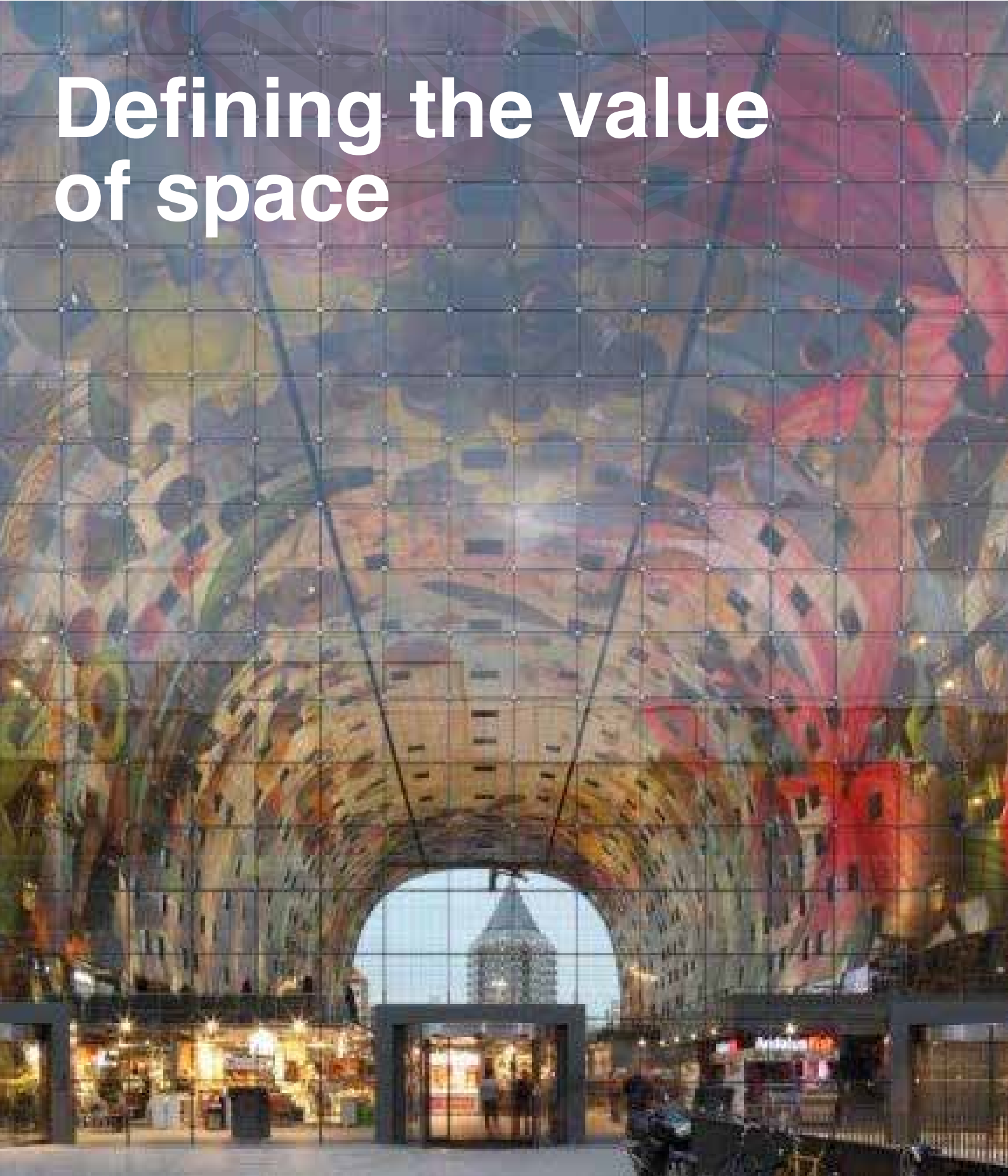


Defining the value of space



Kooltherm® K15 Rainscreen Board

high performance insulation



Kingspan's Kooltherm® insulation products are manufactured using a high performing insulant, allowing the products to be made thinner without any loss of thermal performance. This means that standard constructions using Kooltherm® K15 Rainscreen board can be made thinner overall, resulting in a greater internal floor area being available to the building.

Kingspan would like to demonstrate the value created by using high performance, thinner, insulation products and the circumstances where their use is more

beneficial than using traditional counterparts in non-domestic buildings. To do so they require the analysis of a range of representative development scenarios and the production of a robust evidence base. To this end, Kingspan have appointed Sweett Group to undertake the analytical work required to understand where these advantages are within the UK's non-domestic market.

S P A C E is money

Whether your activities are in constructing, developing, retailing or investing, at the end of the day only result matters. The more square meters you can utilize effectively, the better revenues will be. It's as simple as that: the less space insulation results in more square meters to maintain. We developed thinner Kingspan K15 high performing Kooltherm® insulation products, to meet the highest standards in thermal performance as well as earn back your investment in a significant shorter time.

Earn Back Period & Yield*

The yield describes the ratio of income received (i.e. rent) to capital value.

Manchester - Office/Technology

Kingspan External wall
Kooltherm® K15 Rainscreen Board

Lettable floor area **10,300m²**

Estimated rental value **€330,54/m²/year**

Additional floor area **39.4m²**

Additional costs **€ 79.511**

Additional rental income **€ 13.034 / year**

Current market for development **Yield @7.0%**

Earn Back period **6.1 years**

London Office Tower

Kingspan External wall
Kooltherm® K15 Rainscreen Board

Lettable floor area **15,600m²**

Estimated rental value **€ 773,73/m²/year**

Additional floor area **126.5m²**

Additional costs **€ 205.541**

Additional rental income **€ 97.876 / year**

Current market for development **Yield @4,5%**

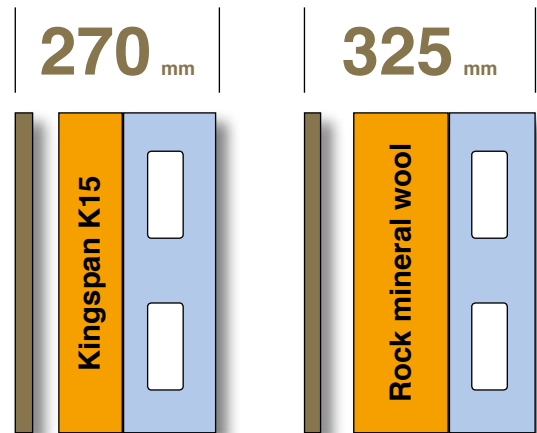
Earn Back period **2.1 years**

* If an office building is let at £10,000 per annum and its market price is £200,000 then the capital value is 20 times (or 20 years purchase of the income). The capitalisation rate / yield is therefore 1 / 20 i.e. 5%. This yield is known as an 'all risks yield' as it assumes factors such as rental increase, obsolescence, outgoings, etc. are implicitly included within the figure of 5%. Assuming the income is fixed a lower yield equates to a higher capital value.

Kooltherm® K15 Rainscreen Board

Comparative detail

The comparative detail replaces the Kooltherm® K15 Rainscreen board with a rock mineral fibre slab insulation. This gives an overall **55.0 mm thicker** construction detail when compared to the Kooltherm detail.



Earn Back Period & Yield*

The yield describes the ratio of income received (i.e. rent) to capital value.

Southampton Business

Kingspan External wall
Kooltherm® K15 Rainscreen Board

Lettable floor area **16,700m²**

Estimated rental value **€ 252,22/m²/year**

Additional floor area **135.1m²**

Additional costs **€ 130.997**

Additional rental income **€ 34.083 / year**

Current market for development **Yield @7.0%**

Earn Back period **3.8 years**

Bristol Office Details

Kingspan External wall
Kooltherm® K15 Rainscreen Board

Lettable floor area **29,100m²**

Estimated rental value **€ 395,25/m²/year**

Additional floor area **118.8m²**

Additional costs **€ 181.352**

Additional rental income **€ 46.955 / year**

Current market for development **Yield @6.5%**

Earn Back period **3.9 years**

5 stages of research method

To quantify the financial benefits associated with greater internal floor area, Sweett Group used an approach that comprised the following five stages.

1 Wall Build-Up Selection

Four external wall constructions were identified as those typically used in new non-domestic buildings. For each construction, two build-ups were selected: one incorporating a Kingspan Kooltherm® wall insulation solution; and the other an appropriate comparative solution. Both build-ups were designed to achieve a U-value of 0.22 W/m².K.

2 Wall Build-Up Cost Analysis

The cost breakdown and elemental rates for each build-up were ascertained. Prelims, contingency and professionals fees were excluded. The analysis of the cost differential between each build-up for each construction did, however, include a deep review of cost differences e.g. materials, labour, sundries.

3 Database Generation

A database of 7,290 building instances was generated using a model to create proxies for different types of non-domestic building in Great Britain. The main inputs used to run the model and generate the database comprised: external wall construction; building size and form; and building financials.

4 Database Analysis

The database buildings were analysed using each external wall construction to determine the financial benefit resulting from the use of Kingspan Kooltherm® wall insulation solutions.

5 Approach Verification via Real Case Study Buildings

Ten real non-domestic building case studies, on which Sweett Group has provided cost consulting services in the last 24 months¹, were analysed to verify the approach..

¹ February 2013 to February 2015.

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Technical Service

Kingspan Insulation has one of the most technically advanced support services in the industry offering a full spectrum of advice, free of charge on both newbuild and refurbishment projects. The Kingspan Insulation technical team are continually updating their knowledge on building trends, construction methods and the development of building materials to ensure the advice and services provided are always one step ahead.

Services Available:

- R and U-value calculations.
- Advice on product selection and product data for the full range of Kingspan Insulation products.
- Installation and fixing advice on all applications and products.
- Specification and construction advice.
- Tapered Roofing Design service.

email: techline@kingspaninsulation.eu

The physical and chemical properties of the products of Kingspan Insulation B.V. represent average values, that have been obtained during generally accepted testing methods, submitted to normal product tolerances. Kingspan Insulation B.V. reserves the right to amend product specifications without prior notice. The information, technical details, fixing instructions etc. included in this literature are handed out in good faith and are consistent with the application targeted by Kingspan Insulation B.V. The images in this document are only meant to give a global impression of the looks of the product and show one out of many applications possible. Kingspan Insulation B.V. does not guarantee that the shown applications are in accordance with valid (local) regulations. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. For other applications or conditions of use, Kingspan Insulation B.V. offers a Technical Advisory Service the advice of which should be sought for uses of Kingspan Insulation products that are not specifically described herein. Please check that your copy of the literature is current by contacting the Kingspan Insulation Marketing Department.



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Export countries from the Netherlands comprise all European countries (including all of the Russian Federation, Ukraine and Belarus) except for Benelux, the UK, Ireland, Gibraltar, Malta, the Nordics, Germany, France, Poland, the Czech Republic and Slovakia.

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