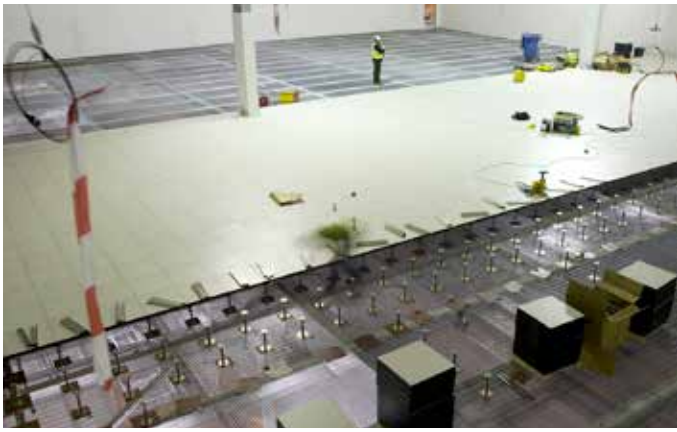
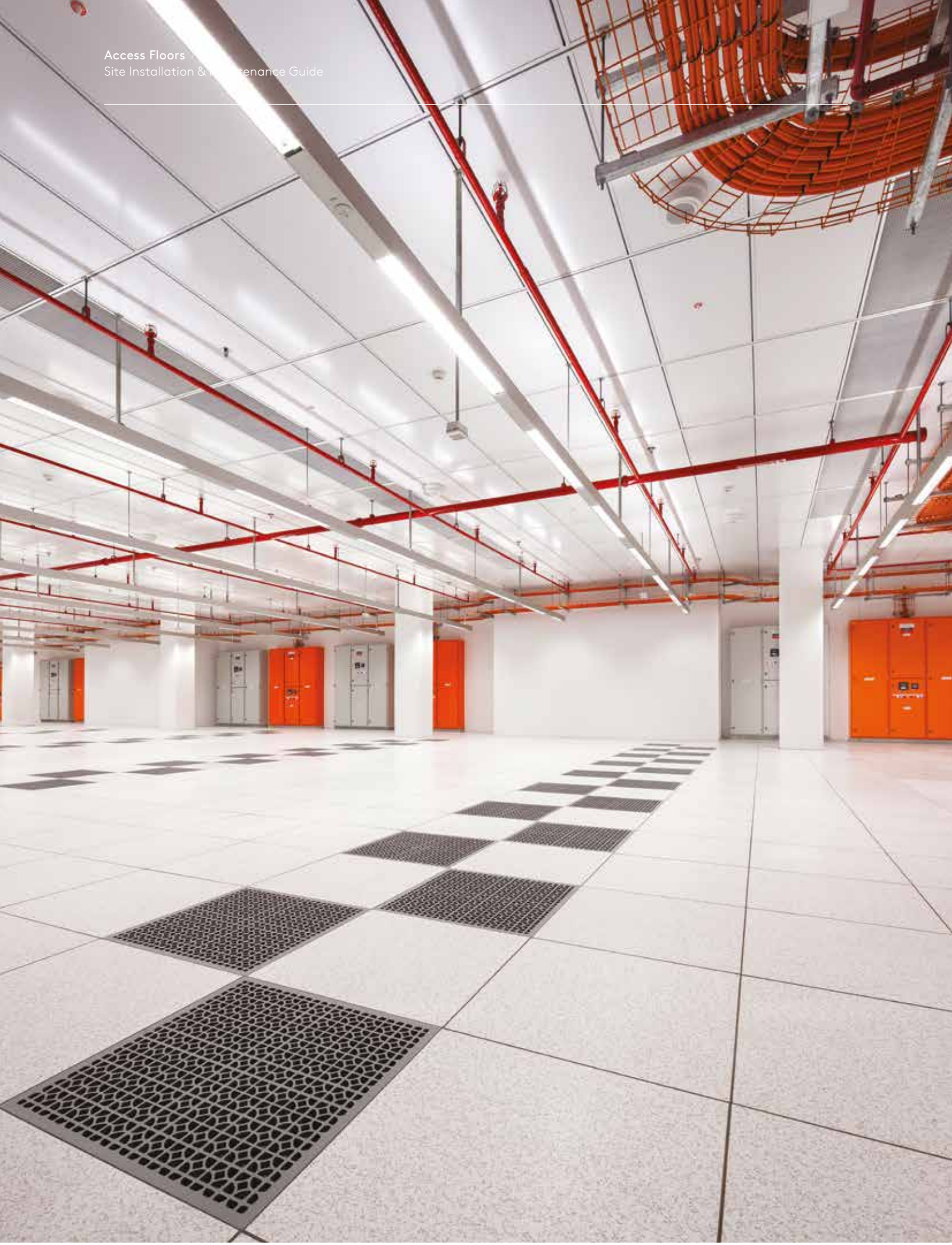
Data & Flooring Technology
Access Floors
Europe

Access Floors
Site Installation & Maintenance Guide



Kingspan®



Contents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01

Introduction

Installation forms the crucial link between manufacturer and client ensuring the optimum performance of the product and its functionality.

Once installed the correct usage and maintenance routines are equally important to ensure product performance and longevity.

This guide is intended to provide easy-to-use references to how to install Access Floors and how to maintain them in use.

Introduction

Whilst all of the elements outlined below are covered in detail throughout this document, there are several parameters which significantly affect the success of a raised access floor installation as summarised below.

In order to achieve a successful installation it is necessary to plan from the outset, and to monitor these parameters constantly during the installation.

- Choice of setting out point

  The setting out point should be positioned at such a point as to ensure as far as practicable, that all cut panels at the perimeter are in excess of 300 mm* in size after cutting. This ensures that the perimeter cut panels retain their integrity and are as of such a size that they can be supported in a suitable manner.

- Squareness of the grid

  The squareness of the grid is initially set by the installation of the first rows of panels and the installation of these is of paramount importance to the quality of the finished floor.

- Choice of pedestal cap

  Ensure that the correct field cap is used as per the system requirements.

- Control of rocking panels

  It is imperative that all panels are seated properly to the pedestal heads without rocking. This is facilitated by the adjustment of the understructure. Manufacturing tolerances may result in some panels not being seated correctly, in this event, these panels should be put aside and used to make cut panels at the perimeter.

- Level of the floor

  Control of the level of the floor to tight limits is essential. Use a calibrated laser or equivalent levelling equipment to mitigate any deviations from level that will result in difficulties in laying the floor, which could lead to unacceptable inconsistencies in panel-to-panel levels.

- Correct use of components

  It is essential to use all of the components of the flooring system in accordance with the manufacturer's recommendations. Do not take short cuts to economise.

*Always verify the exact requirements for the installation by referring to the Specification.

02

Preparation

Preparation

Job Site Preparation

The installation of an access floor requires a thorough understanding and control of the building space receiving the access floor. Attendance at the pre-construction meeting is a must. Be sure your requirements are known and understood by the General Contractor and / or the Owner.

This includes the following:

1 Approved drawings showing size and configuration of the access floor area.

2 Identification of material movement paths within the building. Plan your material paths from the trucks to the access floor area. Arrange for any special equipment needed. The customer must provide a dry, accessible area to receive and unload material. There should be a free path from an elevator and / or hoists to the area receiving the access floor material.

3 Agreement on means of access to the area: elevator, stairs, street level, loading dock, etc.

4 Storage Conditions: Prior to start of installation, a dry, secure storage space must be made available for the access floor materials. It should be closed to the weather and should be adjacent to the area where the floor will be installed.

5 Power available during installation. (110 – volt 20 amp supply, minimum requirement).

6 Work schedule of the other trades. All overhead work should be completed before the access floor is installed. If overhead work is done after access floor installation and the access floor is to be used as a work platform, then it must be adequately protected to prevent permanent damage. This can be achieved by placing 2 mm plastic protection plus a minimum of 10 mm plywood (standard trades – foot traffic / light works) – where any powered vehicles / scaffolding rigs / MEWP or heavy loads, please refer to the Kingspan Technical Team for further details.

7 Installation Conditions: The installation area must be closed to the weather with the environment at 5 °C to 30 °C and 20 %-70 % relative humidity, 24 hours a day during and after installation. Kingspan recommends that the floor be installed as close to the normal operating environment as possible. Access floor materials must be stored in this environment at least 24 hours before the installation begins.

8 Identification of type and location of all equipment and services that will be on stands (for example: air handlers, power distribution units). Determine whether equipment will be installed before or after the access floor.

9 Upon the start of installation, the installation area should be free of other trades and their material and must have adequate lighting and power.

10 The subfloor surface must be free of moisture, dirt, grease, oil and other debris. If a non-approved sealer has been applied to the subfloor, make certain the sealer is compatible with the pedestal adhesive. Test apply several pedestals as early as possible to be sure required bond can be achieved.

11 The condition of the subfloor should be checked before the start of installation to see if it is spalled, broken, or dug out. If these conditions are not corrected you may not be able to correctly adhere and level the pedestals.

12 Subfloors other than concrete: Be careful of wood subfloors, vibration isolation pads, or concrete floors with existing floor coverings. If you cannot avoid putting the access floor over one of these subfloors, you should conduct tests to ensure that the pedestals adhered to them will meet the overturning moment specification.

13 Verify that the work conforms to the contract drawings and that the starting point is agreed upon prior to commencing work.

14 Notify other trades that no personnel other than experienced access floor installers should be allowed on the floor until the following conditions have been met:

- the perimeter is installed on at least three sides of the room;
- the pedestal adhesive has cured for a minimum of two days; and
- the access floor (or a portion of) has been inspected and accepted by the General Contractor.

Uneven Subfloors

Subfloors should be checked for uneven conditions with a laser before installation begins. Where low areas exist in the subfloor, the height adjustment range of the pedestals may not be enough to meet the FFH requirement. Longer bases may be required in low areas. The adjustment ranges of pedestals and the corresponding head to base engagement requirements are shown below.

You may be able to compensate for a slight to moderate subfloor irregularity under a pedestal with one of the following methods:

Slight condition

Use pedestal adhesive to compensate for a slight subfloor irregularity under the base plate. If the subfloor is very rough, apply additional adhesive.

Moderate condition

Use pedestal adhesive and a shim to compensate for a moderate irregularity under the base plate.

03

Installation

Installation
Field

The installation of the access floor begins with the field area. There are certain steps that should be followed which are listed below in sequential order.

STEP 1
Verify Field Dimensions vs Drawings and Check Subfloor for Grade Variations

Check the room dimensions with approved drawings. Set up the laser to verify that the subfloor is within specifications. The laser will give a constant level line to use as a reference. Lasers with targets designed for access floor installation are required. Determine the exact finished floor height by locating the datum set by the General Contractor. This could be a doorsill, curb, or a reference point marked on some structure such as a column.

If the planned access floor elevation must be changed in order to meet the bottom of the door buck or some other fixed structure, you need to verify that the pedestals are of the necessary height to make this change. Keep in mind that the pedestals have limited adjustment ranges.

STEP 2
Check Setting Out Point

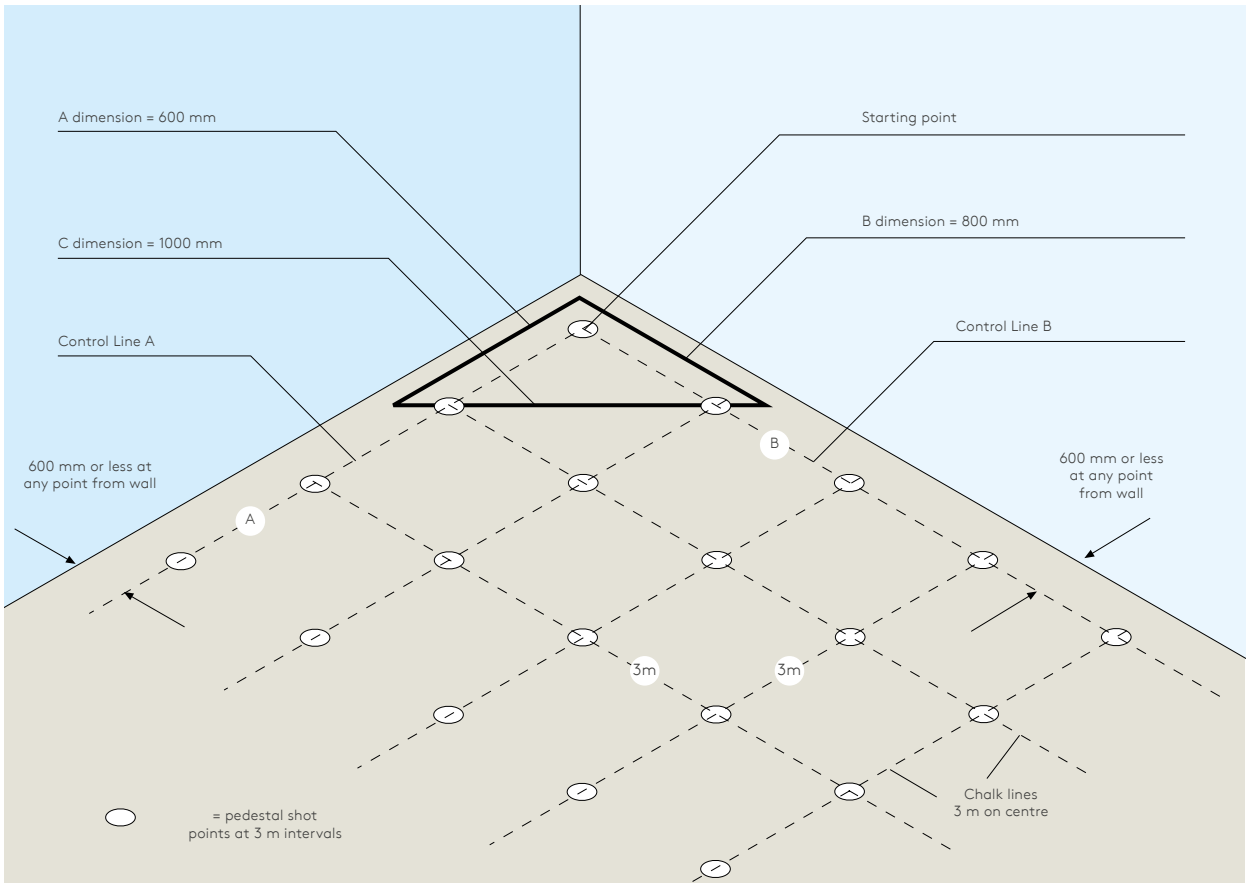
Find the starting point on the floor as shown on the Approved drawings. The point is usually determined by the Architect, Engineer or General Contractor.

STEP 3
Establish Control Lines from Setting Out Point

Once the starting point is established, use chalk to lay out two perpendicular control lines from the starting point (see *Figure 1*, control lines 'A' and 'B'). These will be the control lines for installing the access floor. They may be laid out with a tape measure (using the Dimension Table in *Figure 1* to verify perpendicularity) or with a laser that can shoot a right angle.

STEP 4
Spread Pedestals

Beginning 3 metres from the starting point, draw chalk lines perpendicular to each control line – at 3 metre intervals. This will create a grid, with lines 3 metre on centre (see *Figure 1*). Each point of intersection in the grid will serve as a pedestal shot point (where exact pedestal elevations will be made with a laser or level). The pedestals placed at the shot points will be used to set the height adjustments for all other pedestals (with the aid of a 3 metre levelling bar). Once the lines are drawn, place all pedestals in their approximate locations. Only the shot point pedestals need to be exactly located at this point.



Dimension table: To verify perpendicularity when laying out control lines with a tape measure								
A			B			C		
600	1200	1800	800	1600	3200	1000	2000	4000
Example: If the A dimension is 600 and the B dimension is 800, then the C dimension should be 1000								

Figure 1. Laying out control lines.

Installation
Field

STEP 5
Level Pedestals in Correct Position

Starting with the two end pedestals, using a laser level, place a pedestal assembly to the desired elevation at every chalk line intersection. Once the pedestals at the intersections are adjusted to the correct elevation, the 3 metre levelling bar will be used to position and set the height of the other pedestals (see Figure 2).

The levelling bar should meet the following requirements: extruded aluminium; nominal width and height dimensions of 60 mm x 100 mm; straight (without a bow in any direction); marked every 600 mm. To set the height of the remaining pedestals: position the levelling bar so that it spans the pedestals that were adjusted according to the laser – then adjust the height of the four pedestals under the bar to meet the bottom of it (at 600 mm intervals).

Care must be taken to ensure that all of the pedestal heads touch the bottom of the bar without raising it! Doing this correctly will create a level access floor with panels that do not 'rock' in the system. Remember to check the specification for tolerances that are outlined for the specific installation.

After you have two parallel rows (of six pedestals) 3 metres apart, you will then turn your bar 90° to position pedestals between the two rows. Use the bar to position and set the pedestals in between the rows until you have an entire 3 metre by 3 metre section with pedestals on 600 mm centres. Repeat this sequence for each 3 metre by 3 metre section.

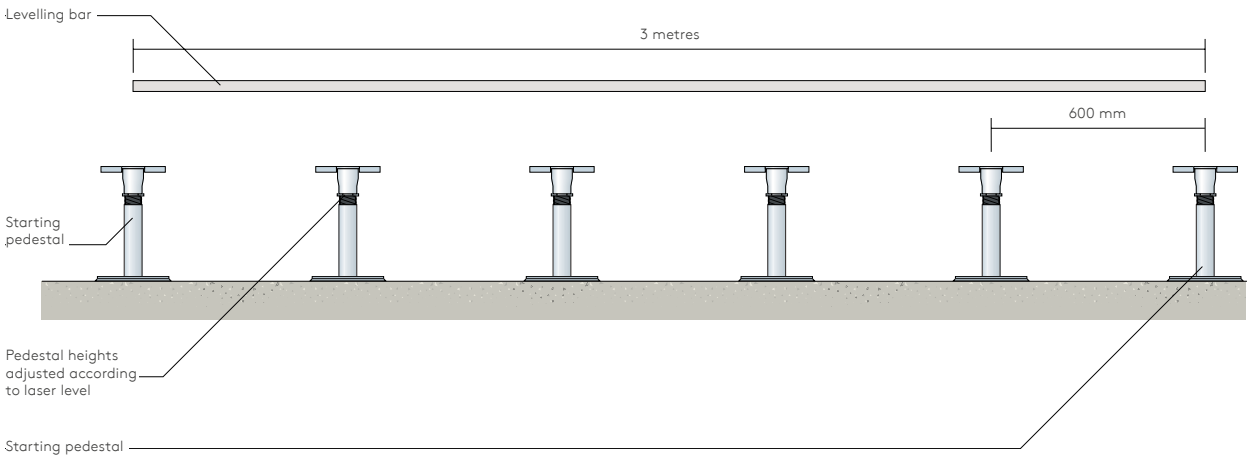


Figure 2. Levelling pedestals with the levelling bar.

Step 6
Attach Pedestals to the Subfloor with Adhesive

The pedestals are attached to the subfloor by dipping the bottom face of the baseplate into the adhesive, scraping off any excess on the edge of the bucket, and applying the pedestal to the subfloor. There should be sufficient adhesive on the base to ensure that base is effectively in full contact with the subfloor. On rough subfloors it will require more adhesive to adequately fill in all the rough area below the pedestal.

After the panels have been installed and all pedestal adjustments have been made, you will have to remove every other row of panels to access the pedestals for mechanical fixing (if required).

Do not install the pedestals and stringers too far ahead of the panels. The placement of the panels will determine the exact pedestal locations. Panels should be laid within 30 minutes after pedestal adhesive is applied. Pedestal adhesive must still be wet when installing stringers and panels. You must ensure that the stringer grid is straight and square throughout the installation process.

For stringer systems only (see Figure 3).

If structural stringers are a part of the system, attach them to the pedestal heads using a torque limiting screw gun. Set torque to approximately 1.25 Nm. Do not overtighten the stringer screws. Do not under-torque. This can leave the system loose and make installing the panels more difficult, and adversely affect the electrical continuity of the floor system.

Step 7
Starting Point

The Starting point dictates the set-out of the installation. In the majority of cases the floor should be installed from the 'centre' line out in both directions.

Note:
At least 48 hours must be allowed between pedestal installation and mechanical fastener installation.

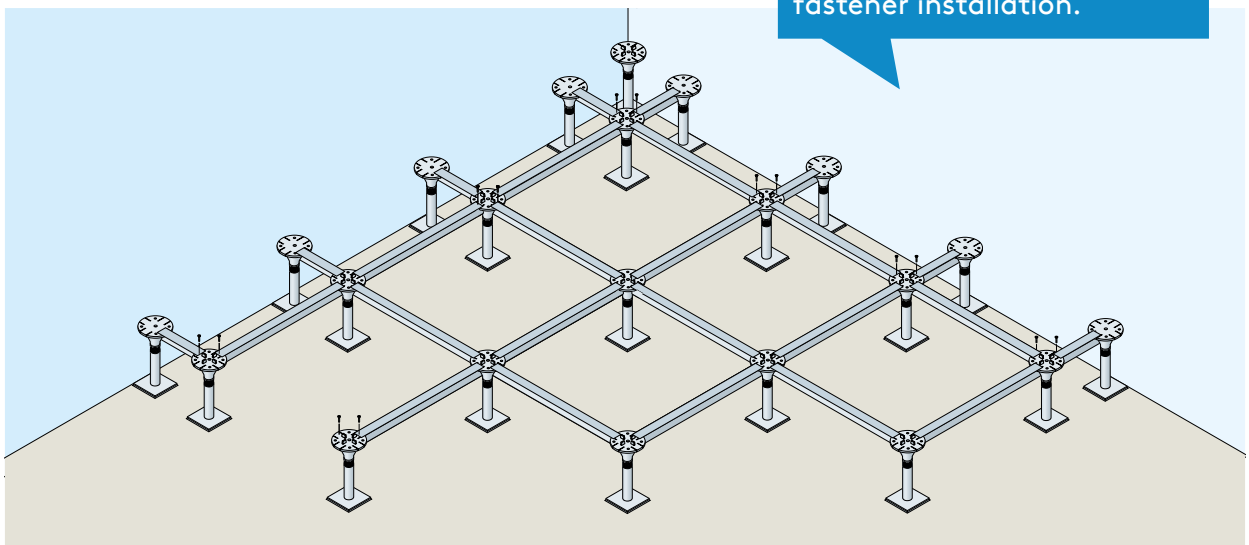


Figure 3. Stringer system.

Installation
Field

Setting Out

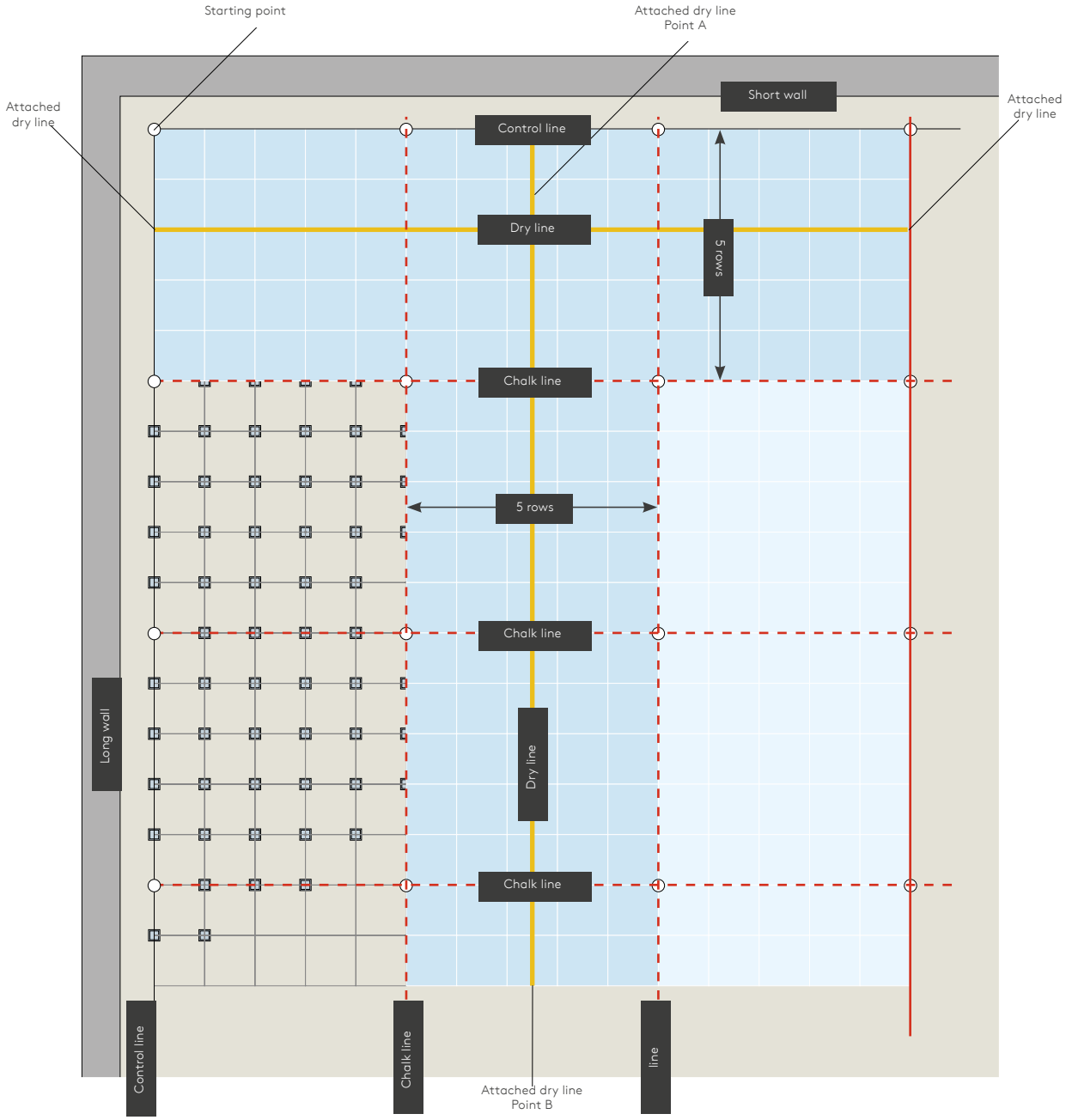


Figure 4. Setting Out.

How to Install a String Line

Establish a dry-line or string line to provide a physical visual reference guide.

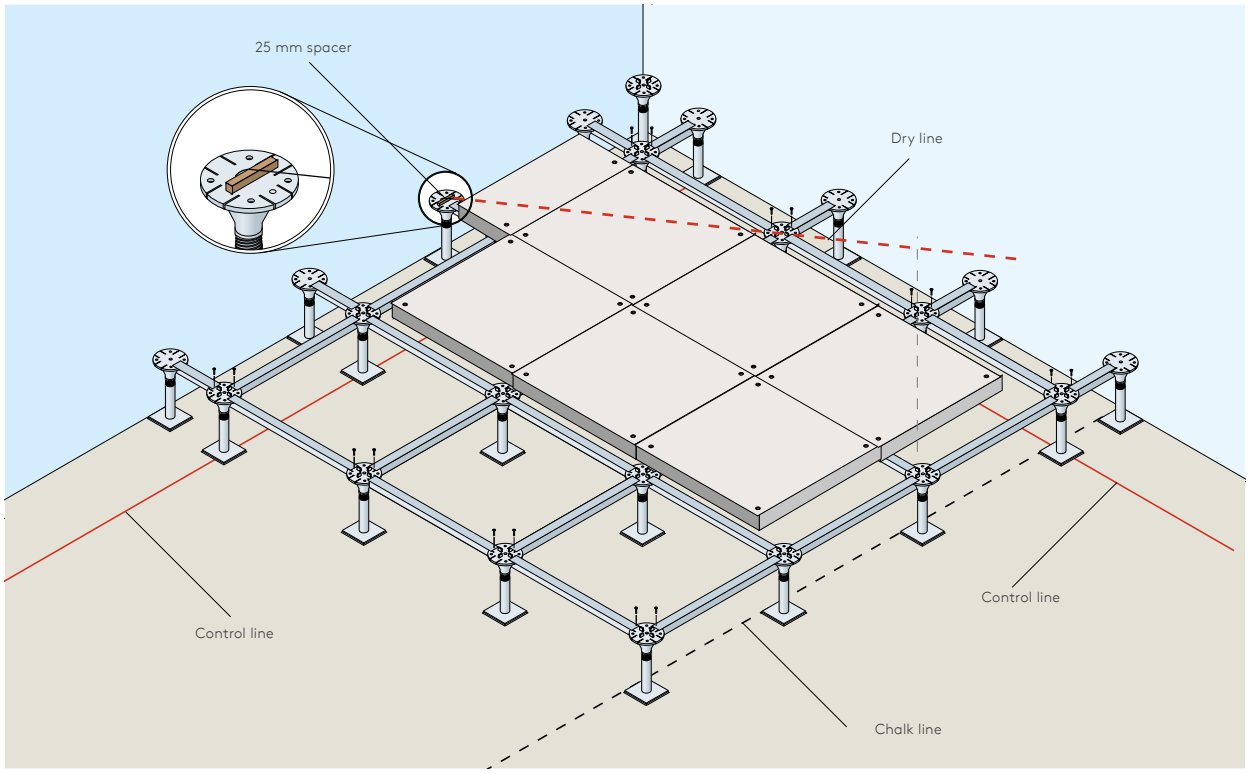


Figure 5. Installing a dry line to verify that your grid line is straight.

Installation
Field

Checking for and Correcting Unwanted Conditions as you Install

Rocking Panel Condition
As you lay out the panels, be sure they do not rock.
If you do find 'rockers,' try the following:

- check for dirt or debris on stringer or pedestal head and remove debris;
- rotate the panel one quarter turn. The rocker may simply disappear. If the panel rocks in a new direction after it has been turned, set the panel aside and try another panel in its place. If the new panel also rocks, lay another panel adjacent to it. If the adjacent panel rocks in the same direction, adjust height or the perpendicularity of the appropriate pedestal.

Panel Lipping Condition

This is usually caused by a bad or uneven subfloor. If this occurs, plumb the pedestal bases. It may be necessary to shim some pedestal bases to make them flush (see Figure 6).

Caution!
Be careful not to create an overly tight panel installation that will result in difficult removal and re-installation or a loose installation that will result in unsightly gaps.

Figure 6. Correcting a panel lipping condition.

Installation
Field

STEP 8
Installing Panels Around Large Obstructions

The objective here is to wrap a continuous rectangular frame around the obstruction that will be square with the floor that you've already installed. After a continuous frame is constructed, you will install the cut panels around the obstruction. The frame will be installed in four sections (see Figure 8, opposite).

Installing Section 1

Install understructure and full panels as close as you can to the side of the obstruction that you first approach.

Installing Section 2

Install understructure and panels along an adjacent side of the obstruction – as close to the side of it as you can come with full panels.

Laying Out Section 3

The next step is to construct a parallel section of floor on the other side of the obstruction (opposite section 2). To do this you will snap a chalk control line on the subfloor that is parallel to the edge of section 2. This will be your control line for installing section 3. Building this section of floor parallel to the edge of section 2 is critical!

To lay out the control line

1 On the north side of the obstruction, measure the distance from the edge of section 2 (line A) to the nearest gridline that exists on the opposite side of the obstruction (the grid line of the floor that you've installed so far).

2 Approximately 3 metres beyond the south side of the obstruction, measure the same distance from the edge of section 2 (line B) and mark the other end of your chalk line there.

3 Snap your chalk line between the end of the grid line of section 1 and the mark you just made. This is your control line for section 3 (see red line in Figure 7, opposite).

Installing Section 3

Position a row of pedestals on the control line, using it as a centreline for the pedestals. Install at least five more rows of pedestals parallel to the control line pedestals so that 5 rows of panels can be installed. No more than 5 rows of panels should be installed at this point – it may be necessary to move this entire section slightly if it is too close to (or too far away from) the adjoining section on the south side of the obstruction that you are about to create. Make sure that your pedestals stay centred on your chalk control line.

Once section 3 extends five panels beyond the south side of the obstruction, you can begin to fill in the gap to the 'south' of the obstruction.

When the entire frame is 5 panels wide on all sides and there are no gaps at the seams where the sections meet, you are ready to install the cut panels around the obstruction (see 'Cutting In' on page 20 for installing cut panels).

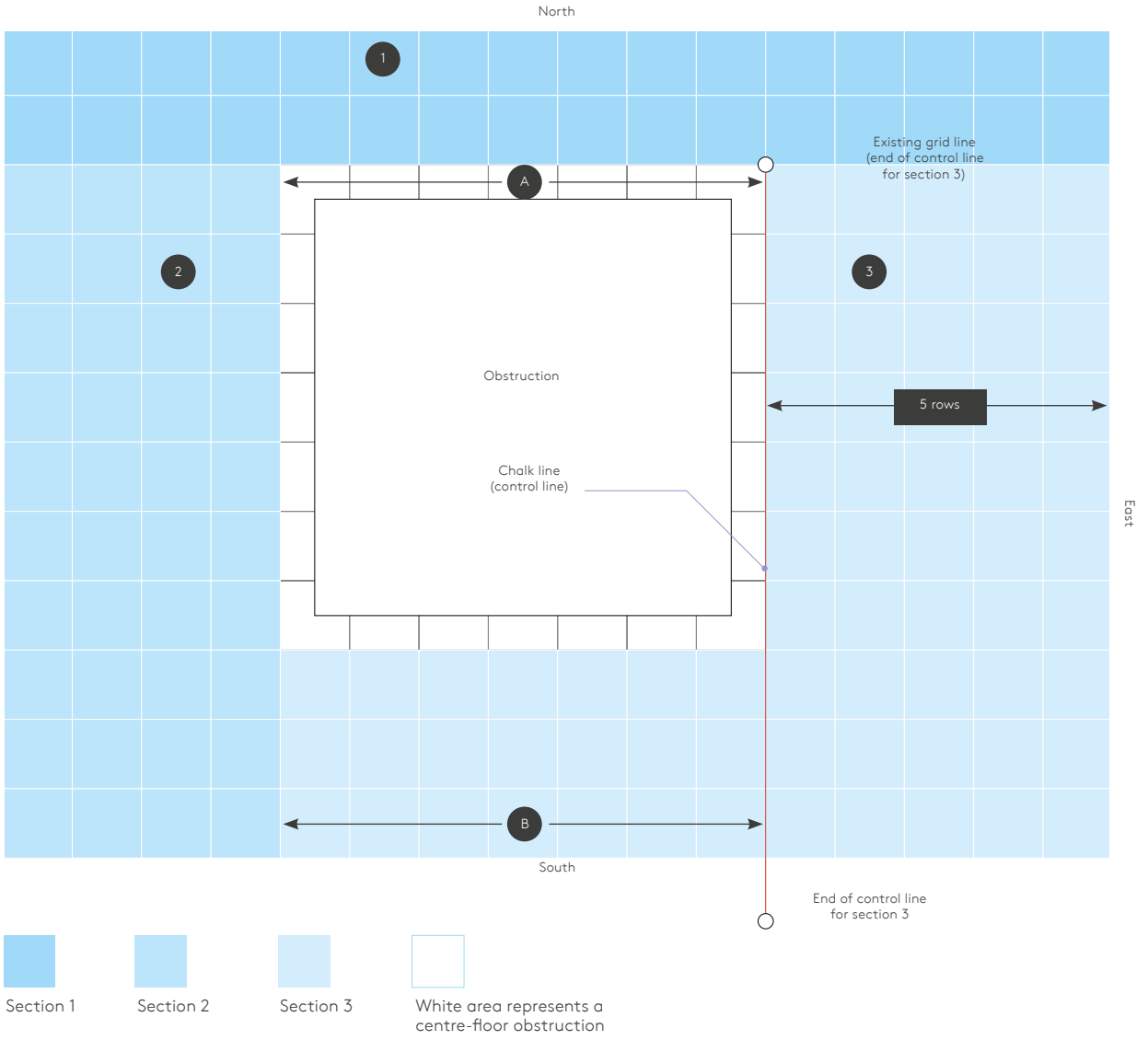


Figure 7. Wrapping around a large obstruction.

Installation
Cutting In

After the field area panels are installed, you are ready to install perimeter panels at columns, obstructions, curbs and perimeter walls.

Installing Panels Around Columns

You should 'cut in' panels around columns before installing panels at other perimeter areas. This sequence will help to prevent the floor grid from getting out of square (areas of the floor around columns may have shifted due to foot traffic and material movement during construction). Before installing any cut panel, you must ensure that there are no gaps between surrounding panels, and that all surrounding panels can be easily removed and replaced. Once installed, the cut panels should not be loose.

Installing Panels at Obstructions, Curbs and Perimeter Walls

Obstruction, curb and wall areas all fall into the 'perimeter' category. If there is a perimeter area where full panels can be installed, this should be the first perimeter area of installation. If there is not, you should start where the largest cut panels can be installed – and then move to the area where the next largest cut panels can be installed (the area with the smallest cut panels will be last).

Note:
All cut panels should be measured and cut to fit for a specific location – cut panels should never be interchanged!

Typical Perimeter Details

Before Cutting Panels

Refer to Safety Items Required and Power Tools on page 44 for personal protection equipment requirements and saw blade requirements. The cutting operation should be separated from the installation area to prevent cement and steel dust from damaging the finished floor surface (and increasing your cleaning job at the end).

Lay Out Panels for Cutting

With the field panels nearest to the wall correctly positioned on the understructure, measure the distance from each field panel to the wall for each perimeter panel to be cut. Scribe the panels for each cut. Note: When cutting a laminated panel that has a directional pattern, be sure that your planned cut is correctly oriented with the pattern direction.

Installing Panels Cut 150 mm* or Wider (Figure 8a)
Perimeter pedestals should be fastened as close to the wall (or curb) as possible.

* Always verify the exact requirements for the installation by referring to the specification.

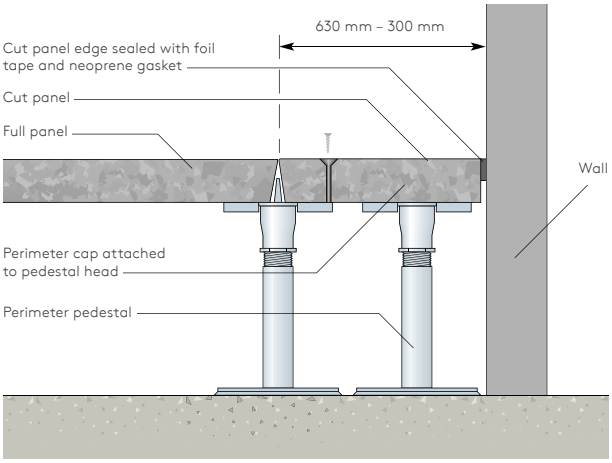


Figure 8a.

This will allow you to install a section of panel as small as 150 mm* wide. To install the cut panel: remove the last full panel from the understructure, install the cut panel – then replace the field panel. The gap between the perimeter panel and the wall should not exceed 2 mm. If the cut panel is in a high traffic area (at an entry or at the top of a ramp) it should be supported at the centre of the cut edge with an additional pedestal. The additional pedestal should be attached to the subfloor with adhesive and adjusted so that it supports the bottom of the panel.

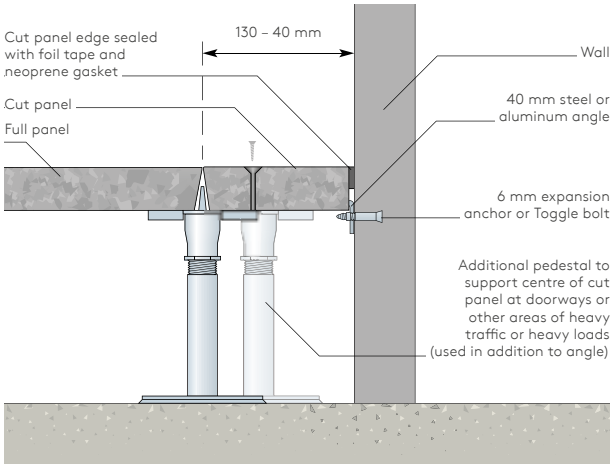


Figure 8b.

Safety Requirements for Panel Cutting

Safety procedures as outlined in the specific RAMS for the project should be adhered to at ALL times.

Cutting of Apertures

If panel cut-outs are required at a later stage to suit outlet boxes, the dimensions, including depth of the floor outlet box, its required position within a raised floor panel and its designated position within the floor level, should be ascertained prior to commencement of the operation. A template should be constructed to suit the required girth dimensions of the floor outlet box, and placed on the panel surface. Once the boundary of the template has been either scribed, or marked around, 2 No. pilot holes should be drilled in opposite corners of the rectangular pattern. This operation allows the insertion, and operation of a hand held jigsaw, fitted with a high tensile steel cutting blade. Once cut the panel is ready for receiving a floor outlet box. The jigsaw is operated and manoeuvred along the prescribed pattern, to complete the cutting of the required aperture.

Kingspan Access Floors recommend that floor boxes are fitted at least 100 mm from edges of panel to maintain panel strength. Therefore, the maximum size of cut-out should not exceed 400 mm x 400 mm. If the cut-out required is greater, then additional support can be given by the introduction of extra pedestals. It is recommended that the end user should contact Kingspan Access Floors, before any work is carried out to the floor system to avoid nullifying the warranty.

If the installation of underfloor services requires that pedestals be removed, we recommend contacting Kingspan Access Floors Technical Department. We can advise on what type of bridging or pedestal alterations are required to facilitate the change.

Installation
Cutting In

Rectangular Cutouts – External and Internal

Panels with cutouts extending to the edge of the panel can be cut with a bandsaw. We recommend that a cutout be at least 100 mm away from the edges of the panel in order to maintain a reasonable degree of structural integrity for the panel. Cutouts inside the perimeter of the panel can be cut with a heavy-duty hand-held reciprocating saw. Use bi-metal saw blades with approximately 14 teeth per 25 mm for this.

Follow these steps for making your rectangular inside cutout:

- Lay out the cutout on the panel (see Figure 9).
- Drill pilot holes in two opposite corners. Be sure holes are large enough for the saw blade to pass through without binding.
- Cut out the hole.
- Deburr all cutouts made for grills or electrical boxes where no trim will be used.

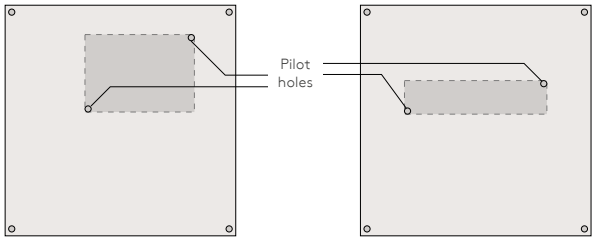


Figure 9. Laying out internal cutouts

Factory made cutouts

It is advisable to have internal cutouts (round and rectangular) cut in the factory whenever the size and location is known in advance. Doing this will save you considerable time during installation.

Round Cuts

Round or grommet cutouts can be made with a hole saw up to 150 mm in diameter. A drill press is recommended for this operation. Use a very slow speed heavy duty drill with a bi-metal cutting hole saw blade. If you use a hand-held drill, pre-drill a hole at the centre of the cutout location. For round holes larger than 150 mm, lay out the circle on the panel. Drill one entry hole along the edge of the circle just inside of the line and cut out the panel with a jigsaw, and deburr all sharp edges. All cuts should be finished with a taped edge.

Installation
Accessories

Steps

Recommendation for building steps with access floor materials:

1 Limit the overall height of the step assembly to three risers.

2 Keep the width of the assembly in 600 mm increments if possible to allow for uncut panels to be used (cut panels are inherently weaker).

3 Verify allowable step tread and riser dimensions with local code officials. As a guide, use a step tread of 300 mm and a riser height of 150 mm. All risers should be the same height.

4 Cover treads with non-slip floor covering.

Note:
Check local building codes to determine whether steps may be built with access floor materials. In some areas, unitised (preformed) steps may be required to comply.

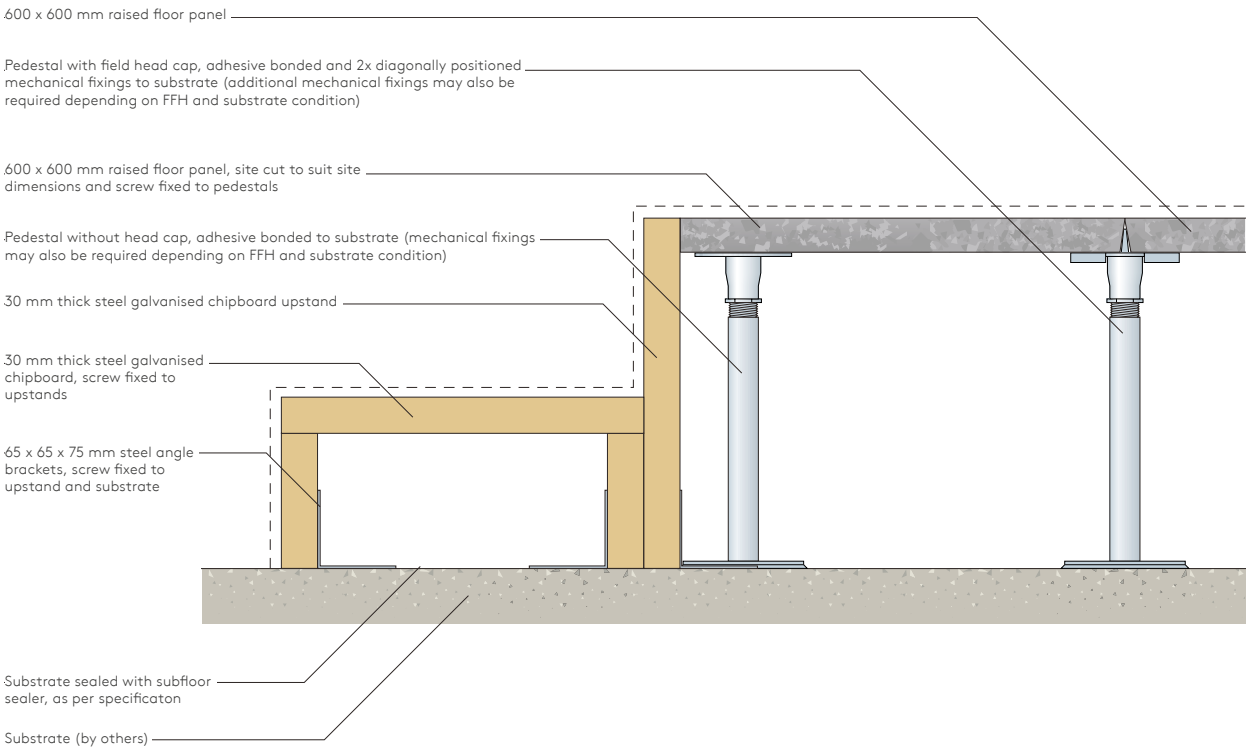


Figure 10. Two step riser assembly.

Installation
Special Conditions

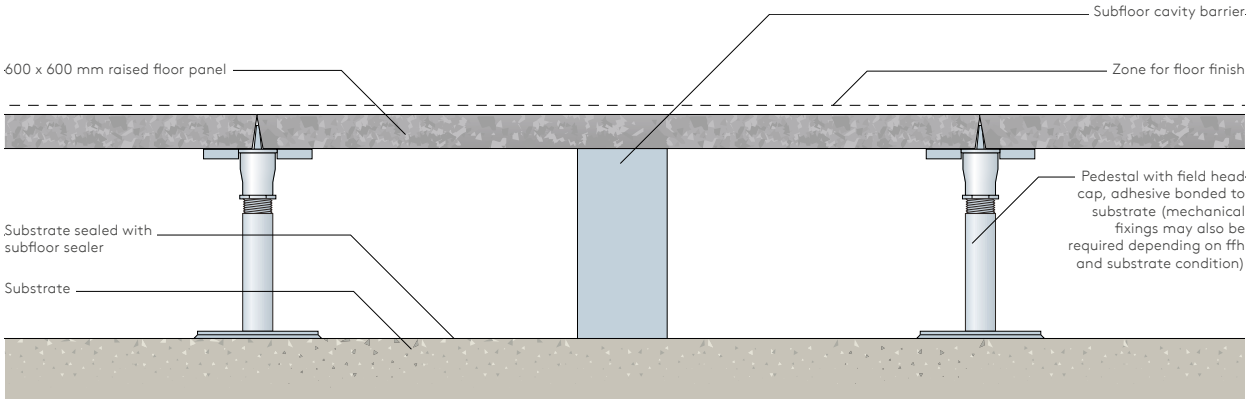


Figure 11. Raised floor with cavity barrier.

Bridging

Bridging may be required to span a trench or an obstruction on the subfloor that cannot be moved. It should be reserved for use only when an obstruction cannot be moved. Stringers should never be used to construct a bridge.

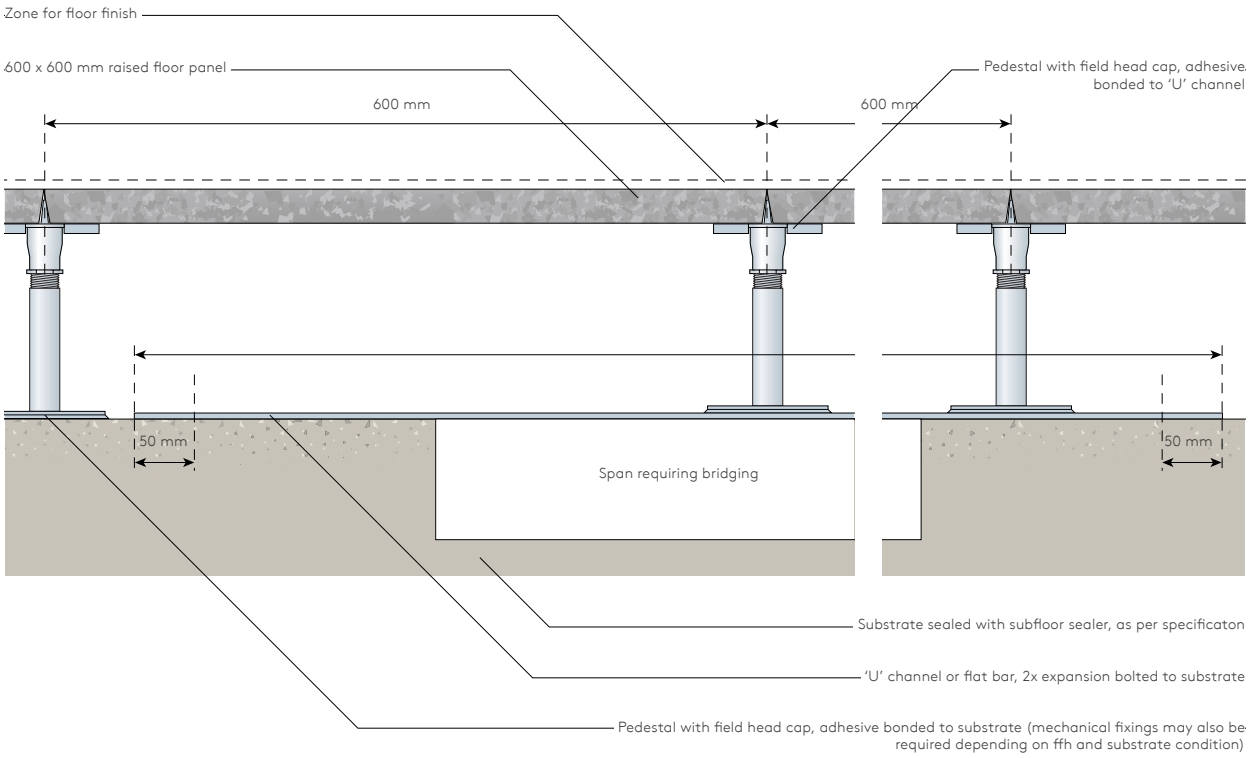


Figure 12. Bridging a trench.

Installation
Special Conditions

Expansion Joints

If an expansion joint must be installed in an access floor due to the presence of an expansion joint in the subfloor, the access floor joint should have the same joint width movement capability as the subfloor joint. The access floor joint can be directly over the subfloor joint or near it. The method on this page details an access floor joint directly over the subfloor joint. To use this method, you can end the access floor on one side of the joint and restart it on the other so that you have full panels on both sides of the joint, or install the floor in the normal way – then remove, cut and replace the panels that span the subfloor joint. If you choose to cut the panels then you must support them at the cut edges with additional pedestals.

There are two ways to cover an access floor expansion joint.

1 Attach to the access floor surface a pre-made expansion joint that is designed to be used on a concrete slab (see Figure 13).

2 Cover the opening with threshold material – which is fastened to only one side of the joint. In this case you must use threshold that is wide enough to cover at least 50 mm of the access floor on both sides of the gap.

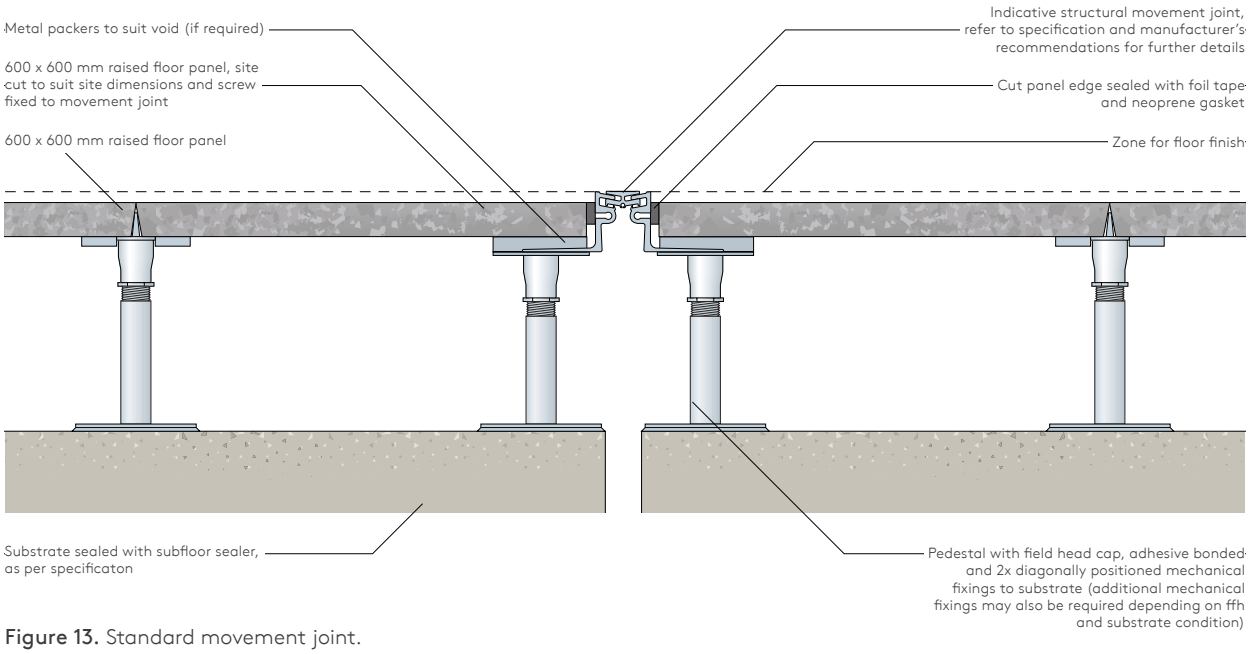


Figure 13. Standard movement joint.

Installation
Perimeter: WoodCore Access Floors

Typical Perimeter Detail

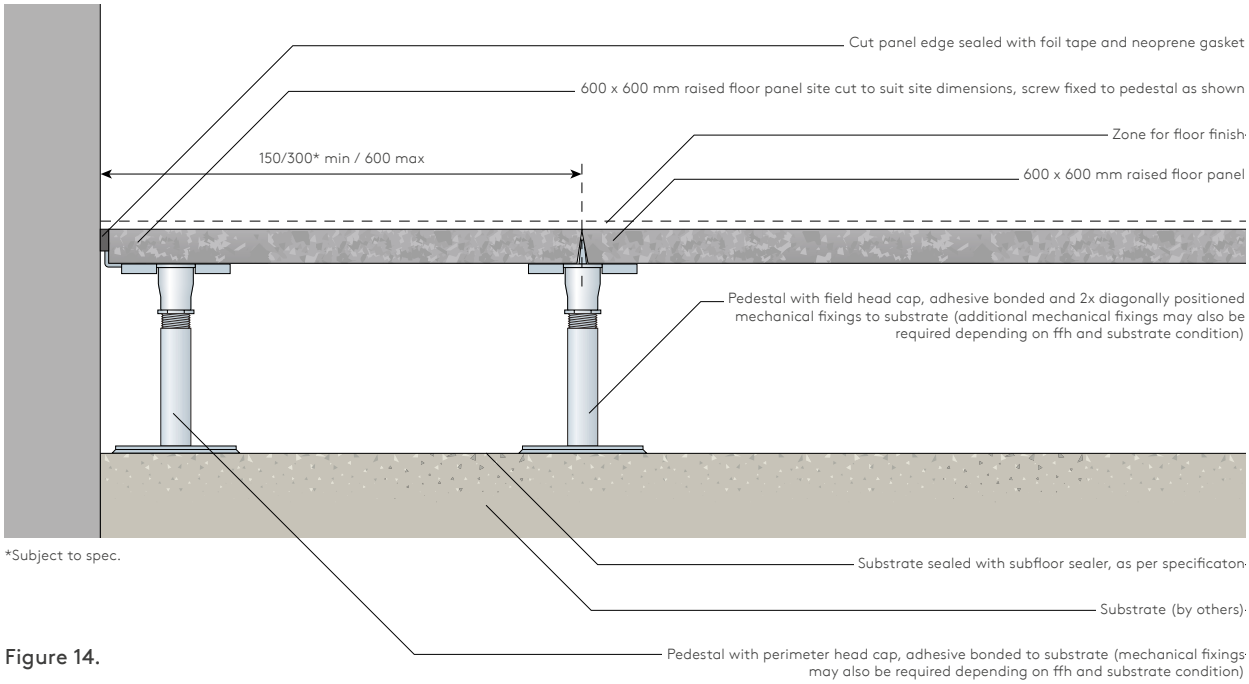


Figure 14.

04

Care & Maintenance

Care & Maintenance
Floor Panel Removal

Removal of Floor Panels for Access to Underfloor Void (Once the Floor System is Handed Over to the End User)

Due to the constant change that invariably occurs in modern offices, it will be necessary occasionally to gain access to the void beneath the raised floor and will obviously require the removal of a quantity of panels.

In order that this exercise is performed with the minimum disruption the following guide-lines are suggested. If the floor is undisturbed then no maintenance is required.

Before attempting to gain access to the floor void consult any drawings indicating the positions of under floor services and fire barriers. Openings in panels should not be left unguarded. Cordon off areas where work is taking place and, if practical, advise all personnel in the vicinity of the planned activity. Always reinstate the panels as soon as possible following the completion of the works.

- When access to the cavity under the floor system is required, only those panels directly over the area of work should be moved. Do not remove the whole floor.
- The first panel must be removed by using the correct lifting device provided by the access floor manufacturer. Place the lifters diagonally across the panel and ensure that there is effective grip of suction and lift vertically. Once the corner of the panel is raised above the plane of the adjacent panels, remove the panel from the system by hand. Do not attempt to lift the full weight of the panel with the lifter. The use of screwdrivers, pliers etc. is undesirable and will lead to damage and injury. If a panel immediately adjacent to the first panel requires removal, then place one hand under that panel and lift it out. 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.
- Every care should be taken while floor panels are out of the system not to disturb the adjustment of the access floor pedestals, as they are liable to displacement or damage. Lifting panels only in alternate rows overcomes these problems.
- When panels have been removed in rows, it is advisable to leave single panels in position at approximately 3 m centres, i.e., leaving every sixth 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. Avoid long continuous runs of forming islands of panels or pedestals and do not leave pedestals free-standing.
- Do not use pedestals as ‘pulleys’ to draw cables through etc.
- 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. Dropping or kicking panel into position will result in damage. If a panel will not go into place without resort to force, remove it again and investigate.
- Ensure that no dirt or grit is left on pedestal heads when panels are replaced - this can create a rocking and noisy floor. It is advisable to wipe edges of panels before re-locating them.
- Panels should be replaced in the same position and rotation as soon as possible in order to protect the floor, its void contents and in the interests of safety.
- Care must be taken when lifting and reinstating tiles adjacent to oversize or cut tiles to avoid damage to the edge and surface of the cut tile. Protective foil tape and a neoprene gasket has been applied to all cut tiles and care must be taken not to dislodge / damage this when lifting or re-instating the tile.

Failure to observe and implement the correct procedure may result in damage to the flooring system and will affect its future performance and the longevity / warranty of the system.

Care & Maintenance
User Instructions

On project completion Kingspan Access Floors Ltd, or their approved dealer will provide a full and comprehensive Operating and Maintenance Manual which comprises the following headlines:

1 Scope of Works
2 Design Parameters
3 Description of Operation
4 Removal of Floor Panels for Access to Underfloor Void
5 Materials Schedule
   - Stock spares
6 Suppliers / Manufacturers Directory
7 Manufacturer's Literature
8 Guarantees & Warranties
   - Panels
   - Pedestals
   - The flooring system
9 Maintenance
   - Maintenance instructions
10 Health & Safety Information
   - Disposal methods
   - Residual risks
   - COSHH sheets
11 Test Certificates
   - As–built drawing register

Servicing

Limitations on sequence, number and positions of floor panels and stringers that can be removed safely at one time.

Permissible loads

With guidance on use of spreader plates when shifting heavy equipment and subsequent maintenance.

Methods for installing cabling and ducts, to prevent damage to supporting structure.

Pedestal adjustment and locking.

Maintenance

Recommended methods and frequency. Minimum maintenance-free life of raised access floor system. Minimum maintenance-free life of replaceable parts where this differs from that of the whole system. Minimum period during which replaceable components will be available.

FAQs

Q How should a raised access floor be used?

A Raised access flooring panels should only be lifted using the correct lifting device i.e. vacuum lifter or spiked carpet lifter. Panels should be lifted vertically with no hinging movement. Panels should be replaced in a vertical movement ensuring that the panel is seated on the pedestals correctly. Only single rows of panels should be lifted at any one time so as not to leave pedestals independent of panels, as they are prone to damage.

Q What are the maintenance requirements?

A The exact maintenance requirements for any specific installation will be clearly spelled out in the Project Operating & Maintenance Manual. This will take due regard for the products and floor finishes used and also the anticipated loadings on the floor in terms of static loads, rolling loads and pedestrian traffic.

Q What is the expected lifespan of a raised access floor?

A The expected lifespan of a raised access floor system is outlined in the PSA MOB PF2 PS / SPU specification as:-

- The supporting components should have a minimum life of 50 years.
- The floor panels (excluding floor finish) should have a minimum life of 25 years.

There is no reference to lifespan in the BS EN 12825 standard although it can be reasonably expected that the raised floor has a lifespan in keeping with the period of time between major refurbishments of the building.

Care & Maintenance
Maintenance Instructions

Basic access floor systems require a little if any maintenance once the installation is complete, but will depend on function and the type and volume of traffic across the floor. To prevent minor problems becoming serious, adjustments and repairs should be actioned as quickly as possible.

Structural Maintenance

It is recommended that a periodic inspection of the raised access floor system is carried out on an annual basis.

This will involve walking over the whole installation checking for rocking panels or irregularities and, if so, make sure that the pedestal heads are clean.

- Avoid applying shock impact loads to the floor.
- Should a panel show any sign of instability, investigate and rectify. The affected area should be blocked off to prevent traffic moving over it.
- Replace damaged/warped panels immediately.

Note:
With Raised Floor constructions only the smallest possible amount of water should be used for thorough cleaning to prevent any damage to the Raised Flooring System.

Cleaning and Care

Ensure that the under floor void is kept clean and that no rubbish is left in the floor void.

- Ensure that no dirt or grit is left on the pedestal heads when panels are replaced as this can create a rocking and noisy floor. It is advisable to wipe the edges of the panels before relocating them.
- Cleaning of panel finishes should be carried out in accordance with the manufacturer's instructions, avoiding the use of water which could damage the finish and attack floor panel protective coatings. Vacuuming is the most appropriate method.
- Floor finishes should be vacuum cleaned regularly to avoid build up of dust and dirt.

If water is required as part of the cleaning process then it should be used sparingly with neutral cleanser and wiped or removed immediately. The panels, whether encased in steel or not, are not hermetically sealed and heavy use of water can lead to ingress.

Cleaning and Care of Vinyl Finish

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

- When cleaning of the panel surface is required, this should ideally be confined to brushing off any excess dirt with a soft broom and thereafter vacuumed. Note: We do not recommend vacuums that have a beater bar since it can visibly damage your flooring surface, electric brooms with hard plastic bottoms and no padding are also not recommended as this may result in discolouration, scratching and / or loss of gloss.
- If water is required as part of the cleaning process then it should be used sparingly and wiped or removed immediately.
- Any water spilt onto the surface of the panels should be removed immediately to avoid staining.
- In the event that more obstinate stains need to be removed, it is advised that they are removed by localised cleaning using water damped mops with neutral cleanser. The panels should then be dried off immediately with a dry cloth and not left to dry.

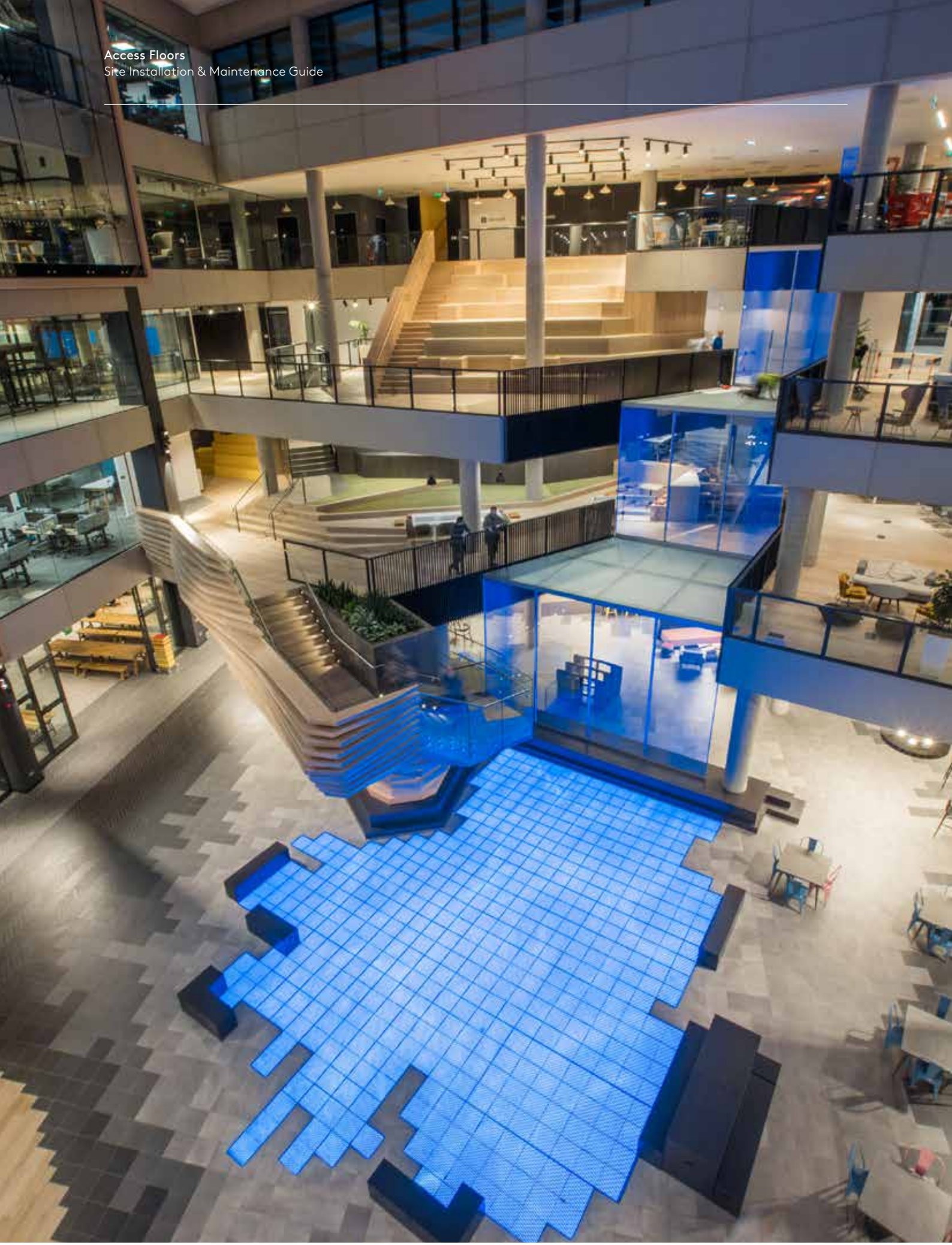
Under no circumstances should liquids be used on the floor in a way which would damage the adhesives used in panels. Always refer to the original manufacturers care and maintenance instructions.

Care & Maintenance
Disposal

Disposal Methods

At the end of normal life, the floor can be removed and disposed of. There are no hazardous materials involved.

- Disposal of materials and components must be carried out in a safe and proper manner with due consideration for the prevailing Health and Safety regulations and disposal procedures.
- In all cases, proper consideration must be given to the protection of the natural environment.
- Under the Environmental Protection Act 1990 – Duty of Care, building owners have a responsibility to dispose of all waste in a safe and proper manner.
- In most cases disposal should be carried out by a registered waste carrier to a properly licensed site.
- Full personal protective equipment must be worn when disposing of materials.
- All items can be safely disposed of by normal methods.
- Notwithstanding the above statement, it is recommended that items for disposal be submitted for repair / recycling or disposed of in accordance with prevailing local authority directives. The panels are a steel and timber composite and may be recycled; the pedestal array will have value as steel scrap.



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Support & Service

Service & Support
Customer Services

Design Support

The front line experience of our technical sales and product managers in the field is backed by dedicated technical teams with the specialist skills to give a support service to specifiers. They will be pleased to advise on appropriate products to meet both PSA performance specification and the recently introduced Common European Standard BS EN 12825.

Typically this includes assistance with project specific raised access floor specifications, advice on floor layout and special details. Full product details and specification are provided and online information can be accessed at any time via the our website, www.kingspanaccessfloors.co.uk.

As well as providing downloadable product information, the extensive FAQs and case histories of completed projects are an invaluable guide to product selection. Specification is further facilitated by links to NBS site.

In addition, we offer a RIBA approved CPD package which provides authoritative guidance on all aspects of raised access flooring.

Pricing Information

From the provision of budget prices for planning purposes though to fully comprehensive tender packages, we will provide competitive offers based on our extensive product range. Tender packages include fully priced bid, product specification, method statements and quality plans, risk assessments, manning levels to meet programme time scales, and proposed project management structure including personnel information.

Contracting Services

Kingspan Access Floors' contracting teams have carried out most of the UK's largest, most technically demanding, time critical and prestigious raised floor projects. There are few problems they have not previously encountered and overcome.

We are unique among UK access floor manufacturers, by having our own ISO 9000 quality management accredited contracting service. Highly qualified managers and skilled fitters, logistics and technology support, result in a responsive nationwide capability, delivering turnkey solutions on time and on budget.

Compliant with the latest construction legislation all documentation is prepared and presented in the required format. Our contracting management teams ensure that the raised floor installation meets quality and timescale requirements. Full raised access floor layouts are generated on CAD with the provision of as built drawings if required.

Working closely with technical and production departments experienced project management teams ensure that the demands imposed by major construction projects are met. All installations are carried out to the required standards by trained personnel only. On project completion, comprehensive operating and maintenance manuals are supplied to the main contractor.

Aftercare

Aftercare service ranges from the simple provision of spares or a variety of modifications carried out by the Special Works division, typically alterations to existing floors and re-levelling of existing older floor installations. Full project records are kept for many years, thereby facilitating any subsequent works.

Service & Support
Warranties

Our unique Total System Warranty guarantees the performance of our PSA MOB PF2 PS systems for an unprecedented 25 years.

The Total System Warranty covers all the key performance areas for our systems in a single comprehensive package. As part of this package, we offer technical support through design and construction. We also provide a site inspection service throughout the contract period as part of our Aftercare service.

PSA MOB PF2 PS Warranty

Kingspan Access Floors will:

- comply with the specification against which the products, solutions and systems are offered;
- comply with the agreements into which they enter;
- replace any faulty goods where it is agreed that the faults have been caused by a defect in the manufacturing process or installation process; and
- operate at all times in a manner which ensures that the product / system is capable of being supported by appropriate technical resource and respond accordingly to any queries relating to its use or implementation.

In order to ensure that these aims are adhered to and standards maintained, Kingspan Access Floors also conducts the following:

- Third Party Accreditation to ISO 9001:2000 with regard to the quality control of its systems of work and manufacturing processes; and
- an internal testing resource to ensure attestation compliance to the stated performance requirements of the individual components and systems provided.

These warranties are supplied provided that:

- the floor is not subjected to loads in excess of those stipulated in our specification, or any other abuse;
- the floor is maintained strictly in accordance with our maintenance specification;
- the floor will be subject to normal fair wear and tear anticipated with its intended use;
- the floor is not subject to change of use without the written consent of Kingspan Access Floors Limited; and
- all components will be stored before and after installation in environmental conditions similar to those expected during final use.

Panels

Kingspan Access Floors Limited hereby guarantees that their PSA MOB PF2 PS panels will last for a minimum of 25 years from date of installation provided that:

1 the floor is not subjected to loads in excess of those stipulated in the contract specification;
2 the floor is maintained in accordance with our maintenance specification; and
3 the floor will be subject to normal fair wear and tear.

Pedestals

Kingspan Access Floors Limited herewith guarantees that their pedestals will last for a minimum of 50 years from date of installation, provided that:

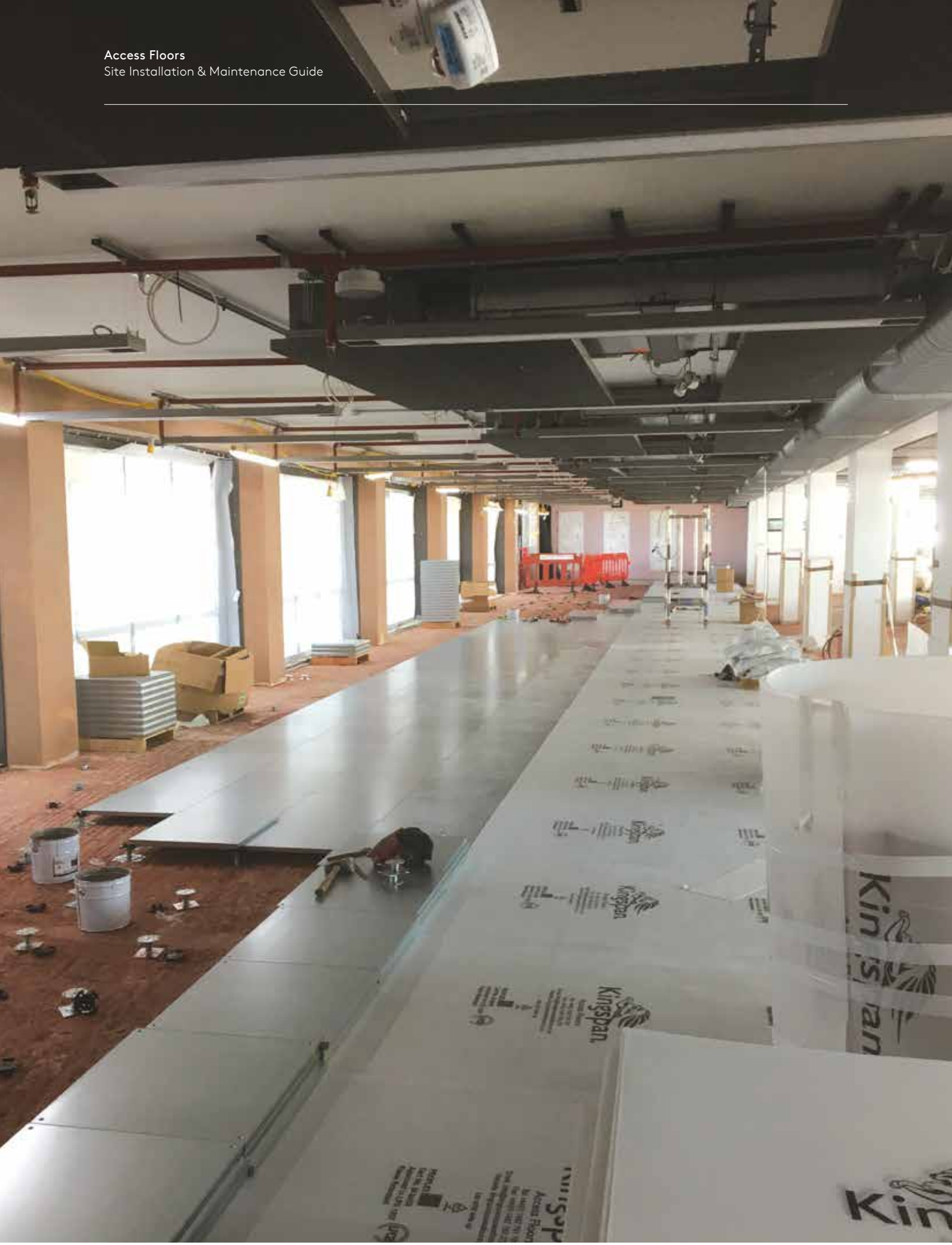
1 the floor is not subjected to loads in excess of those stipulated in the contract specification;
2 the floor is maintained in accordance with our maintenance specification; and
3 the floor will be subject to normal fair wear and tear.

The Raised Access Flooring System

Kingspan Access Floors Limited hereby guarantees that their PSA MOB PF2 PS floor system will last for a minimum of 25 years, from date of installation, provided that:

1 the general clauses in the guarantees for the component parts of the system are fully complied with;
2 the floor is maintained in accordance with our maintenance specification; and
3 the floor will be subject to normal fair wear and tear.

Our EN12825 Certified systems and components are covered by different warranties in different regions, please request further information.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Appendix

Appendix
Glossary

A/F

Access Floor including panels, pedestals and accessories.

Basic Space

A space bounded by reference planes, assigned to receive a building component or assembly including the appropriate allowances for joints and tolerances.

BoM

Bill of Material.

Bridging / Beams

Load bearing component to accommodate situations where pedestals cannot be located in their normal positions.

Builders Level

Builder's optical levelling device used for establishing grade levels for floors, ceilings, etc.; for measuring horizontal angles

C/L

Centre line.

Cavity Depth

Nominal vertical dimension from the subfloor to the lowest part of the panel or supporting structure.

Chipboard

High density particle board that is used extensively to provide a high strength core to many designs of raised floor panel.

Churn

The frequency at which office layouts are changed.

Class

The loading grade for which the system is designed.

Collapse

State reached when deflection of the element or panel will continue without further increasing the load.

Components

Parts of access floor elements, e.g. panels, pedestals, stringers, etc.

Datum height

This positions the raised floor in the vertical plane in relation to all building structures, fittings etc.

Deflection

The distance the system or its parts move from the original position when subjected to a load.

Deformation

Alteration of shape.

Deviation

Difference between a specified dimension or position and the actual dimension or position.

Dry Line

A string line (with no chalk on it) on top of the access floor used as a temporary reference line.

Earthing

The connecting of electrically conducting components to the building earth for safety reasons.

Edge Trim

Component of the panel, either adhered or mechanically fixed to all four sides to provide protection to the panels and to the floor covering.

Expansion Gap

A perimeter gap left to allow for thermal expansion of the floor when the building is heated.

FFH

Finished Floor Height. Dimension measured from the subfloor surface to the top surface of the access floor panel

Field

The main open floor area where full floor panels are installed. Does not include perimeter panels

Finishes

Factory applied surface coverings to the raised floor panels such as vinyl, stone, wood etc.

Grid Line

Lines formed where the panels join together.

HVAC

Heating, ventilation and air conditioning systems.

Laser

Electronic transit

Levelling Bar

A straight edge having permanent 600 mm centre marks used for levelling of pedestals. It is usually made from a rectangular aluminium tube with the following dimension: width 20 mm to 25 mm height 60 mm to 100 mm; wall thickness 4 mm to 6 mm; length 2400 mm to 3000 mm.

Lifting Device

The device used for the correct lifting and replacing of floor panels. A vacuum device is used for bare or vinyl finished panels. Spiked devices are used for carpet finished panels.

Manufacturer's Stated Panel Size

Dimension to which the tolerances are applied.

Mechanical Fixings

Nail fixings or similar used to provide additional fixing security of the pedestal base plate to the sub floor.

Module Size

The nominal size of the floor panels is 600 mm square. Oversize 900 x 600 mm panels are also available for perimeter detailing.

Nominal Size

Theoretical dimension used for commercial description.

Office Layout

The location of individual desks / work stations within a office area.

Operating & Maintenance (O&M) Manual

This will spell out clearly how the raised floor system should be used and what maintenance should be undertaken to ensure the raised floor performs satisfactorily for many years.

Panel

Load bearing horizontal component of the access floor.

Pedestal

The complete vertical, adjustable supporting structure.

Pedestal Adhesive

This is normally a 2 or 3 part epoxy resin based adhesive with good adhesion to concrete and steel. Normally this adhesive will be of a thick consistency in order to cater for local undulations in the concrete sub floor.

Pedestal Fixings

The means of attaching the supporting structure to the sub floor.

Pedestrian Traffic

This is the frequency that the floor is subject to from foot traffic as personnel move across the floor. Important to consider in areas of high traffic such as lift lobbies.

Plenum

Available space between the underside of the panels of the access floor and the sub floor.

Plumb

90 degrees from horizontal level.

Protection

A means of preventing damage to the raised floor surface by other building trades.

Raised Access Floor System

Factory made flooring system comprising panels supported on understructure of pedestals and / or stringers or other components providing a load bearing structure for the fitting out of a building.

Rocker

A panel that rocks up and down diagonally when installed.

Rolling Loads

These loads are imposed by items of equipment fitted with wheels or castors that are frequently moved around.

Setting Out Point

A specific location in the area which has been purposely designated as the best place to start the installation. Typically designated by the architect on architectural drawings.

Appendix
Suggested Equipment / Tool List

Handbox

- 3 m tape measure (min. length)
- 5 m steel tape measure
- 1 kg claw hammer with steel handle
- Portanail hammer
- Countersink
- Screwdrivers
- 600 mm Hand Level
- Spanner set
- Chalk line and chalk
- Dry line
- Drill bits (as required)
- Utility knife
- Pair tin shears
- Suction panel lifter
- Marking pencils
- Screw gun

Safety items required

- Safety glasses (F1 rated)
- Work gloves (3443 rated)
- Ear plugs or ear defenders (20dB)
- Steel toe safety boots

Caution!
Adequately protect the Access Floor when moving gang boxes and bandsaws across finished surfaces by placing 20 mm plywood sheets on the floor.

Power Tools

- Laser with target designed for access floor installation.
- Power drill
- Adjustable hammer drill
- Jigsaw
- Narrow gauge pallet truck (500 mm forks)
- Aluminium levelling bar
- Adjustable torque-limiting screw gun
- Electrical extension leads
- Industrial vacuum cleaner / dust extractor to required class (LMH)

Appendix
Site Team Recommendations

Installer Qualifications

Installation operatives: minimum requirement:

- NVQ Level 2 Access Flooring
- Blue Card Holder

Contact Details

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For the product offering in other markets please contact your local sales representative or visit www.kingspanaccessfloors.com

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