



**Figure 22.18** The Schüco façade in the Solar office in Doxford, Sunderland (UK) is well engineered. Reproduced with permission by BEAR Architecten T. Reijenga

### 22.2.5 Integration of PV Modules in Architecture

The integration of PV systems in architecture can be divided into five categories:

1. Applied invisibly
2. Added to the design
3. Adding to the architectural image
4. Determining architectural image
5. Leading to new architectural concepts.

These categories have been classified according to the increasing extent of architectural integration. However, a project does not necessarily have to be of a lesser quality just because PV modules have been applied invisibly. A visible PV system is not always appropriate, especially in renovation projects with historic architectural styles. The challenge for architects, however, is to integrate PV modules into buildings properly. PV modules are new building materials that offer new designing options. Applying PV modules in architecture should therefore lead to new designs. In some of the selected projects, the design was based on this principle.

1. *Applied invisibly*: The PV system has been incorporated invisibly (and is therefore not architecturally ‘disturbing’) (Figure 22.19). The PV system harmonizes with the total project. An example is the Maryland project in the USA (Figure 22.20), where the architect tried to integrate PV modules into the design invisibly. This solution was chosen because the entire project concerned historic architecture. A modern high-tech PV module look would not be appropriate for this architectural style.
2. *Added to the design*: The PV system is added to the design (Figure 22.21). Building integration is not really used here, but this does not necessarily mean that architectural