

# RESIDENT-GROUPS TAKING OVER THE ROLE OF PROFESSIONALS, OUR NEW HOPE IN SUSTAINABLE-ENERGY REAL-ESTATE PROGRAMS

Drs. Ir. FRED.C.SANDERS

Delft University of Technology, Department of Real-estate & Housing,  
Faculty of Architecture, the Netherlands

## **Abstract**

*For new Real-Estate developments in the Netherlands, as for existing housing stock, Kyoto follow-ups to reduce the carbon energy use in new developments by up to 50% in 7 years have been agreed between government and housing developers since mid 2008. An obstacle to these sustainable-energy programs is that these developers are bearing the costs, not the residents who get the benefits. Secondly, trend analyses tell that for a breakthrough of results projects on the level of numbers of houses, or households, are needed. Hence it is worthwhile to know under what conditions resident-groups will taken responsibility for sustainable-energy project-developments themselves up to a level at which role-change with the professionals involved can be realized. In autumn 2008 new qualitative research has been carried out with focus groups of residents. In focus sessions in two Dutch neighbourhoods residents were asked what incentives are needed for them to participate actively in sustainability. These results are compared with a recently performed rapid survey of Dutch eco-villages and a literature search on role-change to complete the picture. The conditions under which resident-groups will accept sustainable-energy programs are: they need to know what their financial benefits are before they will participate and they want to know the sustainability and reliability of the technical solutions offered. Strong push-factors are sustainability coupled motivations. Exiting pull-factors are improvement of the quality of life in neighbourhoods, of which green space is one of the most important issues. Then they will accept initiatives, group initiatives. Although their level of self management may be viable, they need help from the Real-Estate professionals, also Government can help to fasten the process by facilitating these push- and pull-factors.*

## **Keywords;**

sustainable-energy programs, neighbourhood-regeneration, people's responsibility, real-estate development, role-change and sustainable integrated communities.

## **INTRODUCTION**

### **Dutch post Kyoto agreements in progress**

In April 2008 NEPROM, the organization of real-estate developers in the Netherlands, made a Kyoto follow-up agreement, called the "Spring agreement" between the government and its members to reduce carbon energy use in new developments by up to 50% in 7 years (NEPROM et al. 2008). Social Housing companies in October 2008 agreed with government

and the tenants representative organization 'Woonbond' to the same reduction for housing in stock, at their own expense including house price stabilization (Aedes et al. 2008).

These targets naturally conform to the national targets the government made after Kyoto (VROM 2007). With 1990 as a reference these Dutch targets are: a 30% reduction of greenhouse-gas, a 30% energy-use reduction and a level of 20% renewable energy all by 2020 in general here called sustainable-energy programs. In 1990, what is termed the 'building environment', housing and buildings, accounted for 15% of important greenhouse-gas emission. Research and analyses from ECN and MNP, two Dutch research institutes, helped to translate these general targets to this 'building environment' (ECN/MNP 2006): an emission reduction of CO<sub>2</sub> of between 6 to 11 Megaton/year in 2020, tightening the EPC norm for new houses from 0,8 to 0,4 in 2015, and aiming for energy-neutral new housing by 2020. All kinds of agreements are attached to these targets; agreements for existing housing stock, and those with emphasis on materials and innovations. Each ECN/MNP-assessment is an opportunity to reorganize the toolbox for attaining the basic targets. Subsidies, joint agreements and innovative programs are the instruments in the toolbox; human behavior, and organizing the motivation to adapt are not.

Since 2006 the EPC norm, which is a standardized norm NEN 5128 for measuring energy use of newly built and existing stock houses, became standard in the Netherlands. It concerns excessive energy use and installation and use of heating, cooling and other systems. The handicap of this EPC norm is the emphasis on the single house. There is as yet no standard for calculating methods for carbon energy reduction at the level of apartment blocks or housing complexes. Part of the agreement is that such norms will be developed in cooperation between the government and the commercial and social organizations involved.

Reading Opstelten et al. (2007) it must be concluded that the 2050 targets will not be realized easily. It is not specified in this report to the extent to which more public initiative can contribute to better and more rapid results, but nevertheless it is made clear that all initiatives including those concerning numbers of houses will be important to close the gap. Hence, it will be hard to mobilize resident activity into such sustainable-energy programs because these are divided incentives. It is the initiators, in other words the professional real-estate organizations, who will bear the costs, not the residents, who get the benefits. Hence knowledge on the prospects of resident-group activation is important! As the NEPROM ex-chairman Mr. H.D. Werner said at the PeGo-congress 16 February 2009, 'no energy transition, without personal transition'.

Before pursuing this question on the involvement and motivation of residents further, let's look into a recent study of Dutch SEV.

### **Signs of role-change behaviour in a Dutch SEV scan,**

SEV, the Dutch institute to promote housing innovations, completed a case study of research into sustainable transformation housing projects (SEV 2003) which focused on the role of residents. The starting-point was the involvement of the residents population, that these should be important for the final results of such projects. A number of transformation projects, relevant case studies of all kinds concerning apartment blocks as well as ground level housing neighbourhoods, were selected in cooperation with the Dutch OTB and NIDO research institutes. The residents' role in these projects is dominated markedly by the professional organizations involved. In the projects presented, it is demonstrated how much must be done to connect with the people living in these housing areas and apartment blocks

on the group level. During the projects consumer-hours were organized, choices concerning the transformation were given, special accommodation facilities offered and temporary housing arranged to let the residents enjoy a comfortable absence during the building stage. However all these prospects were merely presented and not discussed. The research conclusions suggest that residents in these projects were pleased with these offers, although the level of participation remained low. Only in the 'Vinkhuizen' Groningen case was the resident-group really involved from the beginning, through the design process and to the end. This resulted in a wider range of housing types, more attention to architectural design and special public buildings for recreation and meeting. One observes that this led to a prominent change of resident attitude from negative to definitely positive. It can be suggested that it was public group-involvement that made the difference. As shown by this SEV report, most sustainable projects in the Netherlands are still for the most part the initiative of professional organizations and government.

### **Former REVIEW (Sanders 2006) on research concerning social-cohesion,**

Since the government and the social-housing companies enlarged their focus on neighbourhood renewal over the last 10 years numbers of reports, case-studies and other studies focusing residents behaviour have emerged. To get a clear picture of this field of study in 2006 a booklet of papers (Sanders 2006) was brought together to present the broad scope of scientific knowledge, trends and opinions on this subject. What we learn from this is that people nowadays are active in different parallel social group initiatives and the housing environment: the housing block, the nearby neighbourhood or the street, is seldom ranked high ranked in relation to social priority.

As a consequence less is known on the question, "can social cohesion in resident-territory be stimulated, be a basis for projects and programs?" Instead, all research seem to be focus on the loss of social-cohesion (Sanders 2006). Chan et al (2006) supports this argument and concludes with the advice to initiate new research with special emphasis on the origin of positive social-cohesion, active behaviour of resident-groups supporting the community, not to mingle with participation

As Jay Walljaser said in 'The great neighbourhood book': 'The community is the expert, the people living and working in a place are the folk who know what needs to be done and are best placed to do it' (Walljaser 2005), a extra motivation to focus deeper into the dynamics of resident-groups, social-cohesion supporting projects and programs in special concerning sustainable-energy programs.

## **RESEARCH QUESTIONS AND METHODOLOGY**

### **A PhD research plan with emphasis on sustainability**

In autumn 2008, qualitative research was carried out with focus-groups of residents . In the focus sessions it was asked what incentives or actions are attractive to bring resident-groups into sustainability in action. This research is a fragment of a wider oriented PhD study in progress, a study on social-sustainability. The results are new and previously unpublished.

In the PhD research plan concerning 'social sustainability', a follow-up on the research concerning 'social-cohesion' in neighbourhoods (Sanders et al. 2007), the focus was given to those places in Dutch housing where the changes in real-estate can be expected in the coming decades and where this can lead towards change of social behavior and conditions. The case is that in the Netherlands such places are new and existing suburban neighbourhoods. Without

explaining or going deeper into this PhD study, it is clear that in relation to the introduction of sustainable-energy programs on a far larger scale than up to now, these neighbourhoods can offer opportunities of scale.

### **The research question and methodology,**

Knowing the governmental agreements as mentioned and reading this SEV report, the exciting research question to ascertain the advantages of more resident involvement in sustainable-energy programs should be:

*'under what conditions will resident-groups take responsibility for sustainable-energy project-developments up to a level that a role-change with the professionals involved can be realized?'*

In relation to the Role-Change theme, the focus is on criteria for change; hence the research should take an either-or approach. The basic question is therefore divided in three sub-questions because different research-steps (observations, interviews and literature search) were then appropriate. The domain of research is due to choices made for the PhD study the Netherlands territory.

#### *1. Can sustainable-energy programs be a basis for positive social-cohesion?,*

In the PhD study, as part of a study on stimulus for positive social-cohesion in neighbourhoods this research question is added. A qualitative survey carried out with focus groups in two Dutch neighbourhoods was chosen. The results as performed by DSP-group Amsterdam in 2008 should give an answer to the question formulated above concerning individual behaviour according to group-forming. Why focus-groups? In the PhD research plan a new start was chosen with research purely focusing on the perception of people in neighbourhoods. Such a new start demands research of a survey nature, so a qualitative methodology is appropriate (see introduction).

#### *2. What base supports group-initiatives and role-change concerning eco-villages?*

To learn more from group-initiatives and role-change a second research step was taken concerning eco-village initiatives in the Netherlands. A questionnaire of a survey nature was sent to the ten of these projects that are already inhabited, people having already lived there for a period of from one to five years, in projects with from ten to six hundred houses. Their representatives were surveyed on the subject of group initiative, as to why they had accepted it and how they acted now with the project finished and in use. They were questioned on the subject of role-change and the role of the professional real-estate scene in these projects; the other question asked on the subject of role change was how dependent or independent had been the eco-initiative. The eco-villages residents are often asked for questionnaire research with antipathy as result, therefore the interview methodology was to choose the spokesman of these neighbourhoods. This second research step should be seen as supplementary to the first, together addressing the full scope of group-initiative for sustainable-energy programs in primary and completed phases.

#### *3. When will resident-groups confronted with special programs opt for role-change?*

In the research done concerning the former two questions, no conditions for entering into role-change were studied. The only knowledge currently available is the scientific literature on this subject. The methodology chosen to enable one to comment on the conditions for role-change and the changing process itself, was to combine the research results with those from a scientific literature search. The book on role-change is 'Role transitions in organizational life'

from Blake E. Ashforth (Ashforth 2001), it contains a complete overview of all scientific literature. Not only are role-change, and freezing and refreezing of roles comprehensively presented, but also the process of role-transition is skillfully described. Therefore this book is used for this paper to give more insight into the facts of role-change, and as an aid to formulate acknowledgements on sustainable-energy coupled role-change in neighbourhoods.

### **Case studies in the Western sector of the Netherlands,**

The quantitative survey relating to Sanders's PhD plan is done in two Dutch neighbourhoods, IJburg in Amsterdam and Hoograven in Utrecht see figures 2a and 2b. The first is a new neighbourhood halfway towards completion and the second is older, built in 1956. Both house, more or less 15.000 people. These neighbourhoods were selected from a number of neighbourhoods under construction or reconstruction.

The selection criteria were threefold;

- The focus was on neighbourhoods of medium scale in the Western area of the Netherlands called Randstad, in the knowledge that conditions would be stable and comparable,
- Neighbourhoods under construction, to ensure that the people were aware of and concerned with what happens in these neighbourhoods,
- Neighbourhoods with a mixed population in terms of background and age, without specific ethnic problems.

Two focus groups in each neighbourhood, each brought together with the community-center. Most people (80%) were of Dutch origin, of all ages, with 8 to 10 persons a session.

#### **IJBURG,**

A newly built neighbourhood on the Western side of the city of Amsterdam, finally containing 45.000 people. The original idea, proposed in 1965 by the architects Van de Broek and Bakema, was for a new town outside Amsterdam for 350.000 people. In May 2008 the 10.000th inhabitant moved into his newly built house. In 2008 the neighbourhood accommodates 31% single households (in Amsterdam area 55%), 3% older than 65, and with 49% of people not of Dutch origin. The average number of people per house is 2,6 and 30% of the houses are rental homes.

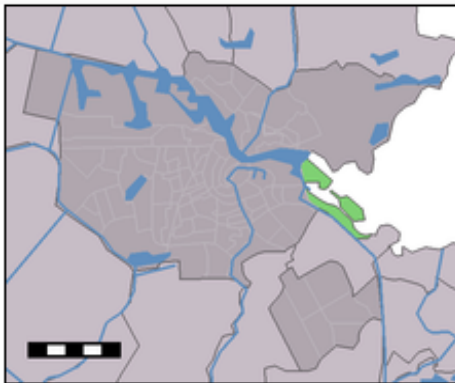
There is an active residents organization with clear targets, wanting a neighbourhood with its own identity, in a close community with interpersonal involvement. They want to stimulate contact between people, organize activities and represent their interests to others.

#### **HOOGRAVEN,**

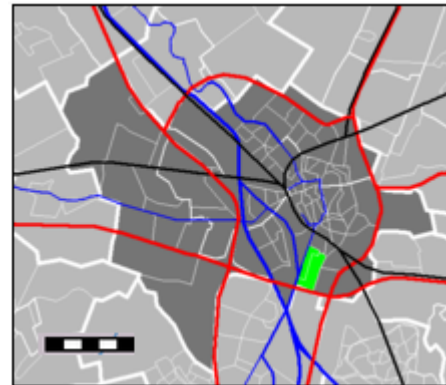
This neighbourhood in the South part of the city Utrecht was newly built in 1954. A small section is from 1939, being a little village that over the years has become part of Utrecht. The total neighbourhood consists of 10.400 inhabitants in 6450 houses, containing 23% houses, 77% apartments and up to 84% rental homes. The population contains 25% singles, 5,6% older than 65 and 35% of Dutch origin. The average number of people per house is 2,25. The unemployment is enormous, 37% compared with 6% at the national level.

Hoograven is recognized by national and local government as one of the most deprived areas in the country. There is a neighbourhood program subsidized by large sums of money to improve the housing and especially the situation. The neighbourhood residents organization has existed since 1937. Nevertheless their emphasis is mostly on neighbourhood activities for

young and older people, and they have an annual agenda. For housing projects groups of resident representatives are formed.



*Figure 1a: IJburg Amsterdam*



*Figure 1b: Hoograven Utrecht*

### **A brief survey of Dutch eco-villages,**

Up to 2009, in the Netherlands, initiatives into sustainability at the group level in the Netherlands are few. Well known and conspicuous to most people are the eco-village initiatives, housing projects that vary from 10 to up to 600 houses in one project. There are no other initiatives known that are so mature and with real results. These eco-villages are based on three convictions; community, spirituality and ecology. Their locations are spread over the country, from east to west. A recognizable phenomenon in these projects is the garden, a green area to be in or play in, as a strong theme. The origins of these projects, as can be read on [www.eco-villages.nl](http://www.eco-villages.nl) have been quiet different, involving individuals, groups of civilians or social-housing companies. Currently the number of Dutch eco-villages has reached 15, of which 5 are under construction. All were asked to cooperate in the survey, and eight responded.

## **THE HIGHLIGHTS OF THE RESEARCH RESULTS**

### **Results of focus groups in Hoograven/Utrecht and IJburg/Amsterdam**

The results were predictable but on some points surprising. Before becoming involved residents need to know what their financial benefits are, and to understand the durability of the technical solutions offered; then they will accept group initiatives, not just individual initiatives. Accepting an initiative is the hard part of such programs; the message was that professional support was needed.

In the focus group sessions the following messages were expressed;

- They showed a positive attitude towards sustainable housing; durable materials, energy-sufficiency and alternative energy-sources were the words used. All knew the issues.
- They felt such development could be theirs although the break-even point should be between 7 and 10 years. Idealism per se is not enough.
- They had the impression that bringing sustainability to older houses is too expensive because of technical complexities. One respondent recalled the initiative of city-heating for an existing neighbourhood in which the residents doubted that it was technically easy, and as a consequence the project failed.

- There was an experience among the people of a prominent positive attitude of Muslim women towards sustainability initiatives, positively coupled to their religion.
- In general it was expressed that, for sustainable projects concerning a number of houses, it could hardly be expected that residents start such an initiative. Plans were often made on one citizen's initiative, but often not followed through. Personally they stood open to group initiatives.
- Introducing gardening for young and old was brought up as a promising optional step towards sustainable activity on a group level. Also safety and group-connection were issues mentioned.

With focus on the attitude of residents, taking their own 'drive' for initiative along with the programs offered and managed by the professional real-estate scene, the 'given picture' can be described as an equilibrium situation. Residents are willing to participate and even take action in group programs under certain conditions. Although the prospects are not very positive, their attitude can be mentioned as one 'of waiting'. For a 'role-change' on a group level to be proposed, a much more positive motivation will be needed. These research results, a small excerpt from the PhD study, do not show that such will be the case without help, or any kind of external pressure.

#### **A rapid survey Dutch eco-villages and role-change**

A quick scan is done interviewing 10 eco-village (see appendix 1) initiatives by email. Three questions were asked, as to who started the eco-village project, who controlled the objectives and how and by whom is the ongoing situation controlled at present. The speed of response and the enthusiasm with which it was expressed said much about the motivation of the speakers involved. These answers to some extent represented the overall result, that in these projects the 'union of residents', as well the professional organizations involved, have been sustaining the initiatives from the outset. The spokesman of the project 'Meanderhof' Zwolle phrased this poetically; 'The initiative group of civilians was the engine from the beginning until now, but the social housing company brought the fuel without which we would not have succeeded'. The results (appendix 1) presented in more concrete figures in table 2:

| Eco-village's                                  | Question 1:<br><i>'Who took initiative to start-up the eco-village neighbourhood?'</i> | Question 2:<br><i>'On the subject of sustainable-energy measures, who made the proposals?'</i> | Question 3:<br><i>'In the current situation, what maintains the spirit to function socially and ecologically?'</i> |
|--|--|--|--|
| Just people, volunteers                        | III  | I  | III  |
| Union of people                                | IIII   | IIII   | IIII   |
| Union of people and professional organizations |  | II   | I  |
| Professional organizations                     | I  | II   |  |

**Table 2:** Tabulated results of the questionnaire, 9 out of 10 eco-villages.

In 90% of the projects, groups of people (50%) or people (40%) took the initiative for eco-housing. For realization, professional organizations were needed, and housing companies, architects and contractors were connected in 45% of the cases. Keeping the initiative alive again depends totally on the people involved. They search for themes and mechanisms to continue their ideals within the group of residents. Green areas and gardening is mentioned as an important motivator. Most energy systems and other energy-efficient choices like solar-orientation and high level insulation are presented more as choices at the outset, as can be understood. Public venues are mentioned in 55% of the cases as important to maintain social connection in the group. In one of the projects questioned, organizing group interaction was given as the means to keep up the eco theme in the initiative.

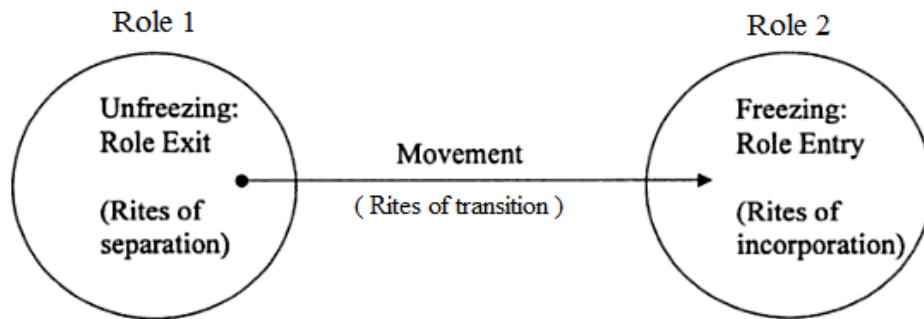
The motivation, let's call it 'drive' of the initiative groups, as given by the representatives of these eco-villages, can be expressed as a combination of an individual commitment to the issue of sustainability and a group bonding connected to spirituality. This last is not remarkable knowing the vision of the eco-villages initiative as it has been spread over Europe and other places worldwide. 'We envision a planet of diverse cultures of all lifestyles united in creating communities in harmony with each other and the Earth, while meeting the needs of this and future generations'. However, in most of the projects responding the rapid survey results reveal how hard it is to keep continuity in the initiative. In these eco-inspired neighbourhoods new people arrive and early adaptors to the initiative leave. Some actively want to evolve into the existing group of residents, other newcomers bring in new ways of thinking, character and motivation that influence the future of the initiative. Others candidly admit that the sustainability effects for the most part are brought in with all these choices made at the outset with the real-estate developers. Most of the projects have car-free zones, durable chosen materials, solar-energy supplies and high-level insulation, as well as sun-orientation of the houses, choices arranged from the start. The eco-initiative GWL-location in Amsterdam, which includes 600 houses and a theater, although not an eco-village, realized a superlative total package including central heating with CHP, a double water-system and a self developed garbage disposal program. It could be that these extra choices were made possible because of the larger scale of the project. By far the strongest response from all the eco-villages in this brief survey concerning motivation, involvement and future involvement is the green-zone as the central place for meeting one another, for children to play or for growing produce. Not only a place to meet, but also a place to talk and exchange ideas on the village-theme of sustainability.

### **Role-change scientific analyzed,**

Blake Ashforth's message is that role-change has to deal with role transition. He studied role-transition in organizations in working life (Ashforth 2001). His book remains a lexicon on role-change and role-transition, usable in wide variety of situations. Let's look at the content and what it can teach us.

According to Ashforth, the important basis of role transition is Lewin's field-theory (1951). Various social states are neither fixed nor permanent, rather, according to this field theory, they are quasi-stationary equilibria. Such an equilibrium situation is held more or less in place by a set of counterbalancing forces within a given domain. If these forces were to shift, the relative balance could be upset, resulting in an 'unfreezing' of the situation heading to a new equilibrium. Although the terms unfreezing and freezing imply a movement from one fixed state to the other, the process from one to the other situation is one of fluctuation, hesitation, (see figure 3). It is a process of emotion and contradiction, there are side issues like personal ties and committed costs, and motivations like new identity, sense-making, establishing

control, and belonging called the ‘rites of passage (Gennep 1960). The more a new role satisfies personal motivation, the faster the transition takes place. Transitions by groups develop even faster (van Maanen & Schein 1979) as Blake Ashforth instructs us on role-transition cases.



**Figure 3:** Role-transition model Blake Ashforth (2001).

When role-change into sustainable-energy programs in neighbourhoods as a group process is the case, the role-transition theory can help to understand the process. A role-change can start when the old role-pattern is disturbed accidentally or on purpose. The process is not one of single cause and effect, it changes towards the new role when pull factors on an individual or group level operate. These pull factors are of identity, sense-making, establishing control and belonging. These factors can ordain that the change is in the new direction, unless side issues and hesitation dictate a fall-back into the old role-pattern.

## CONCLUSIONS,

In the eco-village situations the group of residents truly took an active role, and for the most part they were the driving force for realization of the initiative. Their actions were driven by planet-coupled inspiration with people with the same interests, push factors. No subsidies or technical information were needed here, the people already knowing, more than others, that taking the step into planet-responsibility is not easy and costs money. They managed small and large sustainable-energy choices, some with and some without professionals on board. Important to the most, they were convinced from the start that keeping the initiative alive asked for maintaining of the group as a social entity for now and in the future. From these examples we can learn that motivation and group-binding themes among residents are important pull factors, for taking responsibility as a group in these sustainable-energy programs in making the step to role-change

From the ECN/NMP report we learn that such group successes are important for the planned sustainability results in the Netherlands. Hence both Sanders’s study and the SEV scan found that bringing resident-groups into action around sustainable-energy programs is not simple, that it needs reliable information, reliability of the systems offered and conviction on the financial issues.

What the research in Hoograven en IJburg in the Netherlands brought up is that residents are not against sustainable-energy programs at all; acceptance may simply be deferred. Nevertheless the people need a joint motivation to make the first step. Such themes could be gardening and green well-maintained public space. From Ashforth’s overview on role-change,

and the process leading up to it, these conclusions are endorsed. People are willing to take the lead and to take over the role of the professionals, role-change, when such pull-factors described as sense-making, desired identity and better control of the housing situation in the new situation are the issue.

In the light of these insights, the step to speeding up results of sustainable-energy programs with resident-groups in neighbourhoods is a 'push and pull' situation. Those motivated on the subject of sustainability itself could be a base to 'push'. Government can support this by information and facilities, finding partners for the input of special knowledge and for organizing the process. Secondly, in neighbourhoods group-forming around sustainable-energy programs can be enforced by stimulating group-sessions and group-communication for sense-making to 'pull'. Topics like green surrounding, well maintained public space, feelings of safety and group connection should then be issues.

## LITERATURE

1. Ashforth, B.E., *role transitions in organizational life*, Lawrence Erlbaum Ass. 2001.
2. AEDES, Woonbond, Government, *Convenant energiebesparing corporatiesector*, 2008.
3. Chan et al, J. *Reconsidering social cohesion: developing a definition and analytic framework for empirical research*. In: Social Indicators research, 75, pp. 273-302., 2006.
4. Dutch Government, Ministry VROM, *Werkprogramma Schoon en Zuinig*, 2007.
5. ECN/MNP, *Optiedocument energie en emissies2010/2020*, ECN/MNP 2006.
6. Gennep van, A. (1960). *The rites of passage* Chicago: University Chicago Press.
7. Lewin, K. (1951). *Field theory in social science: selected theoretical papers*. New York: Harpers & Brothers.
8. Maanen van, J., & Schein, E.H. (1979). Towards a theory of organizational socialization. In: B.M. Staw (ed.), *Research in organizational behaviour* (Vol. 1, pp. 209-264). Greenwich, CT: JAI.
9. NEPROM, NVB, Bouwend Nederland and Government, *Lente akkoord, energiebesparing in de nieuwbouw*, 2008.
10. Opstelten, L.J. et al., *Potentials for energy efficiency and renewable energy sources in the Netherlands*, EN and TNO, 2007, ECN-M-07-039.
11. Sanders, F.C. et al., *Reflecties op het woondomein*, Technical Un. Eindhoven, 2007
12. SEV, *Ruimte voor verandering*, SEV 2003.
13. Walljasper, J., *The Great Neighborhood book*, PPS, New Society 2007

## Appendix 1

| Eco-village's                | houses | Question 1:   | Question 2:  | Question 3:  |   |
|------------------------------|--------|---|--|--|---|
|                              |        | <i>'Who took initiative to start-up the eco-village neighbourhood?'</i> | <i>'Talking about sustainable-energy measures, who did the propositions?'</i>  | <i>'The situation today, what keeps up the spirit to work social and eco?'</i>                             | <i>'The eco coupled initiatives in the project'</i>   |
| Meanderhof, Zwolle           | 53     | Union of people   | The union and the social housing company together                              | The union and the social housing company together; the garden, activities, parties and selection newcomers | <ul style="list-style-type: none"> <li>• Car free</li> <li>• Eco materials</li> <li>• Solar orientation</li> <li>• Extra insulation</li> <li>• Solar electricity</li> <li>• Vegetable garden</li> </ul>         |
| De Vuurplaats, Heerhugowaard | 14     | Union of people   | Union of people  | Union of people  | <ul style="list-style-type: none"> <li>• Car free</li> <li>• Eco materials</li> <li>• Energy reduction</li> <li>• Communal garden</li> </ul>  |
| De Buitenkans, Almere-buiten | 59     | Union of people   | Union of people  | The residents doing things together  | <ul style="list-style-type: none"> <li>• Making a communal house</li> <li>• Communal garden maintenance</li> <li>• Games</li> <li>• Comm. newspaper</li> </ul>  |
| De Bongerd Zwolle            | 36     | People from a similar local project                                     | Future residents with the architect and the contractor                         | The residents doing things together and having separate groups for different tasks                         | <ul style="list-style-type: none"> <li>• Green activities</li> <li>• Meeting places</li> <li>• Diversity of the residents</li> <li>• Purchasing eco facilities together</li> </ul>                              |
| Carré, Delfgauw              | 49     | The social housing company  | The social housing company with the architect                                  | The residents and others in events, an open community  | <ul style="list-style-type: none"> <li>• Meditation</li> <li>• Kids playing together</li> <li>• Socializing</li> <li>• Events</li> </ul>  |
| Woonderij, Zutphen           | 30     | Union of people   | Union of people  | Union of people  | <ul style="list-style-type: none"> <li>• The house for disabled people</li> <li>• Eco materials</li> <li>• Energy systems</li> <li>• The garden</li> <li>• Kids playground</li> <li>• Meeting places</li> </ul> |
| Lanxmeer, Culemborg          | 250    | One person with group professionals                                     | Professionals  | Union of people  | <ul style="list-style-type: none"> <li>• Archaeological place in centre</li> <li>• Working in the neighbourhood</li> <li>• City farmhouse</li> </ul>  |
| Het Groene Dak, Utrecht      | 66     | Initial group of strongly motivated people                              | Union of people with the social housing company and the contractor             | The social ties of people, people are obligated to work on the complex                                     | <ul style="list-style-type: none"> <li>• Eco materials</li> <li>• Solar orientation</li> <li>• Garden</li> </ul>  |
| GWL, Amsterdam               | 600    | People from local neighbourhood   | Union of people with a number of social housing companies and local government | Cultural events and the residents organization keep it together  | <ul style="list-style-type: none"> <li>• Energy systems</li> <li>• Solar orientation</li> <li>• Car free</li> <li>• Disposal system</li> <li>• Green facilities</li> </ul>                                      |