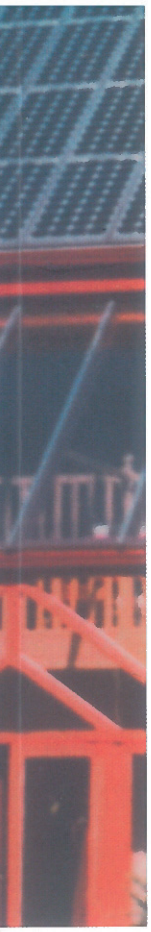
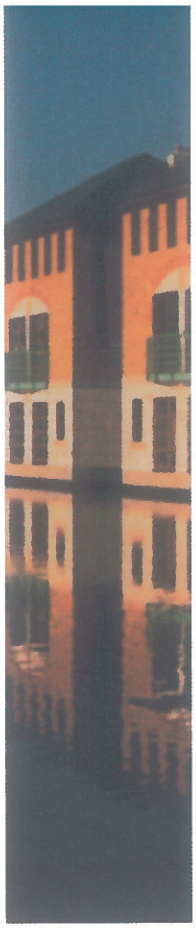
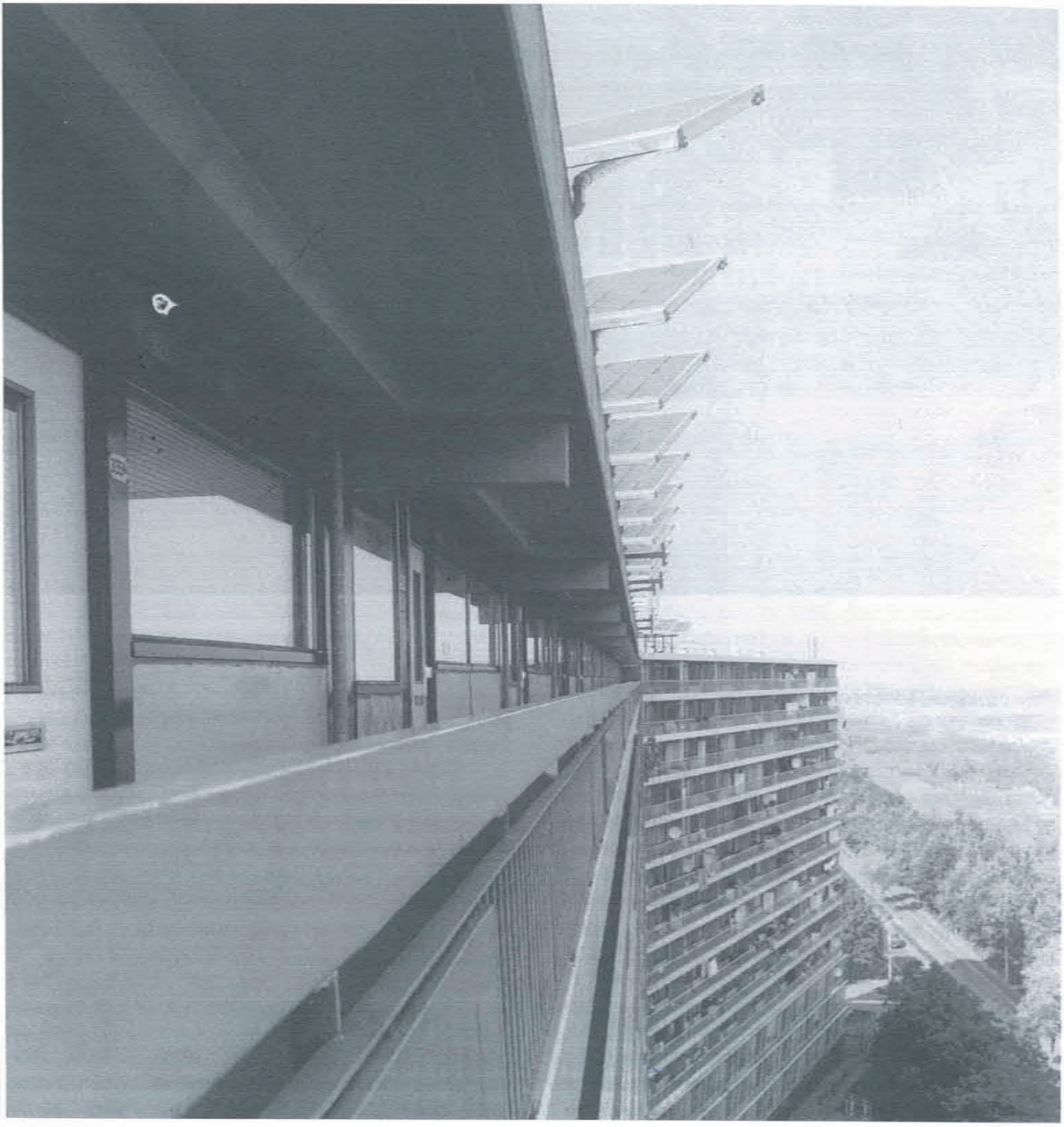




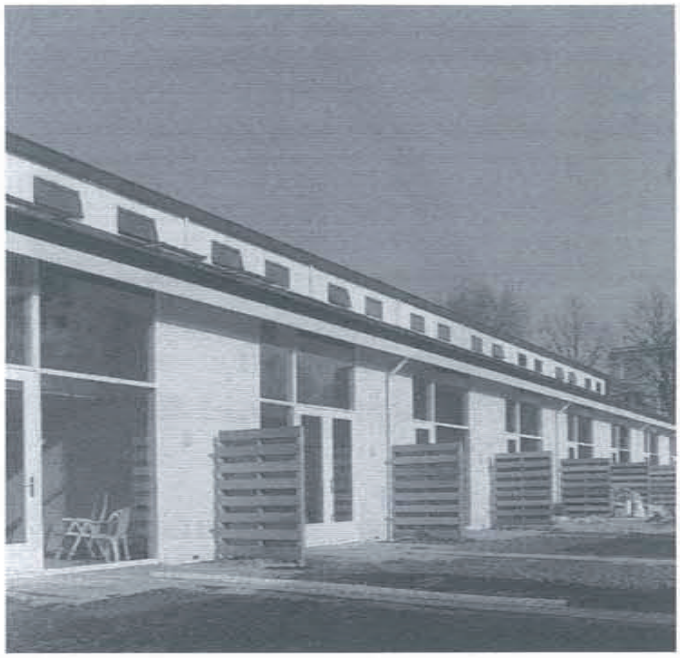

Edited by Brian Edwards and David Turrent

SUSTAINABLE HOUSING
PRINCIPLES & PRACTICE

6.4 *Solar thermal collectors used on the roof of an existing housing block in Zaandam as part of energy upgrading.*
Architect: Hans van Heeswijk



6.5 *Modest but acceptable social housing at Den Haag which integrates various strands of Dutch thinking on sustainability.*
Architct: Splinter Architecten Den Haag



global impacts are highlighted in a fashion that can influence material or design choice. Again, it was the government that helped develop the Eco-Quantum approach because it felt uneasy about auditing methods that relied solely upon energy as an indicator of sustainable development.

Enhanced environmental performance standards are crucial to the realisation of sustainable housing, but architects should not forget that sustainability creates better communities. There is an important social dimension to sustainable development which, with the emphasis upon energy, is easy to forget. But if you pursue the environmental priorities outlined earlier, there is no doubt that sustainable housing will be both distinctive in form and socially cherished. Only if it is robust and enduring (culturally, environmentally and socially) will housing be truly sustainable.

Mention was made earlier of fiscal policy in favour of sustainable housing. There are tax incentives through a Green Investment Bank, which also provides mortgages for sustainable projects. The bank, which is partly government owned, offers an advisory service to companies and individuals. It also assists developers in attracting grants from elsewhere (such as EU Thermie grants) and is the main agency underwriting the 100 or so energy projects currently on site in The Netherlands. It was the Green Investment Bank that carried the risks for the development of the Lucien Kroll master-planned village of Ecolonia aan den Rijn. Working with private house builders and the different architectural practices, Ecolonia successfully tested a variety of novel approaches to sustainable design within the field of lower to middle income housing.

The existing stock of housing is less easy to tackle from a sustainability point of view than new construction. We made many mistakes in the reconstruction of Dutch towns, creating poorly built, energy inefficient, socially divisive housing schemes. The challenge today is to modify the estates to make them more sustainable without actually pulling them down. Energy enhancement is the key to estate remodelling and in the process of improving efficiency we will raise comfort levels and make the housing blocks more visually attractive. Several projects are currently on site and others that have been completed are now being monitored. Three main initiatives are being taken to cut CO_2 emissions per household: first, the use of roof mounted solar collectors; second, the glazing in of open, high level balconies; third, a trial scheme of photovoltaic over-cladding of poorly insulated blocks. Most existing social housing schemes have been double glazed, with the insulation levels raised in wall and roof, but more remains to be done to meet the national energy targets set in Action Plan 2 on Sustainable Development (1997).

Although it is expected that 80% of new houses will meet the new minimum standards of energy efficiency contained in the Building Codes by 2000, the existing housing stock remains a problem. The challenge is to evolve new ways of upgrading houses and estates, enhancing in the process the sense of social cohesion and improving the appearance of housing areas. What is good about sustainability is the opportunity it provides to create visual richness and to bring nature back into our cities. And as regulating standards rise under the influence of international obligations, such as the Climate Change Protocol signed in Kyoto, the potential to use our skills as architects and engineers is enhanced.