

# **Maintenance Manual Raised Access Flooring**

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# G *ENERAL*

The raised access floor provides a void for cables, ducts and other underfloor services. Each floor panel can be lifted with the correct lifting device, so that extra services can be easily installed, or existing ones re-routed.

The installed raised access floor *needs to be handled in a manner appropriate to its design*. The following advisory information will facilitate its use and save time and unnecessary expense.

***This manual is intended as a basic guide for maintaining your floor.***

For further information or enquiries please contact The Access Flooring Company on 0800 783 1398.

# PRECAUTIONS DURING INSTALLATION

In order to prevent accidents and avoid damage to the floor, access by all persons except the floor installation crew should be prohibited during the installation phase.

Ensure that no part of the floor installation is:

- Used as a workshop or as a platform for storage of equipment and materials.
- Trafficked within 48 hours (subject to temperature and humidity levels) following the use of adhesives.
- Permitted to be used by other trades until the main contractor has accepted responsibility for the installation.
- Left unprotected. It is highly recommended that, as a minimum, protective materials such as Megafilm or hardboard with taped joints be applied to the raised floor, prior to access being permitted to other trades. This will deter abuse and reduce the likelihood of damage to the surface finishes of the panels whether they be steel, paint, vinyl or carpet.
- Subjected to static or dynamic loads, which exceed those for which it is designed.

# P *ROTECT THE FLOOR WHEN MOVING EQUIPMENT*

Adequate precautions, including the use of spreader plates, must be taken during the installation of materials and equipment.

## *Types of Protection Available and Which to Use:*

The type of floor protection can only be determined by assessing the following factors:

- Gross weight.
- Distribution of the gross weight.
- Size and type of the wheel, castor or moving skate.

Various covering protections may be used depending upon the above. Typical materials are:

- Hardboard sheet.
- Plywood sheet.
- Various thickness of chipboard
- Various thickness of steel or aluminium sheet.

# HANDLING

Before attempting to gain access to the under floor void consult any drawings indicating the positions of under floor trunking, services and fire barriers.

*Access Floors finished with a proprietary carpet tile:-*

*The carpet is normally held in place with a tackifier glue product. To gain access to the under floor void, find a corner of a carpet tile and gently lift it off the panel. Several carpet tiles may need to be lifted to reveal the individual floor panel. It is beneficial to mark the carpet tiles and take note of the direction arrow to aid easy re-laying.*

It is important that panels are removed and replaced by lifting and lowering in the horizontal plane. Do not remove panels by using a 'hinged action' or by 'levering' with screwdrivers or similar.

Take care not to dislodge headcaps, gaskets or shims.

Do not remove pedestals from the sub floor.

Care should be taken to avoid damaging neoprene infill on perimeter panels. If the neoprene is dislodged it can be re-glued with a proprietary adhesive.

If the work under floor has penetrated the fire barriers they should be re-cut to fit neatly around the obstruction. Awkward shapes may need the addition of supplementary fire bags.

Proper panel lifting devices should always be employed; the use of screwdrivers, chisels etc. to prise up panels will result in damage to the panel edge and any surface covering. Panels should be carefully lifted and replaced in their original orientation.

According to the type of surface material, it may be found that withdrawing and repositioning of panels is accomplished more easily by the use of two lifting devices, which allows the weight and balance to be more easily controlled.

Each panel should locate, without the use of force, into its proper position. If it fails to do so, remove it and investigate the reason.

**DO NOT FORCE PANELS INTO POSITION!**

# SAFETY

Openings in panels should not be left unguarded.

Panels should not be removed and left out of position unnecessarily.

Panels should be lifted in rows and never in blocks.

When panels have been removed in rows, it is advisable to leave single panels in position at approximately 3m centres, i.e. leave every 5<sup>th</sup> panel in place. It is strongly recommended that no more than 5 panels are removed in a single row and that at least two complete rows are left between each row of panels removed. Only remove the minimum number of panels, avoiding long continuous runs of forming islands of panels or pedestals. With panels out of position, extra care must be taken, especially if equipment is being moved.

*Do not remove the whole floor.*

Never leave pedestals isolated, as they are liable to displacement or damage. Lifting panels only in alternate rows overcomes these problems.

***BEWARE LIVE CABLES. TAKE CARE TO AVOID DAMAGE TO SERVICES.***

Cordon off or otherwise protect cut-outs in panels. Identify with hazard tape.

Before re-locating panels, ensure that stringers (if any) are in place, the pedestals are firmly fixed to the sub floor, and are upright. Check that the pedestal cap (if any) is correctly aligned and free from dust and debris. See that any electrical continuity devices are properly in position.

Damaged or worn surfaces should be considered for repair or replacement without delay.

# M AINTENANCE

The amount of maintenance likely to be required will depend on function and the type and volume of traffic across the floor.

Check the substructure whenever the opportunity presents itself. To prevent small problems becoming serious, adjustments and repairs should be actioned as quickly as possible. The remedy may be as fast and simple as changing standard panels in high traffic areas with others, which are in more remote positions. Should a panel show any sign of instability, investigate and rectify.

## *THE EFFECT OF CUT-OUTS ON PANEL STRENGTH*

Panels with holes cut in them are inevitably of reduced strength. The amount by which the strength of a panel is reduced will depend on the shape and the position of the cut out and its dimensions.

There are so many potential combinations of hole size and position that it is not possible to issue general information; rather each configuration needs to be considered on its merits. The situation is complicated by the fact that the cut panel may or may not have to be load bearing on a permanent or on a transient basis.

Holes are cut in panels normally for cable entry or ventilation. Cable entries are normally under machines and vents are more commonly in exposed positions.

### *Cable Entry*

It is normal practice that the cut-out will be under a cabinet, close to where the legs (and therefore weight) happen to be. It is not recommended that the weight of heavy equipment is imposed on panels containing cut-outs. In particular, there should be no excessive weight close to the cut-out itself. If it is unavoidable that the weight and the cut-out position are close together, it may be recommended that an extra pedestal(s) should be installed to transfer the weight axially down the pedestal(s) to the subfloor.

## *Ventilation*

Holes may be required for ventilation devices such as square, rectangular or circular grilles or diffusers.

In order to minimise risk of panel failure, cut-outs should be positioned so that there is at least 100mm between the cut-out and the panel edge. Care should be taken to avoid overloading the strip of panel remaining between the cut-out and the panel edge.

## *Brush Seals*

If you wish to prevent unintended air loss from the floor cavity through any cable entry opening(s), consider fitting brush seals. These will allow the routing of cables and, at the same time, reduce air leakage.

## *General*

Caution should be exercised in placing panels containing cut-outs in areas which are likely to be heavily trafficked by rolling loads. When equipment is being moved or manoeuvred, spreader plates should be used.

# R *EMOVING AND REPLACING PANELS SAFELY*

Always use the correct lifting tool, and ensure the lifting tool is in good condition and fit for the purpose. It is recommended that 2 panel lifters are used. Place the lifters diagonally across the panel and ensure that there is effective grip of suction.

Test the grip by pulling on the handles before starting to raise the panel.

Raise the panel in a horizontal plane so that it will clear adjacent panels without jamming and without the use of excessive force.

Once the panel is lifted clear of the floor surface rotate it through 45° and rest it on the surrounding panels.

Some panels do not have a smooth soffit. Take care to avoid scratching or indenting adjacent panels by placing one panel on another.

Remove the lifting tools from the panel surface. Now lift and move the panel by holding the sides.

Before replacing a panel ensure that the substructure is properly fixed, aligned and free of debris.

Replace the panel using 2 lifting tools and offer it gently into the opening. It may need gentle foot pressure to press it home but should not be forced. If a panel will not go into place without resort to force, remove it again and investigate.

Failure to observe and implement the correct procedure may result in damage to the flooring system.

Damage to the flooring system will, in turn, affect its future performance and the longevity/warranty of the system.

# M MOVING HEAVY EQUIPMENT

Ensure that all panels are in position and properly fitted. Investigate any rocking panels or irregularities, which might indicate a loose pedestal or pedestal head.

Overlay the route to be transited with protective covering. Secure it so that it cannot move horizontally. It is particularly important to prevent movement which could create a gap between boards, allowing the pallet truck or bogey to impact on the raised floor surface.

*Avoid impact loads.*

Shunt loads which impose a sideways force should also be avoided, especially at and close to perimeters. It may be advisable, when perimeters are exposed on one or more sides (a loading bay, for example) to install a restraining system to enhance stability. Such enhancement could consist of additional pedestal base fixings, horizontal bracing of pedestals fixed at some point to the structure, diagonal bracing and screwing panels to pedestal heads.

Heavy loads on castors and small wheels should not be run across grilles, perforated panels, panels with service outlet boxes or grommets and other panels with cut-outs.

If in doubt, always consult with a representative of a recognised Raised Access Flooring Company for advice when heavy items of equipment are being moved on to, and across, the raised floor.

The floor surface may be damaged or indented by hard wheels, castors etc. when combined with heavy loads. An overlay will help prevent this.

# M *ODIFICATION / DISPOSAL INSTRUCTIONS*

ONLY A RECOGNISED RAISED ACCESS FLOORING COMPANY SHOULD CARRY OUT MODIFICATIONS TO THE RAISED ACCESS FLOOR.

If panels need to be removed for access, or any damaged panels need to be replaced, follow the maintenance and cleaning instructions.

No special requirements are necessary for the disposal of the floor panels as they are biodegradable.

Pedestals are usually of steel manufacture, and once used will have traces of adhesive attached, they should be included with the general debris disposal.

# CLEANING INSTRUCTIONS

## ***UNDERFLOOR VOID***

Whenever panels have been removed for access, the cavity should be checked for cleanliness. Vacuuming is the most appropriate method.

If a floor sealer has been employed previously, any cracking or flaking should be noted so that repair work can be scheduled.

At all times, the utmost care should be taken, as there are likely to be live cables and expensive fibre optics in the floor void.

## ***VINYL PANELS***

Vinyl covering, which has been bonded to access floor panels is likely to have static control properties. Do not impair these by using sealing compounds, polishes etc.

Do not in the first place allow the vinyl surface to become dirty or stained and discoloured. There are serious limitations on methods to be used for cleaning due to the nature of the services in the void.

Normal methods for the initial clean and long term maintenance of vinyl floor coverings are generally unsuited to raised floors simply because the surface is not water tight. You cannot use a bucket and mop.

- All surplus dust and debris should be removed by sweeping with a soft broom.
- The floor surface should be burnished with a rotary floor polishing machine. No polish or sealant is necessary and indeed should not be used because it could impair the anti-static characteristics of the vinyl.
- Depending on the condition of the floor, a number of burnishing treatments will give the vinyl a clean and shining appearance. There are various grades of pad available for floor polishing machines and, dependent on the condition of the surface, the cleaning contractor should select

whatever he considers most suitable for the initial burnishing and then the ongoing maintenance.

- In conjunction with the burnishing process, a detergent mist may be sparingly applied from a hand held bottle with a trigger to produce a fine spray.
- Under no circumstances should liquids be used on the floor in a way which would damage the adhesives used in panels or in quantities which could seep between panels and on to services (mostly electrical) in the void below.
- This limitation therefore precludes the use of mop and bucket methods of cleaning the floor, with or without detergent added to the water.
- If necessary panels must be lifted, one by one, and bench-cleaned by hand.
- The floor covering may become indented or lined by the wheels, castors or feet of static or moving objects. It is strongly recommended to protect against damage by overlaying the floor with a suitable sheet material when equipment is being manoeuvred.

## ***CARPET PANELS (NEEDLEPUNCH CARPET)***

### **Barrier Matting**

Soil within the carpet will abrade the carpet fibres and accelerate the ageing process. Over 80% of carpet soiling is applied directly to the floor via foot traffic.

The long-term appearance of any installation will therefore be substantially improved by the use of an effective barrier system at the exterior entrances. In order that these barriers remain effective in removing soil, it is essential that they be regularly cleaned in accordance with the manufacturer's instructions relative to traffic density.

### **Pattern Staining**

Where a differential pressure exists between the floor cavity and the room there is a danger of "edge-staining" because the floor can seldom be 100% airtight.

The risk of discoloration at panel edges will be reduced by ensuring that the cavity and the room are kept as clean as possible. Circulating air must be filtered effectively.

## Routine Maintenance

### DO NOT WASH OR WET THE CARPET

Vacuum the carpet frequently, daily if possible, preferably with a machine that has a separate power driven brush head and an airflow of at least 38 litres per second. Needle-punch carpet, by virtue of its extra-dense construction will tend to hold soil more tenaciously than pile carpet and so the vacuum cleaner must be effective to extract the dust.

## Spot, Spillage, Stain Removal

Deal with the problem quickly. The sooner it is tackled, the easier and more effective the cleaning will be.

Blot up excess liquid with absorbent material and scrape up solids with a flat tool such as a blade or spatula.

Ensure that you have the correct cleaning substance for the type of stain and one which will not "bleach" the colour out of the cloth. Do not spread stains. Work carefully from the edges to the centre. Always dry off as quickly as possible to prevent dust and dirt settling on the damp area.

## Periodic Cleaning

It may become necessary to clean the complete carpet in which case a "dry powder" method is recommended. This involves the application of a proprietary compound brushed into the carpet and vacuumed off. A specialist contractor normally carries out such intermittent cleaning.

Shampooing and hot water/steam cleaning are not recommended on account of the amount of moisture involved.

## Loose Lay Carpet Tiles

Loose lay carpet tiles should not be wet-shampooed unless the application is able to remove all the moisture, which is used in the process. Residual moisture will eventually migrate into the panels and potentially result in swelling, delamination and corrosion.

***BARE STEEL PANELS***

Clean by sweeping or vacuuming. **DO NOT WASH.**

Any superficial stains may be removed using a fine water mist spray and wiping immediately with a dry cloth.