

# Factors that considered when choosing a cladding system for a building

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Factors Influencing the Choice of Cladding Systems Factors Influencing the Choice of Cladding Systems The choice of cladding influences a number of aspects of the building's performance, which commence immediately after its construction until the time for its eventual disposal or demolition. Key among the factors to consider when selecting a cladding system are as discussed below.

#### Weathertightness

Cladding system primarily serves to provide a weathertight envelope for buildings. For this reason, the cladding designer must put a thoughtful consideration to the choice of the cladding components as well as the detailed design of the system. When specifying the cladding, it is essential to consider the orientation of the building, its location and the external climate. Additionally, correct assembly of the components is necessary for a satisfactory performance of the system.

#### Building Appearance

The choice of the roof and wall cladding significantly influences the appearance of the building. Profile shape, fasteners and colour are particularly important. The profile shape influences the building's appearance because of its effect on the perceived texture and colour of the cladding (Kassem, Dawood & Mitchell, 2012 p. 1042). The choice fasteners also influence the overall appearance of the building. For this reason, designers must careful consider the location, shape, size and colour of the washers and fasteners.

#### Insulation

Cladding system usually has a significant contribution to the overall wall

insulation values. A number of complex cladding products encompass insulation. For instance, those with higher R-values, which relates to the capability of the material to resist heat flow, can limit bulk insulation between frame members in varied climatic conditions.

#### Thermal Mass

Cladding fixed to frames, which are lightweight does not contribute to thermal performance irrespective of its mass, since it is on the outside of the building and uninsulated (Pan, Dainty & Gibb, 2012 p. 1244). Using cladding of higher mass in lightweight framing systems can greatly reduce thermal performance.

#### Sound Insulation

Cladding systems that have high thickness, usually provide limited sound insulation.

#### Vermin Resistance

Vermin resistance is usually dependent on the design details of the construction. Compound cladding systems that have EPS foam backing are likely to harbour birds and rats. In addition, termites do not attack reconstituted timber as well as non-timber systems.

#### Legislation

The minimum performance requirements for the aforementioned factors are entirely established by legislation (Kassem et al., 2012 p. 1048). Therefore, it is essential to consider the already laid policy when selecting a cladding system for a building.

#### Cost

Cost of an insulated cladding in a normal industrial or commercial building is

of a profoundly significant to the overall cost of construction (Kassem et al., 2012 p. 1045). Therefore, decisions that regard cladding has a strong influence on the economic sustainability of the project.

#### British Rules

Cladding and curtain walling, Clause D7 of NHBC Standards Chapter 6. 9 sets out the vital requirements for certification and testing of cladding systems.

Wall cladding addresses particular features of cladding, which are in application. Therefore, a cladding system is deemed to comply if it meets the necessary minimum standards, as well as meeting British set of rules regarding cladding system.

#### References

Kassem, M, Dawood, N, & Mitchell, D 2012, A decision support system for the selection of curtain wall systems at the design development stage, Construction Management & Economics, 30, 12, pp. 1039-1053, Business Source Complete, EBSCOhost, viewed 25 January 2015.

Pan, W, Dainty, A, & Gibb, A 2012, Establishing and Weighting Decision Criteria for Building System Selection in Housing Construction, Journal Of Construction Engineering & Management, 138, 11, pp. 1239-1250, Academic Search Premier, EBSCOhost, viewed 25 January 2015.