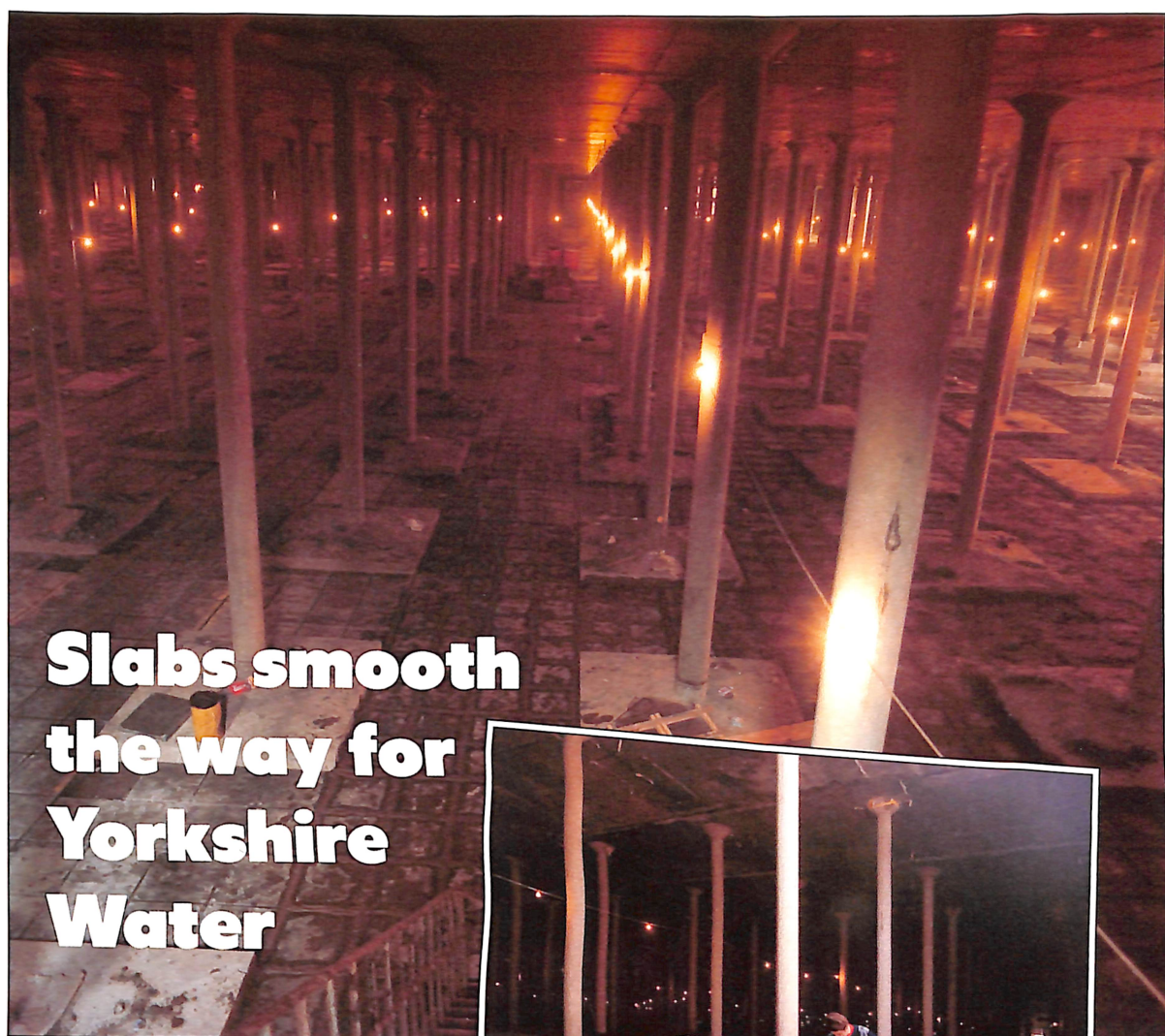
Hot on the heels of the DIY Concrete Block Paving video, Marshalls Mono has produced another one – this time covering the installation of paving and walling.

This latest video programme shows, in simple form, how a DIY enthusiast can create garden features, patios and walls. As a sales aid to merchants it is invaluable – either for showing on the premises or loan/hire/sale to potential customers.

Copies are available now.







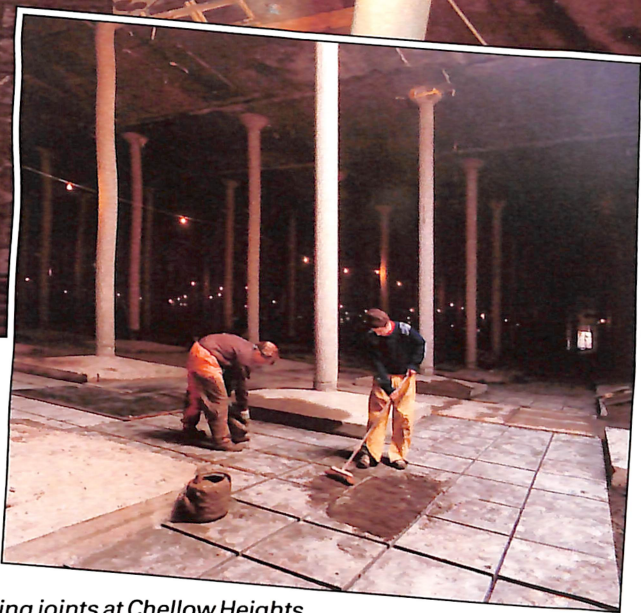
## Slabs smooth the way for Yorkshire Water

Lining the bottom of a covered reservoir with 45,000 Marshalls paving slabs was an innovation by consulting engineers, MRM Partnership, Bristol, and their Morecambe-based contractor, Harbours & General Works Ltd, which eliminated the need for an awkward insitu concreting operation, involving a large number of expansion joints. Substituting slabs for insitu enabled work to continue through the winter, when concreting would have been curtailed. It also provided a smoother and harder finished surfacing than insitu, which will make periodic cleaning of the reservoir more effective.

The site of the operation was the Yorkshire Water, Western Division, water treatment works at Chellow Heights, Bradford, where major new work has turned a disused, open Victorian reservoir into a covered one for storage of potable water.

The 300 x 100 metre reservoir now has an insitu concrete roof, supported by 970 slender cylindrical columns, each springing from square base pads. To surface the floor around the pads with insitu concrete would have entailed expansion joints around each base and at regular intervals across the intervening floor area. Because of the limited access under the roofed area the logistics of insitu would have been difficult whereas slabs were relatively easy to move and install.

The 600 x 600 x 50mm slabs were laid wide-jointed to achieve a pattern which avoided cutting. They were laid on a minimum 25mm screed (average 28mm) over an existing but time-worn concrete floor. Completion of the work was by filling the joints to within 12mm of the top with a dry mix, followed by a poured mortar grout. With the joints scraped flush the reservoir floor is now smooth-surfaced for periodic cleaning operations to remove any settled material.



Paving joints at Chellow Heights reservoir were filled with dry mix mortar, followed by mortar grout.

The paved floor area provides a smooth surface for cleaning.

## Bollards to help those with sight handicaps

Three new bollards from Marshalls are thought to be the first to be developed in response to the Institution of Highway Engineers' guidelines for providing for people with a mobility handicap.

The bollards are waist-high so as not to be a low trip hazard for the blind or partially sighted. They are also banded at the top to meet the requirements of those au-

thorities which have adopted this form of identification as an aid for those with a sight handicap. Ribs on the tops of the bollards are intended to be a tactile indicator of the direction of pedestrian flow.

As the guidelines recommend that bollards contrast with their background or are two-tone, Marshalls offer a choice of aggregate finishes. Additionally, bollards with white-painted banding are also available.



NEW  
PRODUCT  
'88

MILLBANK BOLLARDS



## Residents had a say

Tom Raine Court in Darlington, named after a life-long local Salvationist, is home to 72 single people of all ages who, for a variety of reasons, have nowhere else to turn for help. The operative word is "home," there is nothing of the Victorian institution about this new development for the Salvation Army Housing Association.

The residents of the old building, which Tom Raine Court replaces, were consulted at the design stage and their preferences for a homely feel are expressed in the finished buildings. Clustered around two landscaped courtyards, the com-

plex of buildings has a village feel to it. Paving the courtyards with Marshalls Keyblok Brindle is a perfect link between the separate brick buildings and helps to create the homely village atmosphere.

Designed by Co. Durham-based Anthony Burns Architects, in conjunction with the Housing Association's Major David Blackwell RIBA, the development has single room self-contained flats, a community centre and a rehabilitation workshop. The contractor was Northallerton-based Walter Thompson Ltd.

## Keyblok — the permanent way

\* Keyblok Brindle, in radiating stretcher bond around the Island Gardens Station on the Dock-

lands Light Railway. Keyblok is also widely used around other stations on the new line.



Meanwhile the Edgley Garden Railway in Rixton, Bedfordshire, also puts Keyblok to good use. David Edgley, a rail baron of no mean repute



in those parts, says that Keyblok is ideal for the embankments. He comments "They are laid dry and

the friction between them is amazing." That's what we've been saying all along.



# Pencil round Keyblok — smooths the way for small wheels

Being innovative with rectangular concrete block paving (short of making it square or round) would at first sight seem to be the ultimate test—but Marshalls have done it. The result is a pencil round type of rectangular Keyblok that is smooth-jointed

enough for supermarket trolleys to run over without any irritating vibration.

The trouble in the past has been the distinctive chamfered edges of rectangular concrete block paving. Chamfered edges are needed to prevent edge

spalling when the blocks are being laid and vibrated. They are also part of the distinctive appeal of blocks, but they can be reduced in size. Hence the pencil-round type — still proof against spalling but smoother for small wheels.

NEW  
PRODUCT  
'88

PENCIL ROUND KEYBLOK

CHAMFERED BLOCKS

## A novel idea that doesn't hold water

Concrete rarely wins the approval of ecologists — but make holes in it, hide it underground, call it a soakaway and suddenly the reactions are favourable. Although Marshalls' segmental soakaways have that kind of effect on ecologists, their use is actually dictated by the practical problems of surface water disposal.

Buildings, car parks and roads, in urban areas, have an effect on the land that is more than skin-deep, in that they limit the amount of rainwater absorbed by the ground. Apart from the possibility of damage to foundations, as a result of lowered water tables, the water still has to go somewhere.

This in turn raises problems of overloading or flash flooding of sewers or streams — always assuming that there is a convenient sewer or stream. In practice the drainage of surface water from new developments is strictly controlled, so soakaways often provide the only answer that satisfies developers, local authorities, water boards — and ecologists.

Irrespective of size, the 1.5, 2.1 and 6 metre diameter soakaways made by Marshalls work on the same principle. Water from roof or paving is collected in the soakaways where it can be absorbed into the surrounding ground. Segmental soakaways are virtually underground circular tanks with holes!

In contrast, the more traditional type of gravel-filled soakaway cannot accept the same sudden



The interlocking segments which make up the 1.5 and 2.1 metre diameter segmental soakaways can be carried and positioned by two men.

volume discharge of storm water which the tank-type segmental soakaway can. Inevitably the traditional type also loses effectiveness through long-term silting.

The method of determining the size of segmental soakaway required is based on a simple calculation which takes into account the area to be drained, the level of the water table, the heaviest hourly rate of rainfall and so on. The permeability of the ground is also a factor but the calculation is not difficult.

Installation is just as simple, requiring only a ring foundation from which the interlocking segments can be built up. In the case of 1.5 and 2.1 metre soakaways the individual segments can be lifted and positioned by two men, but mechanical assistance is needed with the 352 kg. panels used for the 6 metre soakaway. In all cases cover units complete the work, with manhole access where required.

Apart from difference in diameter, soakaways can vary greatly in overall size. Soakaways which are seven metres in depth are not exceptional — the governing factor being the depth of permeable strata.

After construction, filter fabric is wrapped around the soakaways, covering the holes and preventing silt and soil from falling into the chambers. By this method the surrounding excavations can be back-filled with the excavated spoil, rather than with bought-in granular material.

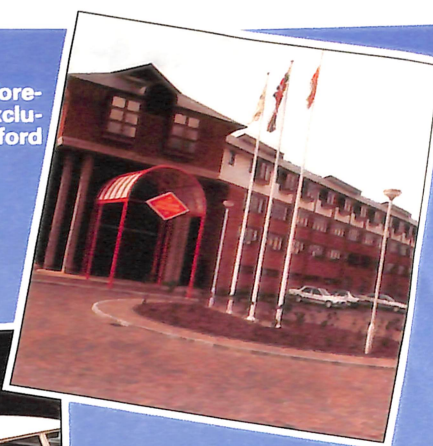
Applications for soakaways range from road drainage and small-scale domestic use to drainage of the considerable surface areas involved in commercial developments.



Lifting equipment is needed for the segments of the 6 metre diameter soakaway. (Top) Non-perforated segments are used above the level of the inlet pipe. (Left) Soakaways seven metres in depth are not exceptional.

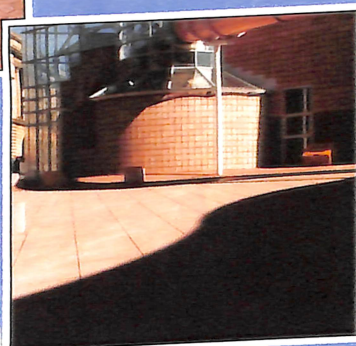
### SALFORD

Keyblok Brindle used for the forecourt of The Copthorne, an exclusive new hotel in the Salford Docks re-development.



### LONDON

\* Over 5,000m<sup>2</sup> of Arcadian fantail setts form the parking areas around the new Marco Polo office development in Battersea. The development is the new home of the Observer newspaper.



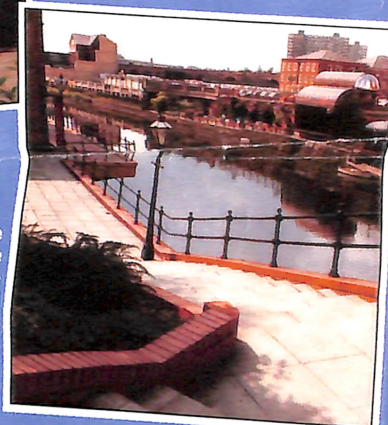
### BLACKBURN

The perfect accompaniment to High Tech architecture — Perfecta paving alongside the new "Waves" swimming pool.



### TADWORTH

Landscaping showed off the full potential of the Wimpey homes on this Surrey development. That's how to sell houses! Heritage paving was widely used.



### MANCHESTER

Once virtually an open sewer, the River Irwell is coming back to life and landscaping is helping in the overall improvement. Standard paving used here for a riverside walk behind Granada studios.

## Parking patterns

Car parks need not be featureless deserts, although they often are. Concrete block paving has the power to transform them into landscape assets — as in the case of this simple but well thought out scheme. Arca-

dian fantail setts (for trafficked areas) and Rialta setts (for parking bays) have been combined to provide a very distinctive office car park. The parking bays are picked out in buff-coloured Rialta.





# NATURAL STONE PAVING

**specifying it means getting in early — and saving money**



Fine-sawn natural York stone pavings, here in Wyndham Place, London, are widely used on prestige projects.

Where Natural York Stone is concerned Marshalls Mono makes a special point of inviting architects and specifiers to visit the quarries to discuss their requirements. But, far from being joy-rides, visits invariably save money for specifiers.

The reasons are not far to see. The resurgence of natural stone pavings for prestige architectural and conservation schemes has brought home to more than one architect that it isn't only in appearance that stone differs from concrete pavings. Size is probably the most important difference, but one that is misunderstood by specifiers. Yet size has a significant impact on costs.

Sawn stone pavings to a one-way gauge and in random lengths, for example, are up to 25% lower in cost per square yard than paving specified to a dimensional two-way size. Quite apart from the price, the characteristic laying patterns achieved with random length sawn stone unmistakably say "stone," where dimensional two-way sizes could perhaps say "very high quality concrete."

Certainly Marshalls can always supply stone pavings to standard concrete paving or any other sizes (up to 6 feet square or 9 feet long), but invariably at a cost premium. That is simply because wastage is involved in cutting "standard" sizes from blocks which have been lifted from the quarry in whatever sizes nature will give them up — none of them standard sizes!

This one factor alone highlights the need for consultation with the quarry at an early project planning stage. Working from the beginning to sizes that can be economically produced avoids needless extra cost later. Discussion on paving thickness can also be fruitful at this stage as there is often a tendency for architects to over-specify.

Early consultation is equally important because of the time scale involved from lifting roughly-shaped blocks in the quarry, right through to the finished sawn pavings. Production can never be as responsive to sudden volume demand as in a concrete plant and time is needed to build up stocks for major schemes. Saws cutting blocks at a steady 2 feet per hour cannot be speeded up — rush jobs or no.

Riven pavings also have some thickness variation which inevitably adds to laying costs. So where a one-way gauge has been specified, the installed cost will be higher than with sawn pavings. The variation in thickness is unavoidable because nature will not always give beds of standard thickness that the quarryman can split along.

Quite apart from the cost factor a visit is worthwhile just to see sawn or riven pavings en masse. Small samples, seen in an office, are a poor substitute and cannot give a representative impression of the colour range or banding. Colour banding often occurs in Marshalls Elland Edge Flagrock — the hardest wearing York-stone — and while most specifiers love it, there are also those who want more uniform colour. The surest way to decide is to go to the quarry and see what the options are.



Riven-faced paving for the recent pedestrianisation of Tower Hill.

A mixture of random size riven pavings and sawn pavings was used for the courtyard of St. James's Court Hotel in London.

The same applies to riven pavings which can only be split and fettled by hand to give the distinctive irregular surface finish. With riven pavings one pitfall for the unwary is the fact that they are lower in cost than sawn pavings — but only when the riven pavings are in random sizes. When they are specified to a one-way gauge they are immediately on the same price level as one-way gauge sawn pavings.

**Marshalls**  
**Mono**

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## Nelson's flags



Junior Environment Minister, Lord Caithness, helped to lay the first flags for the re-paving of Trafalgar Square.

## Marshalls expects...

Admiral Nelson's flags may call to mind the famous message before Trafalgar but, long after the famous sea battle, they are now of the natural stone variety in a major refurbishment of London's Trafalgar Square. The message these days is more likely to be "Marshalls expects that every flag will do its duty."

The company is currently supplying 2,200 square yards of fine-sawn natural stone paving as its part of a £1.85 million refurbishment of the Square being undertaken by Tarmac Construction.

Work has begun on the repaving for the Special Services Group of the Property Services Agency, London Region, to a new more attractive paving pattern designed by consultants, Donald In-sall and Partners.

The paving is a joint Lancashire and Yorkshire venture with eight-ton blocks of stone from Marshalls Scoutmoor quarry at Ramsbottom, being trucked over the border to Halifax for sawing. The completed pavings are unusual for their size — most are six feet square and four inches thick — and for the number of radius pavings to be fitted around the fountains. To ensure absolute accuracy of angles for these radius pavings a Marshalls team prepared templates on site.

The Scoutmoor stone, a very hard flagrock with a distinctive dark blue tinge, cannot be naturally riven and is available only in sawn-face finishes. The same stone, but from a long-closed quarry in the Ramsbottom area, was used when Trafalgar Square was last paved, during the early twenties.

## At the courtyard of St. James



The creation of a half-acre courtyard garden was the final stage of a £45 million refurbishment at St. James's Court Hotel, London's newest luxury hotel. York stone from the Elland Edge bed of flagrock, at Southowram, was used extensively in the paving of the courtyard.

The project was masterminded by Siddeley Landscapes and developed in connection with landscape architects, Design Land London. Natural stone was used for its quality finish which created an image entirely in keeping with a top hotel.

The central courtyard is linked to the main road by a "Victorian Lane" in a bold paving pattern. Pavings in sawn and riven-faced finishes were used, along with setts and sawn kerbs.