

PIMWAG - background

background information about VIKKI

Viikki is one of the four campus areas of the University of Helsinki. It has been developed since the beginning of 1990's into diverse research centre, a science park, where other research, product development and service enterprises are situated in addition to the University. A new ecological housing area is built around the science park. In ten years Viikki University district will have about 13 000 inhabitants, 6000 jobs and 6000 students.

sustainability

The city of Helsinki has set ecological objectives in the Viikki area so that building solutions must save nature and natural resources. Construction process must follow principles of sustainable development and the solutions will be profited in future projects.

PIMWAG ecological criteria

PIMWAG was chosen by the City of Helsinki through competitive bidding. Various experts were asked to form an evaluation criteria and the PIMWAG group was chosen because of their best ideas though their proposal was the most expensive one.

PIMWAG ecological criteria is developed especially for the Viikki area but it is planned to be expanded into majority of governmental construction projects in Finland.

In Viikki all projects must meet the basic requirements level of this environmental assessment criteria in order to get a site and a building permission.

where does the name come from?

PIMWAG stands for the first letters of the surnames of its developers: Alltonen-Gabrielsson-Inkinen-Majurinen-Pennanen-Wartiainen.

The criteria evaluates projects from five points of view:

- pollutants (CO₂, sidewater, site debris caused by construction, domestic waste, ecolabels),
- natural resources (fossil fuels/purchased heating energy, primary energy, the convertibility of living area floor plans, the communal use of spaces, and the multi-purpose use of spaces),
- healthiness (indoor climate, moisture risk control, noise, the windfree and sunny qualities of the site, alternative floor plans),

- biodiversity (plant choices and habitat types, storm waters),
- nutrition (plantings, soil).

The number of criteria is quite limited on purpose to make the method work as a practical tool.

evaluation group

Developers of PIMWAG evaluate plans in two small meetings where implementation teams have a possibility to present their projects. PIMWAG group consists of architect, engineers and consultants. Traditional ecology as a biodiversity of nature is not strongly presented.

The City of Helsinki controls the evaluation process as a client and supervisor.

users of evaluation

Users of the assessment are the City of Helsinki and consultants (designers, engineers, contractors) who make the calculations and are educated in the process.

who pays?

The City of Helsinki.

R&D money is pointed to developers but it's up to consultants to mark their price. Otherwise they do the evaluation work at their own expense.

Evaluation process:

In the case study there are two phases in the evaluation process. First the points are calculated from the plans by the implementation team and commented by the assessment group.

After the meeting the implementation team has opportunity for re-design and improvement of PIMWAG points in the second evaluation.

When evaluators are given the final plans they deliver the final PIMWAG points. Implementation teams that fulfill the requirements satisfactorily get a building permission and a site to rent. A site is tempting as a prize for the competitors as good construction sites are few in the Helsinki area.

verification

Developer must sign a contract in the last phase of Pimwag evaluation (in the case study autumn 99) assuring that project will be implemented like agreed in PIMWAG points.

A special surveillance group has been established to collect feedback from the actors and inhabitants in Viikki. Their final report is still under construction.

public buildings evaluation

Public buildings like various University buildings in Viikki are evaluated "with adaptable requirements". However their assessment is not obligatory.

Most of the public buildings are a result of a planning competition where environmental requirements have been main evolution criteria. University of Helsinki has used its own environment program in construction.

planning competitions in the Viikki area

In all the planning competitions in the Viikki area environmental aspects have been a very important criteria and there have been numerous experts of ecological field in the jury. With the help of consults judgement has been better than superficial.

Expertise used has been from ecological building, green areas, environmental effects, energy management, water management, waste management and feasibility.

In the town plan following aspects are especially considered: the residential street layout, solar energy, wind and the microclimate, green areas and natural diversity, recycling and traffic.

what next?

PIMWAG is being modified for future use (also by its name!). The original group is still evaluating projects but person changes are being expected. They will bring something new to the system.

The report of the surveillance group will be published next year.

The calculation process has been criticized to be complicated and unpractical. Some of the criteria has to be counted with programs that are outdated and not in use anymore. For example this will be corrected in the next version criteria.

PIMWAG will be expanded for more common use and for this its requirements will be modified so that they can be verified easily within building permission process.

BEQUEST, Procurement Protocol TG, Minna Sunikka & Pekka Huovila, VTT