

HOUSING STOCK RE-USE BIBLIOGRAPHY

Several academic researchers, charity organizations and real estate professionals have studied the transformation of office and historic buildings into homes to find solutions to the affordable housing shortage, the decrease of cities' downtown vitality, and vacant buildings not finding use.

Based on case studies, this document provides tools, lessons learned and valuable information to understand, evaluate and manage a building transformation.

Furthermore, one website is entirely dedicated to helping people trying to launch Self-help Housing programs: <http://self-help-housing.org/what-is-self-help-housing/>. This website outlines frequently asked questions on how to run such initiatives, answered with some cases studies.

For case study examples, refer to the following publishings:

- A New Life: Conversion of Vacant Office Buildings into Housing
- Adaptive Re-Use of Offices Residential Conversions in Sydney
- Office Building Conversion and Sustainable Adaptation: A Comparative Study
- Upper Story Housing Case Studies
- Canopy Housing, England

Other organizations are focusing on transitional use of the vacant spaces, such as by using a historic building for 2 years before it is turned into a museum, or by using an office building for 6 months before the owners are able to launch renovation work.

Additional examples include:

- [Entremise](#) in Montréal, Canada
- [Plateau Urbain](#) in Paris, France

There are also organizations that are connecting vacant space owners with associations, firms, or artists to manage win-win rental deals:

- [Reusing Dublin](#) by Peter McVerry Trust brings vacant building stock back into use in Dublin. They have also launched an interactive map where people can register empty buildings.
- [Camelot Europe](#) is a leading, international vacant property management service provider offering a wide range of management and vacant property security services to clients across the public and private sectors. They consider renters as property guardians since vacant spaces are more likely to be vandalized and robbed.

The following pages present some of the key elements to learn from the initiatives previously identified.

Canopy, a self-help housing program (Leeds, UK)

“Self-Help Housing” involves groups of local people bringing back into use empty properties that are in limbo, awaiting decisions about their future use or their redevelopment. It differs from “self-build housing,” which involves constructing permanent homes from scratch.

Canopy uses a model in which they rent or purchase empty buildings from city, firms or individuals, then a group of volunteers (mostly people without a home) work together to renovate the venue into a house. Some of those volunteers then become tenants for the apartments they helped fix. They pay a rent that provides funding for the whole program.

Canopy has an important impact on the community; Canopy housed 21 new tenants and their families in 2014 and were joined by 46 new volunteers.

An example of business plan for this type of program is available at: <http://self-help-housing.org/what-is-self-help-housing/>.

Life of property divided into two flats : 5 years (260 weeks)

Rental Income over 5 years x 2 flats @ £40 per week each = £ 20,800

Maintenance costs @ £10 per week per flat : 2 x £8 x 260 = £ 4,160

Money needed to cover any periods when the flats

are empty & bad debts (say 4 weeks per year): £320 per yr = £1,600

Money available for renovation = £20,800 – (£4,100 + £1,600) = £15,100

The use of a volunteer task force for renovation can minimize the costs and provide occupation since the training can build self-confidence for its volunteers, often helping them to enter the job market.

Low Transformation Criteria Table

The ‘Low Transformation Criteria Table’ is a useful tool to check before engaging in the renovation process. The more checkmarks that you have, the higher the risks associated with the property transformation. High-risk projects are significantly less likely to be undertaken than those with less risks associated.

Aspect	Criterion	✓
<i>Location</i>		
Urban situation	Office on remote industrial zone Office in the middle of an office park Office in area defined as priority area for offices	
Land property	Land rent	
Vacancy	Vacant more than one year Vacancy of surrounding buildings	
Character of urban situation	Location on or near city edge, ring roads Desolated area No greenery in the neighbourhood Social depreciation, vandalism Pollution; smell, noise, view	
Distance and quality of facilities	Shop for daily errands > 1 km Meeting place (café, snack bar, etc) > 500 m Bank/post office > 2 km Basic medical facilities (doctor, pharmacy) > 5 km Sport facilities (fitness, swimming pool, sports park) > 2 km Educational facilities (nursery, school, university) > 2 km	
Accessibility by public transport	Distance to station > 2 km	
Accessibility by car; parking	Distance to bus, metro, tram stop > 1 km Many obstacles, limitations, poor flow Distance to parking place > 250 m < 1 parking place/100 m ² dwelling realisable	
<i>Building</i>		
Year of construction	Building was built or renovated recently (three years)	
Character of the building	Unrecognisable, non-eloquent Poor maintenance	
Extensibility	Not extensible horizontally Not extensible vertically	
Structure	Structure in technically bad condition Dense structural grid, < 3,6 m	
Dimensions	Net storey height < 2,6 m	
Façade	Façade openings not adaptable Impossible to create windows which can be opened manually	
Entrance (building, dwelling)	Daylight entry < 10 percent of the living area Impossible to create a socially secure entrance Impossible to realise elevator in the building (if more than four floors) Distance from dwelling to stairs/elevator > 50 m Impossible to realise escape stairs according to escape demands	
Installations	No or insufficient conduits realisable	
Environment	Noise level at the façade > 50 dB Sufficient isolation between dwellings impossible Sufficient isolation of façade impossible Presence of dangerous materials in construction No or little sunlight	

Source: Geraedts and van der Voordt (2003)

Table I.
Criteria for low
transformation potential
(the greater the number of
checkmarks, the higher
the risk and the lower the
transformation potential)

Remøy, HT., & Vander Voordt, DJM. (2014). *A New Life: Conversion of Vacant Office Buildings into Housing.*

Opportunities and Risks in 15 Dutch Cases

Opportunities for Transformation

Conversion of vacant offices can be considered a sustainable alternative to demolition and new builds since less waste is produced from both the materials and transportation needed. A frequently heard argument for demolition is that older buildings are not up to current sustainability standards. However, the performance of the studied buildings was adapted to the level of Dutch building codes, as well as to the level of comfort expected by the relevant user group. Table 2 summarizes the most striking opportunities found in the Dutch cases studied by Remøy, HT., & Vander Voordt, DJM. (2014).

Table 2: Opportunities defined by the cross-case analysis of the 15 cases

	Aspect
1. Legal	<ol style="list-style-type: none">1. New function fits zoning plan2. Conversion preferred by neighbours3. Measures fit with building code requirements
2. Financial	<ol style="list-style-type: none">1. Low purchasing price2. Preselling implies lower financing costs3. Commercial activities in plinth
3. Technical	<ol style="list-style-type: none">1. Reuse of large parts of existing building, e.g. facade and construction2. Strong floors, possible to add extra weight3. Strong foundation, vertical extension possible
4. Functional	<ol style="list-style-type: none">1. Sufficient parking places2. Existing floor plan easily adapted3. Extra "left-over space", not available in new developments
5. Cultural-historic	<ol style="list-style-type: none">1. Historical value, strong architectural appearance2. Positive impact on surrounding area

Remøy, HT., & Vander Voordt, DJM. (2014). *A New Life: Conversion of Vacant Office Buildings into Housing*.

Risks

Most of the risks associated with converting vacant offices are technical risks, as outlined in the chart below. These risks can influence the financial feasibility of the property's transformation. Table 3 summarizes the most striking risks found in the Dutch cases.

Table 3: Risks defined by the cross-case study of the 15 cases

	Aspect
1. Legal	<ol style="list-style-type: none"> 1. Zoning law: Impossible to meet municipal requirements, zoning law, city policy 2. Building code: Impossible to meet requirements e.g. regarding noise-level and fire-precautions, the municipality is unwilling to cooperate 3. Monumental act. The monumental status does not allow adaptations that are required to match future user needs.
2. Financial	<ol style="list-style-type: none"> 1. Development costs: slow handling of procedures (loss of income, high interests) 2. Vacancy: failing incomes from exploitation or sale of the apartments 3. Owner not willing to sell for a reasonable price due to high book value
3. Technical	<ol style="list-style-type: none"> 1. Incorrect or incomplete building structure assessment 2. Poor state of the main structure/foundation (rotten concrete or wood, corroded steel) 3. Insufficient shafts available; construction allows no extra shafts being made 4. Insufficient thermal and acoustic insulation in the floors and facades 5. Insufficient daylight for housing
4. Functional	<ol style="list-style-type: none"> 1. Present grid does not fit with measurements required for new purposes, resulting in waste of space or costly adaptations of the technical structure 2. Private outdoor space impossible
5. Cultural-historic	<ol style="list-style-type: none"> 1. The appearance of the building does not fit with the required appearance of the new function

Remøy, HT., & Vander Voordt, DJM. (2014). *A New Life: Conversion of Vacant Office Buildings into Housing*.

[Adaptive Re-use of Offices, Residential Conversions in Sydney](#)

Interviews with Sydney Stakeholders on Residential Conversion

Interviews were held in February 2015 with experienced developers and agents in Sydney with respect to the drivers and barriers to residential conversion in the city. The interviewees had experiences working in both Europe and Australia, and each had over 15 years of work experience. The variables found in the literature regarding the technical, physical, legal, social, economic, and environmental variables of conversion adaptation are all considerations to greater or lesser extents. Table 2 summarizes the perceived drivers and barriers to conversion adaptation in Sydney.

Table 2 Drivers and barriers to office conversion adaptation in Sydney

Drivers		Barriers	
1.	Councils may give developers a better hearing where buildings are retained	1.	Costs associated with some designs require additional expense to render the building attractive to residential investors/buyers.
2.	Sometimes zoning makes conversion the only option	2.	Appearances of most offices typically do not lend themselves to conversion without changes to facades.
3.	Technical ease of reconfiguration / change of use	3.	Chinese buyers/investors do not necessarily want to invest / buy into converted property – preference is for new build.
4.	Could provide incentives to conversions to encourage more.	4.	Perception most people would prefer new build.
5.	Perceived 'character' can drive up sales and interest	5.	Unknown costs can escalate prices considerably – floor slab
		6.	Contamination potential
		7.	Always some compromise on space planning with existing buildings

Sust. Build., doi: 10.1051/sbuild/2017002

Lessons Learned from 5 Iowa Cases

Historic areas in Iowa have undergone extensive transformations to convert old storefronts into housing. All buildings were deemed fairly low risk before these conversions took place. The buildings now serve mixed-use purposes, with housing on their upper levels. The Iowa Economic Development Authority tracked the challenges and successes the projects faced throughout their journeys and recorded them into a concise lesson plan.

Lessons Learned

Lesson One

Strength and credibility of the local downtown revitalization program are essential ingredients for bringing redevelopment projects to successful conclusions.

One common trait in all five projects is that they each had a strong, local downtown program behind them. Four of the five communities had long-established Main Street programs, and Woodbine's relatively new program has picked up significant momentum through their aggressive downtown revitalization program that is staggering to behold.

- Effective communication:
 - Reversed any negative public perceptions about the project through informed responses
 - Disseminated consistent and positive information to the community
 - Made the process open to the public
 - Painted an accurate and positive picture of downtown living
- Leadership and guidance:
 - Nurtured the entrepreneurial spirits of the owners/developers
 - Provided handholding and access to needed incentives as the projects unfolded
 - Created a downtown environment where upper story housing rehab projects could take root and flourish
 - Was enhanced by the directors having involvement in other local community and economic development organizations

Lesson Three

Patience and determination are essential traits when shepherding a project through rehabilitation.

It can take years to develop a project concept, work out all of the funding and regulatory issues and get consensus from all those involved in the process before implementation even begins. Once into the project implementation stage, it's essential to remain nimble, since changes in plans are inevitable and will come along quite unexpectedly. Things move fast once the construction is underway. How the owner/developer reacts to surprises is what makes the difference.

- All of the owners and developers had to react quickly to accommodate surprises in rehabbing their buildings.
- An individual involved in one of the projects estimated he had attended 200 separate meetings during the planning process.
- In Spencer, no one had any idea the building retained its original skylights. Once they were uncovered, the project was redesigned to accommodate them. This was a change of plans that, when properly addressed, turned into a bonus feature.

Lesson Four

Designations for Historic and Cultural and Entertainment districts increase opportunities for downtown economic development.

- Establishing a National Register Historic District (NRHD) is one of the best ways to assure that the owners of historic properties within downtown districts have access to historic tax credits. That designation increases appreciation of the historic significance of buildings, attracts visitors, and educates local residents and downtown property owners on the economic benefits of historic tax credits for redeveloping commercial buildings.
- Cultural and Entertainment District (CED) designations have supported downtown development in a manner that enhances quality of life for downtown residents. This designation recognizes arts and cultural related businesses in the district, attracts creative entrepreneurs, and provides additional marketing possibilities. A CED designation by the Iowa Department of Cultural Affairs increases the profile of downtown projects when applying for grants and expands eligibility for state historic tax credits. Currently, Elkader and Spencer have CED designations.

Lesson Two

Technical and financial assistance is indispensable for encouraging property owners to undertake upper story housing rehab projects.

Adaptive re-use projects with upper story housing are a complex undertaking, and each of the five projects utilized technical and financial assistance to overcome barriers and pursue innovative approaches. Technical assistance came through Main Street Iowa and the Iowa Green Streets Initiative through IEDA, as well as the professional consultants, such as architects, that were contracted for services.

- Funding programs made these projects possible, and it is highly unlikely that they would have been completed without them. Two of the largest case study projects in Woodbine and Spencer could not have been accomplished without availability of historic tax credits.
- A variety of incentives were utilized that ran the gamut - from local Main Street program façade grants and loans to state and federal historic tax credits. More than 15 local, state, and federal funding sources were utilized in the five projects.
- Due diligence was required on the part of the local downtown programs and building owners. Developing business plans, writing and presenting applications, and preparing all of the required documentation was no simple task.
- Local financial institutions were a valuable source of information and financing. In situations where they were not able to provide funding for the project, they steered the owner/ developer to other possible lenders.

Lesson Five

A network of partner organizations, institutions, and public entities form frameworks that support the rehab projects and provide necessary leadership.

The opportunities for successful redevelopment projects are greatly enhanced when support comes from many sources.

- Each of the five programs involved key staff members of various civic organizations.
 - Experienced, passionate and creative individuals were involved with the local downtown program, city government, or other civic organizations.
 - These people brought varied expertise, resources and connections.
 - The ability to raise funds and a critical eye for details were valuable skills.
 - Staff members managed and led volunteers, kept everyone focused on the task at hand and got along well with everyone.
- Participation and backing of city leadership was crucial for the success of all five projects. Partnership with the public sector was necessary for federal and state grants, since city officials had to be actively involved in seeking those funds.
 - In Woodbine's case, the property owners received Tax Increment Financing from the city to help underwrite the redevelopment.
 - In all five cases, city officials were brought into the collaborative planning process early on. When the projects succeeded, they set a pattern and precedent for the future undertakings.
- In all five cases studies, entities with regulatory powers, such as the State Historic Preservation Office or local code enforcement office, were brought to the table early in the process to get their input on the project. Beyond the tangible benefits of identifying problem areas early, it also helped to establish communication with people who would make difficult decisions about what to allow or disallow later.

Lesson Six

Having experienced developers with local community ties is an asset.

Past construction experience and the close personal connections with the local community gave developers an advantage in building credibility with lenders, supporters, and the general public.

- The owners of the Odd Fellows Building in Woodbine and their development partner are natives of the community. The owners had experience in the region and had been involved in historic preservation projects. The development partner's background was in business management. When the opportunity arose to be part of this project, he came on board to assemble the sources of funding and to write many of the funding applications that enabled the project to come to fruition.
- The developer of the Spencer Middle School project is Iowa's largest non-profit housing and development group, with numerous affordable housing developments under its belt and an esteemed reputation in the state. The developer's corporate offices have been based in Spencer for 14 years and for many of its employees, Spencer is their hometown. The Friends of the Auditorium group were confident if that if CHI took on this adaptive reuse project, it was going to succeed.
- In Burlington, the owner/developer of Schramm's Corner is a Burlington native with years of construction experience and rehab work in the downtown district. When he initially committed to the project, he was not a newcomer to major construction projects. The developer's family-run construction company and his personal strong interest in downtown Burlington's revitalization process put him in the forefront as contractor of several rehab projects in the downtown district.

Iowa Economic Development Authority. (2014). Upper Story Housing Case Studies

Camelot Europe Successful Actions

Camelot Europe works as a vacant property management service. They seek to follow vacant properties through the vacancy lifecycle and to find solutions to generate income from vacant spaces. They have found that the most practical and cost-effective solutions to the problems associated with vacancy (theft, squatting, break-ins etc.) can be solved by creating living spaces in the building, or by providing housing for live-in guardians.

Protection by occupation: a proactive approach to property protection



'A value for money solution'



Project UCLH vacant properties

Problems

- Vacant property suffering from continual break-ins and vandalism
- Squatters repeatedly occupying buildings resulting in hefty legal costs and damage repairs

Solution

- Cost effective Live-In Guardian solution implemented
- Remedial maintenance carried out by Camelot

Results

- Emergency incidents reported immediately by on-site Guardians
- Positive impact on insurance premium as buildings remain occupied
- Saved £340,000 on security costs of one building in one year



'Keep properties safe from illegal occupation'



Project: University buildings pending refurbishment or disposal

Problems

- Security patrols inadequate, 24hr Guard too expensive
- Continual break-ins and vandalism delayed refurbishment

Solution

- Placement of carefully vetted Live-in Guardians
- Maintenance and security reports available for client via online portal MyCastle

Results

- Properties secured from occupation
- Freed up management time for client to spend on core business



'The space was vital to the success of our campaign'



Project Space required by Charity Elephant Family for 'Jungle City' exhibition

Specification

- Charity required space to paint and store 120 life size jungle animal sculptures
- Low cost lease with flexible terms in a secure property required

Solution

- Warehouse secured by Guardians
- Large open space

Results

- Owner Received PR worth £20,000 and recognized for community focus
- Utilised an empty property for large scale charity event raising over £1million

Camelot Europe. (2016). *Camelot Corporate Brochure* [Brochure]

Les Grands Voisins (Plateau Urbain, Paris)

Les Grands Voisins is a transitional-use program for a closed hospital waiting to be transformed into a new residential neighborhood. This program is slightly more unique than the transformation solutions previously listed. For 2 years, Plateau Urbain helped an emergency housing organization "Aurore" to use the property as both a transitional housing center and a venue for artists, restaurants, and shops. The 600 people who were housed in different specialized shelters were able to take part in the many events and activities that occurred, enabling them to socialize, learn, and have a good time while building a greater support system and community.

Entremise is currently trying to develop similar programs in Montreal.

Author: Jolan Tcheyno

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