

# Designing the dwell care environment as a network: alternative formats for collective living in an ageing society

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## Abstract

When we reflect on the contemporary housing with care and dwellings for an ageing population we focus on the following key concepts: affordability, with a quality of space that has a homeliness embedded in the spatial and social fabric and offers options for collective living. It also has to have strong relations with the surroundings, offering a continuity of care (care landscape), with a diverse spectrum of typologies that provide room and space for personal development and self-respect enhancement. That is a great deal to take on board, and yet, this is the outcome of our conversations with our clients who are dwell care organisers that are planning to develop a new dwell care project. An architectural project that wants to live up to this ambition primarily has to facilitate and create possibilities. These kinds of projects will not be about solving problems but rather about creating opportunities. This paper will showcase an architectural proposal that recently has been developed in the context of an architectural competition in the Flemish region of Belgium. The paper will focus on how an architectural design could address the issues put forward and how considering the project as a network could contribute to the quality of dwelling for an ageing population.

*Keywords: ageing population, network, collective living, design, project.*

## 1 On the issue of variety

A future proof architectural dwell-care environment needs to be supportive and explore and tap into new opportunities and developments. Of great importance to all, but especially to people with reduced mobility (relying on others to interact



with, to come and pass by) is an “embeddedness” in the spatial-social network (Figure 1).

Social isolation is an important issue when it comes to ageing, as has been shown in different studies [1, 2]. An architectural project that acts as a facilitator contributes to the creation of new networks and to the enhancements of existing ones. Such a project contributes to the success of those networks. When it takes on that role it mediates between different stakeholders such as the inhabitants, the staff, the visitors and their families by providing an appropriate space and the right kind of spaces. This mediation is established on different levels, or spheres: on the personal sphere (the person), the sphere of the collective (the housing) and on the sphere of the public realm (the surroundings or environment).



Figure 1: Ninety-four dwellings: organised as a network – work in progress.

## 2 On the idea for this text

This paper will showcase a designerly approach to respond to societal changes such as an ageing population, new living arrangements and lifestyles. The sources consulted are varied in the sense that the knowledge is generated in and through

an architectural practice: CONIX RDBM architects [3]. The practice has been involved in the design of quite a substantial number of public social projects. They range from schools, social centre and day-care to housing projects for older people. According to Flemish standards, CONIX RDBM is a large firm (one of the 30 largest architectural studios) with 65 collaborators, with at least 25 years' experience in dwell care design and innovation. Most of the studio's care projects are designed for and realised in the Flemish region. The author of this paper has been involved in dwell care design and innovation since 1998 and was the leading architect involved in the development of pilot projects in dwell care in the different evolving dwell care visions. The studio has received, amongst others, the Innovation 2 care Award for a dwell care project of 110 inhabitants in Mortsel [4], the VTDV Award 2009 for a dwell care project for 137 older people with dementia in Leuven [5] and Reigersvliet in Leopoldsborg was selected as an exemplary project that combined innovative care with a low-energy building. The studio's expertise in the field of dwell care is hands-on in the sense that the knowledge is built up through intensive and iterative meetings and workshops with its clients and their representatives.

Sometimes there comes along a competition that makes us rethink and explore different ways to practice. At that moment we reflect on how we used to approach things, how we respond to the clients' questions, how we position ourselves in relation to the design brief and the context. Sometimes there comes along a competition that pushes us out of our routine, which in turn sends us off balance.

That is a position we see as positive. That is a moment of great design energy. This paper offers an account of such a project.

We are aware that it is not a traditional academic paper, and that it does not reflect a strictly academic methodology but with the aim of presenting an account of competition design it will contribute towards academic research on housing and, in particular, towards the way we design future housing for an ageing population.

The methodology we used is design research. Based on previous experience in designing similar projects and based on discussions with the client and end-users, we developed a project that hopes to be a reflection of alternative formats for collective living.

The paper will not show evidence nor conclusions in a traditional sense, it is a reflection paper that helped the design studio in the office to grow in its understanding of formats for collective living and hopefully serves readers as an inspiration.

The project was presented to the "client" and to a panel of experts in the field of care real estate. The feedback flows back to the design studio and in some way or another into future projects, but ultimately there may be an academic twist that follows.

### **3 On the idea of a facilitating network**

An architectural project that facilitates has to pay extra attention to the continuous personal development of the individual in his spatio-social context. To support



this, the project offers a comfortable, familiar dwell environment where care is implicitly integrated.

An architectural project built up as a network allows for different patterns of daily use of space to emerge. Existing dwell-care projects are designed as a tree-like structure: they are conceived as a single-routed branch that starts at the personal room, through the living room, to the collective spaces and then to the world outside. In this tree-like branched structure the care model is cast. As a consequence, these buildings are becoming outdated at a very fast rate, and there is a risk of making the building redundant or unsuitable even before it would reach its end of life value. Buildings such as these are still acceptable as edifices and constructions but are unsuitable for transformation to take in new dwell-care models.

An architectural project that facilitates works as a spatial network can be used intuitively by its inhabitants, personnel and visitors alike. Because the spatial quality (volume, light and air) is high the project supports and encourages caregiving as is witnessed in several of our realised designs and most notably in the Wingerd and Reigersvliet. The warm atmosphere feels familiar and is a continuation of the home.

Optimally, living and (institutional) care should be intertwined. In this sense, it is important to reverse the classical perspective and consider a dwell environment in which care is present (as opposed to a care environment in which people live). The ideal thought image would be a spatial-social environment that allows and supports the dweller to stay in his/her home, surrounded by other dwellers and where it is the care that is mobile. The architecture and urban design should anticipate this by providing adjustable and lifelong projects, for example, houses which work in unison with larger sidewalks and pedestrian space which encourage social contact and engagement.

An architectural project that facilitates is a transformable environment. To create a transformable project, we need to read the different layers of a building as a sum of its whole. Each layer has its specific lifecycle and is characterised by its own dynamics and rhythm. From the start of the project we take into account that each of these layers will be replaced (updated) at its own tempo. This implies that the layers need to be easily demounted to allow for the replacement of only that layer that is needed for the transformation of the project; in turn, economising on cost, time and waste material and energies.

An architectural project that offers space for the development of the individual – be it the inhabitant, its visitor or the caregiver – is ideal. Within this framework, the project provides a multitude of different and alternative formats for living. Concomitant to this, it builds a link with society through embracing external functions like childcare, spaces for knowledge and experience transfer, services and facilities. In doing so turning this into a micro public place – the kind proposed by Böhlen and Frei [6].



## 4 On the project

In this part of the paper the actual competition design for a public care home project will be showcased. Through this design reflection, the paper aims at exploring and demonstrating how a new care home project could be designed as a network within the vision described above.



Figure 2: Site impressions.

The competition asked for a broader perspective and a new take on architecture and dwelling for older people. As described in the competition brief: “The designer is asked to develop a concept for the dwell care project of the future. The designer takes into account the evolutions of society, the legal context and the budget. As client, we expect a focus on dwelling and living and the weaving together of the life inside and outside of the dwell care project.” (Author’s translation, original in Dutch [7].) This reflection had to be applied on the specific case of a new project of 94 dwellings (older people’s care).

Before discussing the specifics of the projects, it is important to mention that dwell care projects need to comply with the Woonzorgdecreet (Dwell Care Decree) [8]. This decree regulates the registration, recognition and subsidisation of residential care facilities. The decree has as a goal, to guarantee the quality of life of the user through the supporting of self-care and or caregiving; the provision of differentiated and specialised forms of residential care and promoting

cooperation and coordination between the different actors within the residential care.

These 94 new dwellings had to be imagined on a site in a small village in the province of East Flanders (Figure 2). The program is substantial given the size, use and zoning status of the plot. On the other hand, the plot has some advantages: an existing care facility, central location, in close proximity to the main village road, iconic historical relics on and surrounding the site, important green structures and the proximity of a small waterway with specific fauna and flora.



Figure 3: Ferraris Map (1770). Main Street with alleys leading to the hinterland and farmstead clusters.

Historically, the village is organised along one main street. This street has some perpendicular alleys leading to the hinterland that was and still is mainly agricultural. Within this landscape we find clusters of farmsteads, which are skirted by poplar trees (Figure 3). Today, you can still find some of these square-shaped clusters of trees spread out into the landscape surrounding the site.

In the context of designing this project as a network, we proposed to reflect on a larger scale prior to focusing purely on the building and the site. The proposal builds on a historical continuity and we reintroduce these farmstead clusters to propose a development for the area adjacent to and overlapping with the site. (The area indicated on the zoning plan is for extension of the housing development).

Within that framework the concept of the network is pondered upon at the level of the building, of the dwellings and at the level of the surroundings. In this sense, the project is built up as a fractal where the small is reflected in the large and vice versa.

In the network vision of dwell-care, the ideal urban situation would be the distribution of care-incorporated houses into a normal neighbourhood. The goal is to create an integral dwell-care neighbourhood. Instead of concentrating the care in a large facility, a central care-hub would be provided. Alongside this the houses would be life-long dwellings (adaptable) and could incorporate care at any moment (Figures 4–6). This would lead to a dynamic situation where housing and care are intertwined and mutually supporting lifelong living. The white volumes on the model represent care; the blue ones represent housing.



An architectural project whereby the dwell-care is organised as a network offers the possibility to take in and house different care-models and different dwell models. In the specific case that is presented here this is achieved through a strategy that combines different elements and design decisions. What follows is an overview of those critical components and design gestures that form the core of the proposal.

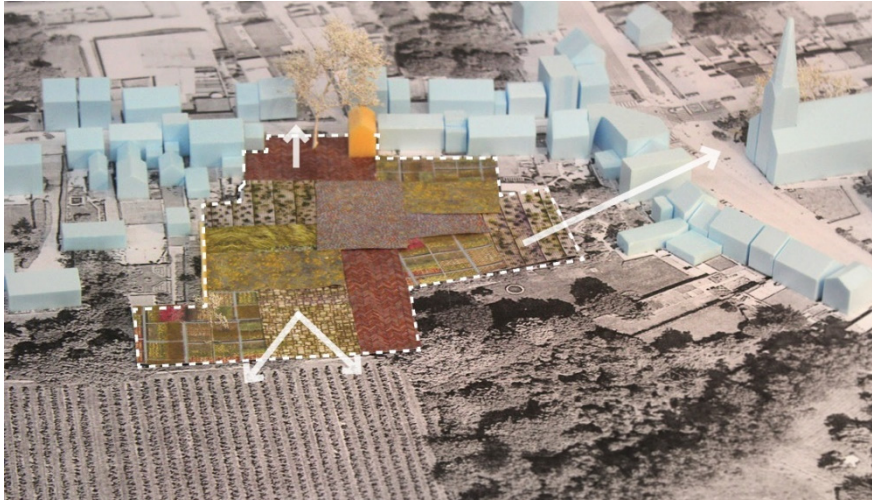


Figure 4: Competition model. The site is characterised by three specific links: with the main street (north on the photo), the church tower (east) and the agricultural hinterland (south). These become the main anchor points for the project.

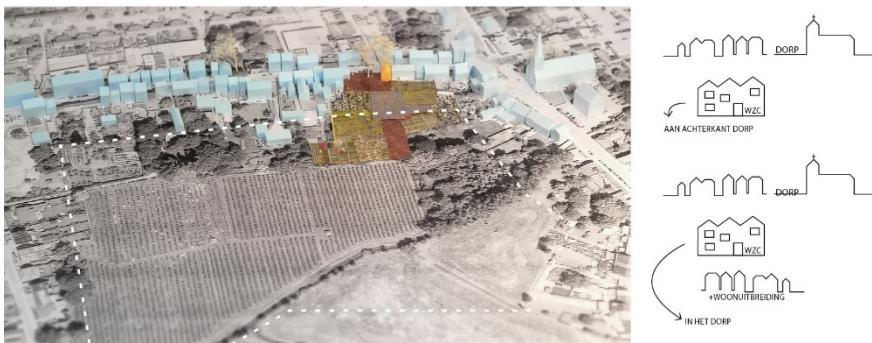


Figure 5: Competition model. Developing the project in such a way as not to create it as the back of the village but embedded in the village.

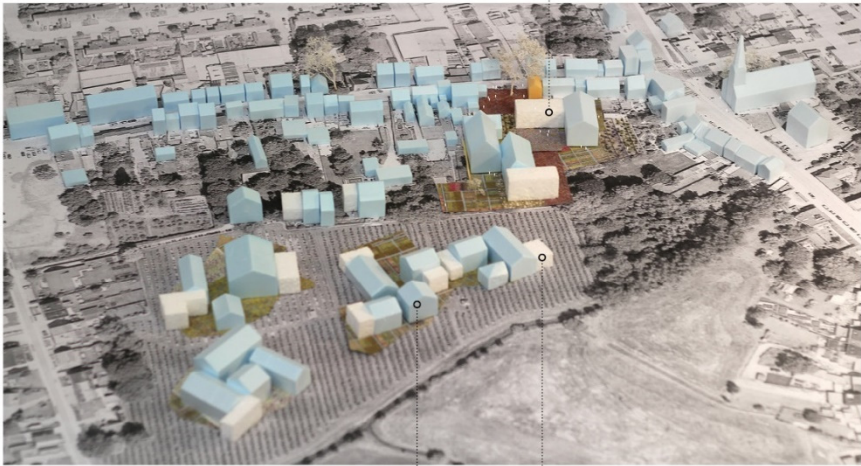


Figure 6: Competition model. Final ideal situating of situated care dispersed and time-based in a clustering of dwellings that reflect the historical context. White volumes represent care, blue represent dwelling. The larger white volumes would be central care-hubs.

To support personal development and to respect the identity of the inhabitants a greater diversity of dwellings (different types) is provided (Figure 7). For the same reasons, and to enhance the feeling of belonging and to provide a project that works on a human scale, the design has three different entrances (instead of one big institutional one). These entrances are linked and relate to iconic and recognisable elements, being the village main street with the chapel and monumental trees, the church tower and the hinterland landscape.



Figure 7: Three types of dwellings proposed in the project.

For a network to be effective, it needs to be able to allow adaptation, shortcuts and the development of different protocols over time. Therefore, a superstructure that allows for transformation and adaptability is the structural base. This way we take into account the possible growth and shrinkage of the program that could be the result of a possible (and very likely) change in vision on dwell-care. The project can be used in different ways and can embed different functions. This is





supported by the superstructure and spans (no beams), the floor height, the situation and different accesses as key examples.

A well-functioning network is locally embedded. For this the project builds on an understanding of the historical, and seizes this opportunity to shape and position the project. To support this the project is designed without a specific front or back. All sides have an equal value, but are concurrently identified through the context (i.e. linked to the three entrances). Hence all façades are equally important. As a consequence, all dwellings and all the social spaces have a unique view and a specific addressable relationship with the surrounding.

The different types of dwellings are heterogeneously distributed over the site/plans. They form a network of their own. Between the different clusters of dwellings there emerges a diverse pallet of social spaces, open spaces, patios, gardens, squares. This is both the case on the urban scheme and in the plans of the building proper.

The inhabitants can use these spaces intuitively. They allow for wandering, exploring, change of routine. Through linking of the different spaces to the iconic elements of the surrounding a readable and navigable environment is created. This supports the possibility for individual development and is a direct consequence from the network-like composition and the formal expression thereof (Figure 8). As a result, the project can embed different dwell-care models. This supports the feeling of familiarity and recognisability.



Figure 8: Competition model. The distribution of the different types of dwelling, built and non-built spaces, both inside the project and outside, create social spaces and allow for a variety of individual and collective uses.

The dwellings and social spaces are distributed and related to each other in such a way as to facilitate a large flexibility of organisation and use of space. As opposed to the classical tree-like structure that allows for only one protocol of space use, this network like build up enables a larger number of different uses. The advantage is that it can embed the classical care models and at the same time enables diverse models, hopefully stimulating reflection on the way care can be de-institutionalised (Figure 9).

On another level, this network-like conception is the guiding principle in the design of the dwellings. The goal is to provide and support homeliness. We interpret this as the atmosphere where there is maximum contact and relationship between the dwelling and its context, where the dweller can customize the space and direct the use of space, where there is abundant daylight, a space that feels familiar and confident.



Figure 9: Competition model. The project is subdivided into three main clusters each with a separate entrance linked to specific site characteristics. This enables the transformability of the project. Other uses can be allocated in overlap with other parts of the project.

When walking alongside the project you encounter different spaces, atmospheres, and gardens. The design and feeling of these non-built-up spaces is as important as the building itself. The patios that form the core of the project are open to the surrounding gardens, the village and the landscape. This porosity enhances the embeddedness of the dwellings and the care into the local, social and

special environment. The three entrances support the approachability and accessibility of the project (Figure 10). This helps to create a small scale feeling that is miles away from the large-scale care facilities we know. The specific shape supports the feeling that the building is smaller than it actually is.



Figure 10: Competition model. Chapel, monumental tree and proposal forming a scenography. The patios and gardens form a porous network.

## 5 “A city is not a tree”: epilogue

While writing this paper a reflection and reference came to mind: “A city is not a tree”, the famous 1965 Christopher Alexander text [9]. In this work, Alexander describes two different ways that cities are structured: according to a tree-like structure or as a semi-lattice. The text is a hidden pamphlet urging designers to reflect on the city as a semi-lattice. The semi-lattice in Alexander’s architectural and urban framework is a structure that is compared to tree-like structures “an enormously greater variety and structural complexity”. The semi-lattice is composed out of elements that have “the right kind of overlap”. “This idea of overlap, ambiguity, multiplicity...represent a thicker, tougher, subtler and more complex view...” Alexander sees in this overlap the potential for more and more informal use with greater variety.

It is exactly this that we aimed for in our proposal for the project in Vrasene. We believe that this ability and capacity to support this variety and diverse use helps in the development of the individual as a social being, even when you are in need of some form of institutionalised care. We can (and probably for economic reasons) institutionalise care but we should create the dwelling as a semi-lattice

supporting variety, individual and collective use with this stimulating kind of overlap.

The kind of designer reflections that is presented in this paper is a form of research by design in the sense that is a critical reflection on our contemporary and projection on our future way of providing housing and care for an ageing population. It is important for the studio to generate these alternative formats for collective living to step outside of the daily routine and take a critical stance against established modes of designing that unavoidably creep in the practice.

It is also a critical reflection on the current legislation that is its way of describing and setting the norms for older people's care unintentionally implies tree-like structures to be built.

A drawback of these kinds of closed competitions is that the development of different concepts and reflections are not disseminated or revealed to a wider audience. Therefore, it was important for the studio to write this paper.

On the final page of his text Christopher Alexander gives the example of the dissociation of retired people as a case of tree-like thought. It is hoped that with this project and this paper we have demonstrated that it is possible to conceive the dwell care environment as a semi-lattice and not like a tree. Reading this paper again and its far-reaching insight and implications I realise the title of this paper should have been:

“Creating overlap: designing the dwell care environment as semi-lattice: alternative formats for collective living in an ageing society.”

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