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Cleaning & Maintenance Guidelines for Commercial Installations

Marshalls

Creating Better Spaces

Contents

Introduction

All paving require some basic maintenance to keep them looking their best, even if it's just a wash with soap and water. Cleaning is usually easy and even the most neglected paving can often be rejuvenated with a little effort.

Over the years, a number of procedures and products have been developed for removing stains and growths from concrete and natural stone. Although these are generally successful, it can sometimes be difficult to remove stains completely. As a consequence, it is usually preferable to take precautions to avoid staining rather than rely on cleaning.

The difficulties which arise are largely due to three factors:

- Concrete is porous, so both stains and cleaning solutions tend to become absorbed in the surface layers.
- Concrete is chemically reactive and dissolves some cleaning solutions more readily than the chemicals causing the stain.
- Concrete surfaces are often left 'as cast' and any locally applied treatment may alter the texture or colour sufficiently to cause a blemish.

In general there are two approaches to eliminating stains from concrete surfaces:

- Techniques exist which can remove stains without affecting the concrete. These are based on chemicals which either react with or dissolve the stain. These techniques, while attractive in theory, sometimes have the disadvantages of being slow and inconvenient and may not always eliminate all traces of the stain.
- Where the stain has not soaked deeply into the concrete, the surface layer of concrete containing the stain can be removed to expose fresh unstained concrete. Unfortunately, the degree of surface removal required may unacceptably affect the appearance of the concrete.

Health & Safety

Some of the methods described in this document employ chemicals and other materials which could be dangerous in inexperienced or careless hands.

It would be impracticable to describe in detail precautions for every conceivable situation and so it is advised that any safety warnings issued by the suppliers of materials should be carefully read and enforced.

In general, the following precautions should be taken:

- When using chemicals, protective clothing such as gloves, goggles, boots and overalls should be worn.
- Adequate ventilation is required when using chemicals in confined spaces.
- When using flammable materials; cigarettes, naked flames and other sources of ignition should be carefully controlled.
- When diluting acids, ALWAYS add acid to water and not water to acid.
- Any clothing that is contaminated with chemicals should be disposed of safely.
- When using any chemicals, care must be taken not to damage, contaminate or stain any adjoining materials, landscaping or finishes.
- Care must be taken to protect personnel operating in the area of the cleaning from any injury or hazard created by the cleaning. The appropriate First Aid must be available.

Before undertaking any cleaning operation, a trial should be carried out on a small, preferably inconspicuous area, to determine the effect of the chemicals before treating a large area.

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General Maintenance of Paving

Early Trafficking of Areas of Flexibly Laid Paving

Once the flexibly laid surface is complete (including complete filling of all the unit joints), generally it can be opened to traffic. If the underlying bedding sand has been saturated by heavy rainfall, either during or immediately after compaction of the paving, trafficking should be delayed.

If saturation has occurred, the paving should not be trafficked until the laying course sand has been allowed to drain.

Initial Maintenance

During the very early life of flexibly laid pavements, the joints between the units will be relatively porous. The ingress of water can consolidate jointing sand and it is important that the joints are regularly 'topped up' to replace the sand consolidated by rainwater or removed by other factors.

The joints will soon become semi-impervious as the build-up of surface detritus seals the joints. Until this has occurred, the paving should only be brushed by hand. Mechanical sweepers and in particular, sweepers with high suction forces, should not be used as there is a real risk of further loss of jointing sand.

Winter Maintenance

Normal de-icing salts (rock salt) can be applied to most of Marshalls' Concrete and Natural Stone products without risk of damage to the pavement. Once the pavement has dried out after any thaw, the paving may be temporarily discoloured by the salt material, as for any paved area. Normal weathering should soon remove such discoloration.

If there is concern to avoid temporary discoloration of a paved area, then other de-icing materials should be used.

NOTE: De-icing salts must not be used on Marshalls' wet cast concrete products.

De-icing Products

Rock salt (Sodium Chloride) is the most commonly used de-icer. Rock salt is the cheapest and most readily available; however, purer marine salt is also available. It is non-toxic, however, it is corrosive to steel and aluminium, harmful to vegetation and can leave a white residue on the paving.

Urea or Carbamide is a solid, white product with a mild ammonia odour. It is non corrosive to metals and surfacing materials; however, it may release ammonia and nitrates into water courses and is more expensive than rock salt. "Magic Ice Melt" and "Ice-Thaw Granules" are products containing Urea which are available in the marketplace.

General Dirt & Detritus

To remove general dirt and detritus, regular brushing is recommended. If the colour of the paving becomes masked it may be re-established by scrubbing with soap and warm water, either by hand or by using a jet wash cleaner.

The simplest way is to scrub the area with hot, soapy water.

- Use washing-up liquid or an acid-free, soap based floor cleaning product.
- The soapy water is swilled onto the surface of the paving and then brushed with a bristle brush to loosen the surface detritus.
- Wash off the loosened dirt with clean water, ensuring all the soap has been thoroughly washed from the surface. Carefully channel the resulting run-off to either drainage points or containers where it can be safely disposed of.
- If a power hose is used, then care must be taken to avoid the removal of the jointing material (sand or mortar). After completion, the pavement should be inspected and the jointing material replaced as required.

Weed Control

Weeds are simply plants that grow in inconvenient places. There are two common myths regarding weeds and paving.

- Certain types of paving/surfacing are "weed-free".
- Weeds grow up through block paving.

Firstly, there is no such thing as a weed-free surface. If detritus is allowed to accumulate on a surface, it will only be a matter of time before weeds or other plants germinate. Secondly, when properly constructed, weeds do NOT grow through block paving. Weeds will grow into paving by colonising the sand-filled joints or settling onto accumulated detritus but it is very rare for weeds to grow through 200mm or so of pavement structure.

Removal of Weeds

Weeds can usually be pulled off the surface of most paving, or scraped off using a hoe or similar tool. Where roots have been sent down into the jointing, removal of the weed often brings away some of the sand, and this should be replaced as soon as the surface is clean. Partially filled or empty joints are detrimental to pavement performance.

Keeping Weeds at Bay

Once a paved surface has been cleared of weeds, it makes sense to keep it weed-free for the future. Regular trafficking by foot or by wheels will limit the ability of the weeds to re-colonise an area but for those areas with little or no traffic, there are a number of anti-weed strategies available:

- Regular brushing disturbs any newly emerging weeds and removes them before they can establish themselves.
- Weed killers, when used with care, can be very effective at killing existing weeds and deterring re-colonisation for a period of weeks or even months.

Look for products which have been specifically developed for use with paving or in gardens, rather than general herbicides which kill everything. Contact weed killers work by coming into contact with the weed and are suitable for rapid killing of simple surface weeds. A systemic weed killer takes longer to kill the weed but it is absorbed and taken into the whole plant and not just the above-ground leaves and stems.

Always follow the manufacturer's instructions and avoid washing-off into any planted areas.

Power Washing

Power Washers have now achieved the status of being a standard cleaning appliance. When used correctly they can help to keep paving in good condition, when used in excess they can damage the paved area and shorten its service life.

When using any form of power washer the following guidelines should be strictly adhered to:

- Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.
- The power washer should be used on a setting which is sufficient to remove the dirt without causing any further distress. A low-pressure setting is recommended.
- Do not direct the power lance directly down on to the paving, as this can result in loss of jointing material and cause damage to the surface of the unit.
- Ideally, a spraying movement should be adopted holding the power lance at a shallow angle, not greater than 30º across the diagonal (i.e. not parallel to joints).
- Certain high-pressure jetting machines have been known to mark or damage the surface of certain wet cast paving material. It is, therefore, prudent to carry out a small test area before commencing on a larger area.
- The area should be inspected after cleaning to ensure that joints are full.

Power-washing is effective at removing moss and algae that can thrive on certain types of paving. The addition of "Jeyes Fluid" may inhibit the return of the vegetation for a short period of time.

Acid Washing

Stubborn and persistent stains that will not generally weather away naturally will require the application of a specific acid cleaning treatment to remove them.

Prior to any acid cleaner being applied, the surface must be thoroughly wetted with clean water to prevent the acid being absorbed directly into the paving. A dilution of up to 10% of Hydrochloric Acid should then be prepared and applied to the affected area.

As the staining begins to dissolve, some frothing may be apparent, which should be followed by agitation of the surface using a stiff bristle brush to completely remove all trace of the stain.

Once this process is complete, the whole surface should be rinsed thoroughly with clean water, taking care to dispose of the run off safely. In the vast majority of cases, one treatment will be sufficient; however, in some cases re-treatment may be required.

When using any form of chemical treatment, the following guidelines should be strictly adhered to:

- With deeper stains, the degree of acid treatment may result in an acid etched appearance.
- Protective clothing (gloves, boots, goggles etc.) should be worn at all times when using chemicals and the appropriate First Aid measures must be available on site.
- Take care to ensure that surrounding materials and landscaping are protected. Soft landscaping and exposed metals can be severely affected by chemical treatments.
- It is better to treat several times with the correct dilution than to use concentrated acid, which may damage the surface of the unit.
- Extreme care must be taken when using chemical cleaners on wet cast concrete products as these are less resistant to such treatments.
- When diluting acids, ALWAYS add acid to water and not water to acid.

Hydrochloric Acid is normally used and can be obtained as an industrial chemical or in the form of a proprietary concrete cleaner. Light staining can often be removed without markedly affecting the texture and appearance of the concrete. With deeper stains, the degree of acid treatment required to remove the stain usually results in an obvious acid-etched appearance to the concrete. In all but the most exceptional of cases, less than 1mm of the concrete skin is removed.

Where possible, initial trials should be carried out on inconspicuous areas to evaluate the final appearance of the concrete and optimize the concentration and number of applications of acid.

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General Maintenance of Paving

Stone Paving

All stones vary and each one should be looked at on an individual basis. Many are slightly alkali so acid cleaners should be avoided. A small, inconspicuous area should always be tested first.

Limestones and Marbles should not be cleaned with acid-based cleaners. Limestone and Marbles are dissolved by Hydrochloric Acid, so this type of cleaner should be avoided.

For more specialist stains, a good stone cleaning product can be obtained from Casdron - 01962 732126 www.casdron.co.uk

Mechanical Cleaning

The following recommendations deal with vehicles and associated equipment and their use in sweeping and washing flagged pedestrian areas and roads.

Equipment should be purpose designed to sweep a particular area. If there is any doubt about suitability, the vehicle manufacturer should be consulted.

- Where possible, low pressure tyres should be fitted to reduce the risk of breaking or cracking flags.
- Tyres should be inflated according to the manufacturer's recommendations, again to ensure minimum weight per unit area.
- Polypropylene, rather than wire brushes should be used.
- Sweeping brush pressures should be set to the minimum required to suit the particular task, i.e. surfaces swept regularly will require a lower setting than those swept infrequently or covered with heavy deposits.
- Tyre and brush pressures should be regularly checked.
- When sweeping, engine speed should be set at the minimum required to maintain vacuum (suction) pressure.
- Operators, including reliefs, should be trained to operate machinery in accordance with manufacturer's recommendations.
- When equipment is stationary or left unattended, suction, brush rotation and water jetting equipment should be switched off to avoid the risk of damage to the paved area below the stationary equipment.
- For conventional block pavements or flag pavements in new or re-laid areas, agreement should be reached with the local highway authority on a period of manual cleaning to allow flags and block paving to become established and the joints to seal with detritus. This period may be reduced by using either a water based bonding agent or elastomeric prepolymer sealant, and by agreement with the cleansing authority, on an appropriate sweeping and sealant replacement regime.
- When water jetting equipment is used to wash areas, the jets or hand held lance should be directed at the surface at an angle not greater than 30° to the horizontal and diagonally across the joints (i.e. not parallel) using a high concentrate detergent solution. The area should be inspected after cleaning to ensure that joints remain full with any required jointing material replacement carried out after the pavement is dry.

Efflorescence

White patches appearing on the surface of concrete paving naturally cause concern. However, such concern is rarely justified in the long term, as the appearance is normally the result of 'Efflorescence'.

Forms of Efflorescence

The term 'Efflorescence' is also frequently used to describe whitish deposits or stains on building materials. However, there are many forms of Efflorescence, which have little in common, other than the fact that they result in a white discolouration.

Efflorescence, as generally found on concrete paving products, is known as 'Lime Bloom.' It is a surface deposit on the concrete, seen either in the form of white patches or as a more general lightening in colour. When the latter effect is seen, it is often misinterpreted as a fading or 'washing out' of the colour of pigmented concrete.

Formation of Lime Bloom

Lime bloom, when it occurs, is a natural phenomenon brought about by the normal chemical reaction between cement and water. A product of this reaction is Calcium Hydroxide, which is slightly soluble in water. Under certain conditions it can migrate through damp concrete to the surface where it in turn reacts with atmospheric Carbon Dioxide to produce a deposit of Calcium Carbonate crystals.

This deposit gives rise to the white patches or the overall lightening referred to earlier. It is normally extremely thin, and when wetted, the deposit becomes transparent and seems to disappear.

Occurrence

The occurrence of lime bloom on the surface of concrete paving products is a spasmodic and unpredictable phenomenon not associated with poor quality manufacture. The weather is a significant factor, with lime bloom forming more readily when concrete becomes wet and dries slowly; therefore, occurrences are more frequent in winter months. Generally, it only occurs in the early life of concrete paving products and materials which have been in place for a year or more without experiencing lime bloom, are unlikely to be affected. The phenomenon is temporary and superficial and will generally disappear in time without affecting concrete strength or durability.

Removal of Lime Bloom

Lime bloom can generally be expected to disappear over a period of time, depending on the environment to which the paving is subjected. Rainwater, being slightly acidic, dissolves the surface deposit. Where paving is fully exposed to the weather, any efflorescence would normally be expected to disappear within the first year or two, although it might be longer for a sheltered site.

Removal would be accelerated by abrasion caused by foot or vehicular trafficking.

Treatment

The following minimum equipment is required:

- Protective gloves and goggles.
- Appropriate footwear.
- Brush with soft bristles.
- Plastic watering can for application.
- Supply of clean water.

Proprietary cleaners can be used for more immediate removal of lime bloom. Most proprietary cleaning treatments contain acids and detergents, so it is important to ensure that the manufacturer's instructions and all relevant environmental regulations are followed. Incorrect or careless cleaning may result in injury or damage and discolouration to the surface of the concrete paving.

It is advisable to carry out a test on a small and inconspicuous area of paving before undertaking cleaning over the complete area.

The procedure is best carried out in cool conditions. When the paving is hot, rapid evaporation may lead to recurrence of deposits. Care should be taken when applying acid based cleaners to concrete. Acid attacks concrete and over application may alter the appearance of the paving.

Wash off the residue and inspect the paving. In the case of stubborn or heavy deposits repeat the application as necessary.

After final application of the cleaner, wash off any residue with plenty of water to prevent staining, taking care to dispose of the run-off safely. Allow the paving to dry and then inspect the surface and joints. Re-sand/replace mortar to the joints as necessary.

Long term experience suggests that it is unlikely that lime bloom will recur after removal with acid based treatments. It is not possible, however, to give a guarantee against recurrence.

Sealants

Proprietary sealing agents may be used on paved surfaces to reduce moisture penetration of the laying course material and minimise staining from spillages. It is generally not required for paving installed in an external application; however, it is particularly important for materials installed in an internal application.

The paving surface must be completely dry and clean before any sealer is applied with the manufacturer's instructions adhered to at all times. Whilst such products may offer certain advantages, careful consideration must be given to the suitability of the sealant and any subsequent effect on the colour, appearance and slip/skid resistance of the paving. Application of a sealant will require on-going maintenance during the life of the paving.

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Stains

Oil Stains

Oil can penetrate readily into hard surfacing materials (particularly lubricating or fuel oil) but it should not stain if any spillages are removed promptly with an absorbent material, e.g. paper towels, cloth or absorbing granules.

Do not attempt to wipe the stain as this will drive the oil into the surface of the units and spread it over a wider area.

If the stain persists then an emulsifying degreaser should be employed (e.g. Gunk engine degreaser). Brush the cleaner onto the affected area, leave for a period of time according to the manufacturer's instructions and then wash the emulsified oil away with plenty of clean water.

Alternatively the surface can be scrubbed with a detergent and hot water, taking care to ensure that the strength of the detergent is not detrimental to the appearance of the paving. However, for persistent oil staining,steamcleaning may have to be considered.

If the stain is proving impossible to shift, consider replacing the contaminated area of paving.

Rust Stains

Rust (Iron Oxide) stains can be difficult to remove. Many dyes used to colour concrete products are based on iron oxides, so many chemical cleaning agents may affect both the rust and the dyes.

Initially, action must be taken to eliminate the sources of staining. Iron rust stains are recognisable by their characteristic rust red/brown colour and their proximity to steel or iron, in or on the concrete.

There is also a danger of accidental staining when weed and moss killers containing Ferrous Sulphate are applied to areas next to the paving.

To remove the rust stain, the surface should be wetted and the affected area treated with an acid based concrete cleaner (no stronger than an equivalent of up to 10% Hydrochloric Acid solution or similar).

It must be noted that the acid in cleaners attack concrete. It may leave a slightly roughened surface or leach out some of the pigment from the concrete, so care must be taken when using acid based cleaners. After application of the cleaner, any residue should be washed off the surface of the concrete with copious quantities of water to avoid staining. Care should be taken to dispose of the run-off safely. All manufacturer's instructions must be strictly followed and after cleaning is completed, any chemical residue should be disposed of carefully.

Rust stains do not affect the structural integrity of the paving; it can be unsightly and detract from the aesthetics of the paving.

Algae, Lichen & Mosses

Moss, lichen and algae can be prevalent on hard surfacing where the area is heavily shaded, under trees or is not laid to an adequate fall. If such growths do occur and are considered undesirable then the area should be treated with a proprietary weed or moss killer used in accordance with the manufacturers' instructions.

If rapid removal of the dead growths is required, this can be achieved using a high-velocity jet of water.

Some toxic washes leave a residue which discourages subsequent growth, but even under favourable circumstances, the residual effect is unlikely to last for more than two or three years.

NOTE: Products containing Ferrous Sulphate can chemically react with concrete products resulting in a brown stain to the surface. Please check with the manufacturers of the weed or moss treatment for further advice on this matter.

Beverage Stains

Beverage stains can normally be removed by scrubbing the stain with detergent and hot water. If the stain is persistent, carefully apply a mild household bleach solution (Sodium Hypochlorite or Sodium Perborate) and then rinse the area with clean water taking care to dispose of the run-off safely.

Berries & Fruit

Berries, drupes and other soft fruit can stain paving when they are dropped onto the surface of paving. When allowed to dry, the resulting stain can prove difficult to remove.

A recommendation is to use a mix of liquid Sodium Hypochlorite (NaClO), obtained from swimming pool maintenance suppliers and a non-oxidising shampoo (e.g. baby shampoo). Dilute 1.5 litres of Sodium Hypochlorite with 4.5 litres of water and add 100ml of baby shampoo. If possible, the mixture should be applied via a pump spray and the whole area treated not just individual spots.

Pre-wet the whole area with clean water and spray the cleaning fluid over the surface. Gently scrub the area with a stiff bristle brush. After 15 minutes wash the pavement down with clean water making sure that the residue does not run onto any vegetation. Repeat if necessary. It has been suggested that for heavy staining, a domestic laundry pre-wash product (e.g. OxiClean) may be used.

NOTE: Sodium Hypochlorite is dangerous. It is corrosive, an irritant and will burn skin, so it is essential that full protective gloves, goggles and clothing are worn at all times when using the product. The liquid will also burn or kill plants and vegetation.

Blood Stains

Wet the stain with water and cover with a thin layer of Sodium Peroxide powder. Care should be taken not to breathe any of the peroxide dust nor allow it to come into contact with the skin. Sprinkle with water or apply a water-saturated cloth and allow to stand for a few minutes. Wash with water and scrub vigorously. Alternatively, a Hydrogen Peroxide or Sodium Perborate solution may be effective.

Chewing Gum

Chewing gum is a particularly difficult substance to remove from hard surfaces.

Newly discarded gum can be scraped off by using a mechanical scraper but hardened gum can only be removed by both freezing the gum and chiselling it from the surface of the paving or utilising a hot water/steam cleaner. There are contract cleaning companies who specialise in this type of cleaning, and it is recommended that they be contacted directly for further details.

Cement Mortar & Concrete Staining

These types of staining can occur on paved surfaces, usually as a result of contamination from other sources, such as concrete furniture or the use of on-site mortars and concrete.

Cement and lime deposits are generally insoluble and, therefore, require treatment by a suitable acid cleaner to fully remove them. These cleaners may be obtained from good DIY stores and builders merchants.

Paint, Ink & Graffiti Stains

Both paint and graffiti are difficult to remove from most hard surfacing materials.

Fresh wet paint should be soaked up with an absorbent material without wiping the paint, as this will spread the stain. It should then be treated with a suitable solvent such as diluted white spirit and then the area washed with a de-greasing agent taking care in the disposal of the run-off material.

Dried paint should be scraped off as far as possible and then an appropriate paint remover applied.

Paint manufacturers may often be able to give more detailed advice on the removal of paint and graffiti. Therefore, they should be consulted directly for specific recommendations.

Colour which has penetrated the surface can be removed by acid-washing but this may affect the surface appearance. Sometimes old paint films can be burnt off using a blow-torch and the final traces removed by scrubbing and scouring.

Paint and ink are the normal tools of the graffiti-artist. Several manufacturers produce products specially formulated for graffiti removal.

There are various types of ink with different chemical compositions, so removal of ink stains may require some trial and error.

Indelible inks can often be removed by the method using Sodium Perborate. In some cases it may be necessary also to treat with an Ammonium Hydroxide solution (or household cleaner containing ammonia). Proprietary 'ink eradicators', available from hardware stores, can also be used.

It is often difficult to eliminate completely all traces of graffiti from concrete and in situations where it is likely to be a problem, the concrete should be treated with an anti-graffiti coating.

Such coatings seal the surface of the concrete, preventing penetration of ink or paint, and any subsequent graffiti can easily be removed.

Scuff Marks from Vehicle Tyres

These can normally be removed by steam cleaning, or by scrubbing the area with detergent and hot water.

Bitumen Stains

Fresh bitumen should be allowed to cool down before removing it with a paint scraper or similar. If it is particularly resistant, the use of ice to make the bitumen brittle may be required prior to scraping it from the paving. Any residue should be removed with an abrasive powder (e.g. household scouring powder) and finally the whole area rinsed with clean water. Certain proprietary cleaning agents are available to remove bitumen but these should be tested on an inconspicuous area of paving first.

Emulsified bitumen consists of very small drops dispersed in water and penetrates only slightly into concrete. It can be removed in the same way as molten bitumen, although rather less easily. Do not use solvents as these will increase the penetration of the stain into the surface.

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Stains

Smoke, Fire & Tobacco Stains

Normally such stains can be removed by scrubbing with detergent and hot water. Where the stains persist, a mixture of scouring powder and household bleach can be used. It is important the bleach is washed from the area with clean water once cleaning is completed and the run-off carefully disposed of.

Bleach is detrimental to plant life so care should be taken to protect adjacent lawns and borders.

Epoxy & Polyester Stains

Areas of solidified epoxy or polyester resin can be removed by carefully burning off with a blowtorch. Care must be taken not to inhale any fumes given off or to overheat the concrete sufficient to cause explosive fracture of the coarse aggregate.
If black stains remain after burning, this can be removed by scrubbing with soap and water.

For larger areas, grit blasting may also have to be considered. This will not affect the durability of the material but may affect the micro-texture of the surface. It is advisable to test a small area before any large scale operation is undertaken.

Copper, Bronze & Aluminium Stains

Copper and Bronze stains are usually green, although in some cases they are brown. To remove them, mix together in the dry form, 1 part of Ammonium Chloride (sal ammoniac) and 4 parts of whiting (powdered gypsum or chalk). Add Ammonium Hydroxide (household ammonia) to form a thick paste. Apply over the stain and leave to dry. Repeat as necessary.

Aluminium stains appear as a white deposit which can be removed by washing with diluted acid.

Useful Contacts

There are a number of sealant suppliers however Marshalls have been involved with the following manufacturers:

Resiblock	01268 273344 www.resiblock.com
Lithofin	01962 732126 www.casdron.co.uk

Other Useful Contacts

Jeyes Group Church & Dwight UK Ltd Karcher UK	www.jeyes.co.uk www.oxiclean.com www.karcher.co.uk
Magic Ice Melt	Available from DIY stores & Builders Merchants
Ice-Thaw Granules	Available from DIY stores & Builders Merchants www.pitchcare.com www.cpd-direct.co.uk
Weedol	www.miraclegro.com
Pathclear	www.miraclegro.com
Roundup	www.miraclegro.com

How to contact Marshalls

(Calls may be monitored or recorded)

The Marshalls Technical Advisory Service is here to help customers and installers with all aspects of installation technical advice 0370 411 2233

customeradvice@marshalls.co.uk

The Marshalls website is a comprehensive source of ideas, product information, and much, much more.
www.marshalls.co.uk/commercial

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