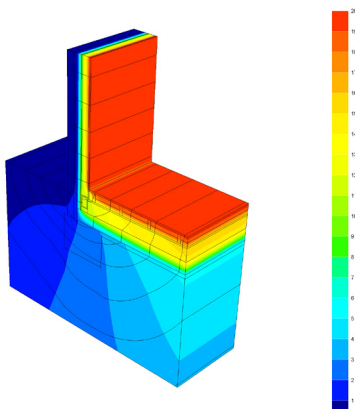


# ASSESSMENT OF THERMAL BRIDGES

PROFESSIONAL AND VALUABLE ADVICE FROM BRE SCOTLAND

bre



BRE Scotland are expert in the analysis of thermal performance of building fabric. This includes the assessment of thermal bridging at junctions between building elements and around openings.

## WHY CONSIDER THERMAL BRIDGING?

As more stringent legislation and energy awareness lead to increased insulation levels, heat losses due to thermal bridging become increasingly important.

The heat loss associated with these thermal bridges is expressed as a linear thermal transmittance ( $\Psi$ -value). The Temperature Factor ( $f$ ) should also be calculated to determine surface temperature and the risk of mould growth, which can have significant health implications.

Building regulations now require that this additional heat loss be taken into account in SAP and SBEM calculations.

Where details do not conform to Government Accredited Construction Details, they should be evaluated using thermal simulation software, following agreed conventions and standards.

## WHY BRE SCOTLAND?

- BRE Scotland staff (as UK representatives) were involved in the production of EN ISO 10211, the numerical modelling standard for assessing thermal bridging in constructions.
- BRE Scotland produced BR497, which describes how to model junction details correctly and the conventions that should be used in order to produce consistent  $\Psi$ -values and temperature factors.
- BRE Scotland carried out the majority of the numerical modelling that lies behind the thermal assessment of the UK Accredited Construction Details and also the EST Enhanced Construction Details.
- BRE Scotland has been involved in many aspects of the thermal performance of buildings for over 20 years with their experts in this field forming the core of BRE Scotland's Thermal Performance Team.

For thermal bridges, the BRE Scotland Thermal Performance Team can assess and provide consultancy on, eg:

- wall-ground floor junctions
- wall-roof junctions
- lintels, jambs and cills
- intermediate floors
- balconies
- corners

Other services provided by the Thermal Performance team include:

- Consultancy on reducing thermal bridging at junctions and improving the thermal performance of the overall building fabric
- U-value calculations
- Assessment of Interstitial Condensation Risk

## Enquiries to:

Thermal Performance Team, BRE Scotland,  
S.E.T.P, East Kilbride, Glasgow G75 0RD  
T 01355 576 200  
F 01355 576 210  
E [thermalperformance@bre.co.uk](mailto:thermalperformance@bre.co.uk)



[www.bre.co.uk](http://www.bre.co.uk)