



Pioneering Green Innovations





By ensuring that our products and services are environmentally-friendly, Kingspan is not only helping to protect the environment but is also helping contractors, architects and developers to enhance their own green credentials. This brochure highlights some of the innovations Kingspan has developed and it also outlines how we can help our customers to meet LEED and BREEAM environmental assessments.



Pioneering recycling scheme makes its mark

Kingspan is the only access flooring manufacturer in the UK to operate a pioneering recycling scheme to reduce the amount of waste for landfill that is generated by the installation of access floors.

Under the scheme, we receive site returns of off-cut Kingspan panels from our customers. The steel and chipboard in the off-cuts are then separated in a £250,000 shredder at our Hull site and then recycled so they can be put back into the manufacturing process.

This is a further example of how our products and services are environmentally-friendly. As the leading UK manufacturer we can use vehicles returning from site to collect these

materials for our recycling programme. Our raw materials are sourced in the UK and waste from the finished product can now be returned to the UK manufacturing process.

This greatly reduces our carbon footprint and it provides a benefit to the environment which a Pacific Rim or European manufacturer cannot match. As well as recycling off-cuts, we will also recycle earlier generations of our raised flooring as part of orders to provide new, replacement product.

A series of environmental initiatives introduced at Kingspan's Hull manufacturing site means that virtually no waste now goes to landfill:

- General waste, which includes paper, plastic and polyester wrappings, is compacted for recycling, either

for re-use as the original product or converted to biofuel.

- Production waste chipboard is shredded and recycled. It is either used by Yorkshire Water as a filter cake to purify water or is returned to chipboard manufacturers for reprocessing.
- Sawdust is recycled for use as animal bedding.
- Cardboard, metal and vinyl waste are collected for recycling.
- Pallets are reworked or turned into biofuel.

Kingspan gains recognition throughout the world for its green credentials

The environmental benefits of Kingspan access flooring are being recognised throughout the world - with our product ranges being installed in prestigious 'green' developments.

For example in Madrid, Kingspan Suelo Tecnico installed 30,000 sq m of flooring in all three buildings which comprise the Tripark Las Rozas project, developed by Hines, the international property, investment management and development company.

Tripark Las Rozas has been pre-certified to at least a silver certification in the LEED scheme (Leadership in Energy and Environmental Design), the most internationally recognised measure for sustainability.

Features of the buildings include thermal solar energy and photo voltaic collectors to reduce energy consumption, protection against solar gain through the façade, flexible air conditioning, and water saving installations.

The park's wider green credentials include its proximity to public transport, landscaping which features plant species that have low water consumption, and extensive parking for bicycles.

Developers of major green projects such as this want to ensure that every product they use within the development is also green in its own right, and they have deemed Kingspan flooring to be the best available.



Sustainability and responsibility.



As well as having strong green credentials such as FSC accreditation, the Kingspan RG3 range installed at Tripark Las Rozas is also more robust than its competitors – this is because floors in the Spanish market are predominantly chipboard, but the board used in RG3 is steel encapsulated, providing far greater strength and durability.

Kingspan Access Floors' international operations cover Europe, the Middle East and the Far East, with green projects accounting for a significant volume of business. For example in a major project in India, Kingspan supplied 22,000 sq m of RLG 600 flooring to Agilent Technologies Ltd for a state-of-the-art campus near Delhi. The campus houses 1200 people carrying out back office operations, including its IT and business centres, field and R&D operations.

The facility has been built with special energy-saving features which provide savings of 50 per cent by harnessing glare-free daylight and by installing air conditioning in the Kingspan access flooring void instead of in the ceilings.

It has been estimated that the site will cut carbon emissions by about three million kilos. The campus also has a massive rainwater harvesting system, and all heating requirements are met by utilising waste heat and solar energy.

Images:

Top Left - Canary Wharf, London.

Centre Left - Kingspan Recycling Shredder.

Above Top - Tripark Las Rozas, Madrid.

Bottom Right - Agilent Technologies project, India.

Reducing landfill waste, increasing recycling.

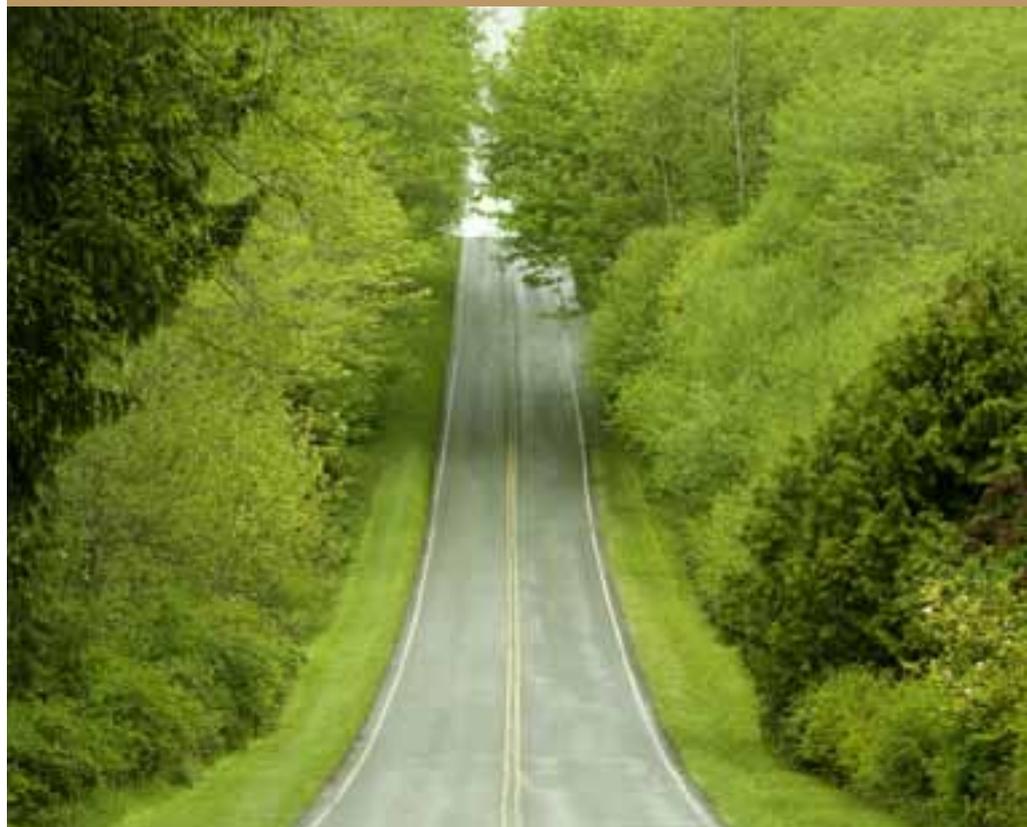


UK haulage fleet features low emission vehicles

Kingspan's commitment to the environment starts with how our raw materials are sourced and extends right through to how we deliver to your site.

When you receive a UK delivery of Kingspan access flooring it is brought to you in a vehicle that conforms to stringent low emission standards, thanks to a substantial investment in the latest low emission vehicles made by our haulage contractor, D&P Haulage, of Hull. D&P have bought five new 26 ton rigid vehicles which can each carry 15 tons of product.

Low emission deliveries



Our floors are the only ones to have FSC third party chain of custody accreditation

Kingspan access flooring ranges are the only ones in the world to have third party chain of custody accreditation under the Forest Stewardship Council (FSC) scheme.

FSC promotes responsible management of the world's forests and through consultative processes it sets international standards for responsible forest management. It can provide additional benefits, including:

- International recognition that the forest management does not put the forest's natural heritage at risk and that the management activities are appropriate.
- The opportunity for interaction and co-operation among various players involved in responsible forest management – forest owners, social and environmental organisations – to solve the problems that forests face.
- The assurance for future generations that they enjoy the benefits of the forest.
- The assurance that forest management practices are responsible and will be further improved.
- The assurance that ownership rights are respected.
- The assurance that wood harvesting is legal.



SGS-COC-403713
By buying FSC certified products you are promoting responsible management of the world's forests.
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- The assurance that the rights of workers and indigenous communities are respected.
- The assurance that areas of natural wealth and endangered wildlife habitat are not being negatively affected.

When Kingspan first approached FSC to request whether our systems and processes were appropriate for third party accreditation we believed that although we already followed quite strict internal standards a considerable amount of additional controls might be required before we could expect to gain approval. However, SGS (the body chosen to carry out the third party accreditation) were very pleased with the systems already in place at Kingspan, which made the process quite straightforward.

Under the third party chain of custody scheme, Kingspan identifies the exact volume of FSC approved materials on all delivery notes, invoices etc. This is enabling customers worldwide to recognise Kingspan's products as ones that support the growth of responsible forest management.



Reducing landfill waste, increasing recycling.

Clearing the fog about LEED & BREEAM

Understanding LEED

LEED (Leadership in Energy and Environmental Design) is an internationally recognised green building certification system, providing third-party verification that a building or community was designed and built using strategies intended to improve performance in areas such as energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, stewardship of resources and sensitivity to their impacts.

Developed by the US Green Building Council, LEED is intended to provide building owners and operators with a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. LEED accreditation is based on a points system – in LEED 2009 there are 100 possible base points plus an additional 6 points for Innovation in Design and 4 points for Regional Priority. Buildings can qualify for four levels of certification:

- Certified: 40 – 49 points**
- Silver: 50 – 59 points**
- Gold: 60 – 79 points**
- Platinum: 80 points and above**

This is how Kingspan’s products and systems can help your organisation to gain LEED accreditation:

Materials & Resources

MR Credits 1.1 and 1.2 relate to the reuse of building elements and can only be awarded on refurbishment and fit out projects. Credit 1.1 relates to the structural elements; walls, floors

and roofs and therefore does not relate to access floors. These are covered in Credit 1.2 relating to interior non-structural elements such as; internal walls, doors, ceiling systems and floor coverings. Kingspan access floors are designed with longevity in mind and are highly flexible. They can be reused, helping you to gain points under this heading.

MR Credit 3 relates to materials reuse. 1 point is awarded where at least 5% of materials are reused, or 2 points where reuse accounts for at least 10%. Our products are suitable for reuse time and time again in refurbishments and fit-outs.

MR Credit 4 relates to the recycled content of permanently installed materials. 1 point is awarded where recycled content accounts for at least 10% of materials used, or 2 points where recycled content is at least 20%. Of course, access flooring is just one of many considerations and our recycled content figures become more significant the greater the number of storeys.

Kingspan Access Floors are made up of several components; 95% of our standard product comprises steel and timber (high density particle board). We procure our materials from various sources to ensure security of supply and to take into account the required access floor loading / density of particleboard. See table below for nominal recycled content for Kingspan Access Floors’ two main products.

Recycled Content (%)	RG3	RMG 600
	58*	62*

MR Credit 5 relates to materials which have been manufactured as well as extracted, harvested or recovered. 1 point is awarded for at least 10% of materials being sourced / manufactured within 500 miles of

the project site or 2 points where at least 20% is within 500 miles. The components which make up Kingspan Access Floors include parts manufactured or assembled in Hull, UK. About 90%* of our entire raised access flooring systems come from companies within 200 miles of our manufacturing facility in Hull.

MR Credit 6 relates to rapidly renewable materials; products made from plants that are typically harvested within a 10 year cycle. 1 point is awarded where the use of such products accounts for at least 2.5% of the total value of all building materials and products. Of course, access flooring is just one of many considerations. Although timber, a renewable material, accounts for at least 80% of our standard product, the growing period is longer than 10 years, therefore this point will not be possible to achieve despite our sustainable sourcing strategy. However, 70% of our chipboard comes from recycled material rather than from new growth, therefore reducing the impact on the environment.

MR Credit 7 relates to certified wood. 1 point is awarded where at least 50% (based on cost) of wood-based materials and products are certified in accordance with the FSC’s principles and criteria. Again, the significance of access flooring increases with the number of storeys where it is installed.

The significance of our product can easily be demonstrated using the LEED NC MR7 template tool where the wood component of our product is 80% and 100% is FSC certified. Not only does each of our suppliers hold FSC certification but we as Kingspan Access Floors hold FSC certification to ensure the entire chain of custody is upheld.



Indoor Environmental Quality

Credits IEQ 4.1, 4.2, 4.3 and 4.4 all relate to low VOC emitting materials.

4.1 relates to adhesives and sealants. All of the adhesives we use to fix pedestals into place before installing the access flooring have a VOC g/L (less water) content lower than the South Coast Air Quality Management District (SCAQMD) Rule #1168 limit level for multi purpose construction adhesive.

Our standard product is supplied without floor finishes, in which case the specification for adhering floor finishes to our product is out of our control. However, where we do supply bonded floor finishes we use a product as described above.

4.2 relates to paints and coatings. This is not applicable to our materials.

4.3 relates to flooring systems. Our standard product is supplied without floor finishes, so the specification for adhering floor finishes to our product is out of our control.

4.4 relates to composite wood and Agrifiber products. The particleboard used in our products contains solid resin (urea formaldehyde or melamine urea formaldehyde) accounting for between 7-11% of the board composition. No further urea formaldehyde is added.

FAQs about LEED

Q: Can you provide a copy of your LEED certificate?

A: It is not possible to provide a LEED certificate of a material. LEED assessments are carried out on an overall building. For more information please refer to www.usgbc.org

Q: What is the recycled content of Kingspan Access Flooring Systems?

A: This varies according to the specified product which is generally determined by loading requirements. However, excluding floor finishes, at least 58% of our product is from recycled sources. Refer to table on page 8.

Q: What is the harvesting period of your product?

A: Although timber, a renewable material, accounts for at least 80% of our standard product, the growing period is longer than the 10 years stated

in MR Credit 6. However, 70% of our chipboard comes from recycled material rather than from new growth, therefore reducing the impact on the environment.

Q: Do Kingspan Access Floors comply with the requirements of Credit IEQ 4.1?

A: Kingspan Access Floors are composite products finished to our clients' specification, often with carpet tiles, vinyl or laminate finishes. However, we can provide composite units with any finishing material so this is then very dependent on the architect's specification. The majority of floor finishes do meet the requirements of Credit IEQ 4.1 for low-emitting materials.

Our standard product is supplied without floor finishes in which case the specification for adhering floor finishes to our product is out of our control. However, where we do supply bonded floor finishes we use a product which demonstrates compliance with the South Coast Air Quality Management District (SCAQMD) Rule #1168, effective date of July 1, 2005 and rule amendment date of January 7, 2005. We also use the same panel adhesive to fix pedestals into place before installing the access flooring.

Q: Where are your products manufactured and sourced from?

A: Kingspan Access Floors are made up of several components, including parts manufactured or assembled in Hull, UK. About 90%* of our entire raised access flooring systems come from companies within 200 miles of our manufacturing facility in Hull, thereby saving fuel and reducing the carbon footprint.

* Based on weight.



Understanding BREEAM

BREEAM (BRE Environmental Assessment Method) is the leading and most widely used environmental assessment method for non-domestic buildings in the UK. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

BREEAM addresses wide-ranging environmental and sustainability issues and enables developers and designers to prove the environmental credentials of their buildings to planners and clients. BREEAM can be applied to new build and major refurbishments of all building types and fit-outs of commercial developments.

Materials are assessed under BREEAM and are awarded credits against a number of issues. No single material can achieve a BREEAM rating, instead the specifications and responsible sourcing of a wide range of materials for a development are assessed to determine how many credits can be achieved.

This is how Kingspan's products and systems can help your organisation to gain BREEAM credits:

Health & Wellbeing

Credit HEA9 relates to Volatile Organic Compounds (VOC's) found within wood panels, timber structures, timber flooring, floor finishes and adhesives, suspended ceilings, wall coverings and adhesives and decorative paints and varnishes.

Our high density particleboard meets the requirements of BS EN 13986:2004. Once cured and throughout the life of the building, the adhesive used meets

the requirements of BS EN 13999-1:2007. Our standard product is supplied without floor finishes, in which case the specification for floor finishes is out of our control.

Materials

Credit Mat 1 relates to the green guide rating of structural elements; external walls, windows, roof, upper floor slabs, internal walls and floor finishes/coverings.

Access floors are not specifically detailed within the green guide to specification, however, the focus of this element is concentrated on the structural build-up of upper floors where typical applications such as 'Powerfloated in situ reinforced concrete slab on "shallow" profiled metal decking' or 'Screeded beam and medium dense solid block flooring' receive the highest green guide rating possible, A+.

Mat 4 relates to reuse of structure, which cannot be achieved on new build or fit out projects. The credit only relates to the primary structure which is defined as structural floors, columns, beams, load bearing walls and foundations and therefore does not relate to access flooring.

Mat 5 relates to the responsible sourcing of materials that have been manufactured as well as extracted, harvested or recovered. Kingspan Access Floors has an Environmental Management System in place which is accredited to ISO 14001 as well as FSC third party chain of custody accreditation. Kingspan Access Floors are made up of several components as well as parts manufactured in Hull, UK. About 90%* of a Kingspan floor system is sourced within 200 miles of Hull. 80% of our products are timber, all of which is legally sourced and supported by a full chain of custody through the third party verification board,

the Forest Stewardship Council (FSC). This means that our product helps to achieve points under the 'Upper Floors' section of Mat 5, although the full floor slab construction will also need to be considered.

Mat 7 relates to the use of robust materials where appropriate for the design. Kingspan access floors are designed with longevity in mind, are highly flexible and able to accommodate a variety of future occupant requirements.

Recycled Content

Kingspan Access Floors are made up of several components; 95%* of our standard product is made up of steel and timber (high density particle board). We procure our materials from various sources to ensure security of supply and dependent on the required access floor loading / density of particleboard. See table below for nominal recycled content for Kingspan Access Floors' two main products.

Recycled Content (%)	RG3	RMG 600
	58*	62*





FAQs about BREEAM

Q: Will you provide a copy of your BREEAM certificate?

A: BREEAM assessments are carried out on an overall building therefore it is impossible to provide a BREEAM certificate for a material or element. For more information please refer to www.breeam.org

Q: What is the Green Guide rating of Access Flooring Systems?

A: The BRE's Green Guide to specification does not contain a section on access flooring systems, therefore Kingspan Access Floors do not form part of the Mat 1 criteria.

Q: Do Kingspan Access Floors comply with the requirements of Hea9?

A: Kingspan Access Floors are finished to our clients' specification and the majority of floor finishes do meet the requirements of Hea9. Our standard product is supplied without floor finishes, in which case the specification for adhering floor finishes to our product is out of our control. However, where we do supply bonded floor finishes we use a product which demonstrates compliance with BS EN 13999-1:2007 and carcinogenic or sensitising volatile substances are absent.

Q: Will you provide evidence for 'Mat 5 – Responsible sourcing of materials' credit?

A: Mat 5 relates to the responsible sourcing of materials that have been manufactured as well as extracted, harvested or recovered. Kingspan Access Floors has an ISO 14001 accredited Environmental Management System (EMS) in place covering the

supply, manufacture and installation of raised access flooring systems.

Kingspan Access Floors are made up of several components which are legally sourced and supported by a full chain of custody through the third party verification board the Forest Stewardship Council (FSC). This means that our product helps achieve points under the 'Upper Floors' section of Mat 5, although the full floor slab construction will also need to be considered.

About 90%* of our entire raised access flooring systems come from British companies within 200 miles of our manufacturing facility in Hull, thereby saving fuel and reducing the carbon footprint.

* Based on weight.
Further details on request.



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Printed on 100% recycled paper