

# Vocabulary for transdisciplinary research in affordable and sustainable housing

Deliverable 4.4

**Lead Beneficiary:** FUNITEC (La Salle-URL)

**Date:** September 30, 2023 (month 36)

**Submission date:** November 22, 2024

**Version:** 1

**Dissemination level:** Public

[www.re-dwell.eu](http://www.re-dwell.eu)



RE-DWELL “Delivering affordable and sustainable housing in Europe” has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 956082,

The European Commission’s support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

## **RE-DWELL**

Deliverable 4.4. Vocabulary for transdisciplinary research  
in affordable and sustainable housing

Version 1

### **Editor:**

Leandro Madrazo (La Salle-URL)

### **Contributors:**

Mahmoud Alsaeed

Lucia Chaloin

Tijn Croon

Annette Davis

Aya Elghandour

Alex Fernández

Saskia Furman

Marko Horvat

Anna Martin

Carolina Martín

Andreas Panagidis

Androniki Pappa

Leonardo Ricaurte

Effrosyni Roussou

Zoe Tzika

Christophe Verrier



Version	Date	Author
0.1	June 30, 2024	Leandro Madrazo (La Salle-URL)
0.2	October 24, 2024	Leandro Madrazo (La Salle-URL)
1.0	November 22, 2024	Leandro Madrazo (La Salle-URL)

## Table of content

Executive summary.....	6
1. Introduction.....	7
2. Objectives and process.....	8
3. Implementation.....	8
4. Vocabulary entries.....	13
5. Vocabulary as learning tool and resource.....	13
6. Competencies .....	17
7. Conclusions.....	17
Annex 1 - Concepts .....	1
Annex 2 - Guidelines .....	16

## Executive summary

The **RE-DWELL vocabulary**, along with the **case library** (Deliverable 4.5) are essential tools for facilitating knowledge exchange among researchers within the RE-DWELL network. These resources aim to promote inter- and transdisciplinary collaboration in addressing the challenges of affordable and sustainable housing. Integrated on the RE-DWELL website (see Deliverables 5.2-5.7), they are publicly accessible, allowing a wide range of stakeholders to benefit from their content.

Researchers often approach complex issues like affordable and sustainable housing from their own disciplinary perspectives, which can lead to overlooking the specialized terminology, priorities, and methodologies of other fields. This lack of awareness can hinder collaboration and impede the construction of inter/transdisciplinary knowledge. The RE-DWELL vocabulary serves to bridge disciplinary boundaries among researchers—spanning architecture, urban planning, economics, social sciences, and sustainable management—helping them develop a comprehensive understanding of contemporary housing challenges.

The RE-DWELL vocabulary serves two main purposes:

1. **Summarizing research findings:** Early Stage Researchers (ESRs) distil their individual research findings into concepts that capture essential ideas related to affordable and sustainable housing.
2. **Sharing concepts:** The vocabulary facilitates the sharing of concepts among researchers, highlighting their relevance for the common research and encouraging cross-disciplinary communication.

As a repository of shared knowledge, the RE-DWELL vocabulary fosters a culture of collective learning among network members. Participants can access and engage with materials produced by their peers, broadening their understanding of various topics. It has been used as a learning resource in educational settings during network activities, such as peer reviewing, clustering concepts, and creating concept maps

The collaborative effort of constructing a shared vocabulary enhances individual research and fosters informed dialogue about critical issues that span different research areas. Moreover, it has enabled researchers to develop competencies in systems thinking, interpersonal communication, and knowledge co-creation within an interdisciplinary framework.

The vocabulary is implemented as an online tool developed by the ARC research group at La Salle School of Architecture. Its structure includes concept names and definitions, associated research areas, and links to related terms and cases. A total of 80 vocabulary entries (see Annex 1 - Concepts) have been created over the three-year project duration by ESRs, either individually or in collaboration with peers and supervisors.

In conclusion, the RE-DWELL vocabulary has proven to be an effective tool for developing essential research skills and fostering interdisciplinary collaboration. The content will remain available online, ensuring it continues to serve as a valuable resource for future learners addressing affordable and sustainable housing from a transdisciplinary perspective.

# 1. Introduction

The RE-DWELL [vocabulary](#) (Figure 1), together with the [case library](#) (Deliverable 4.5), serves as one of the key tools for facilitating knowledge exchange among researchers within the network. Both tools aim to foster interdisciplinarity by integrating the diverse perspectives and knowledge of researchers from various backgrounds, all focused on addressing the challenges of affordable and sustainable housing. These two tools are integrated on the RE-DWELL website, and their contents are available to the public (see Deliverables 5.2-5.5-5.6 and 5-7).

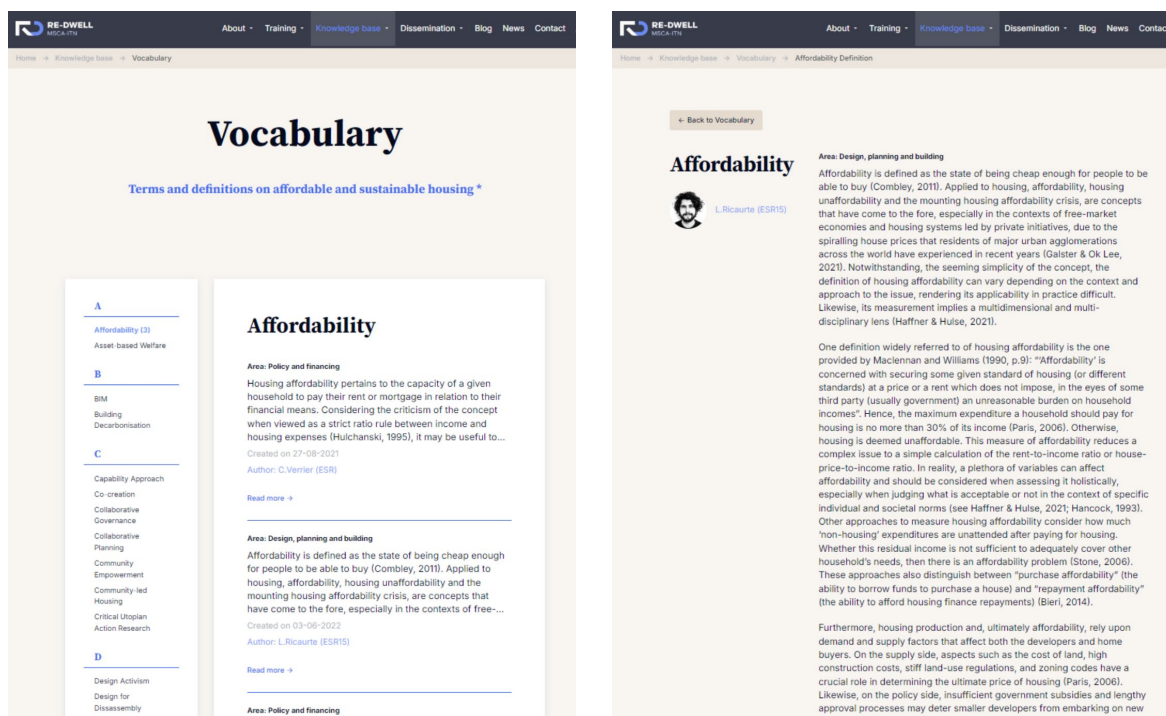


Figure 1. RE-DWELL on-line Vocabulary

In interdisciplinary research, where experts from different fields collaborate, creating a shared terminology is essential for effective communication and for gaining a comprehensive understanding of a multifaceted research area. The purpose of the RE-DWELL vocabulary is to foster the creation of a shared language. It serves as a common framework, ensuring that early-stage researchers (ESRs) from diverse backgrounds—such as architecture, urban planning, economics, social sciences, and sustainable management—can communicate effectively and understand each other's perspectives.

When researchers approach a complex issue like affordable and sustainable housing, they do so from the viewpoint of their own field of expertise. For instance, an architect may focus on the design and materials used in housing design and construction, while an economist might emphasise financial models or market dynamics. Each discipline not only has its own specialised terms, but also its own set of priorities, methods, and theoretical frameworks, which might be unknown to researchers from other backgrounds. This lack of awareness of the knowledge from other fields represents an creates barriers to collaboration.

To overcome this knowledge and linguistic gaps, creating a shared vocabulary becomes crucial. This vocabulary is not just about translating jargon but about building a mutual understanding of the key issues on affordable and sustainable housing procurement identified from multiple disciplinary viewpoints. By collaboratively identifying and defining core concepts from their respective fields, researchers can better understand each other's perspectives. This fosters more meaningful dialogue and allows for a more comprehensive analysis of the problem at hand.

To overcome knowledge and linguistic gaps, creating a shared vocabulary is essential to build mutual understanding of the key issues in affordable and sustainable housing procurement from multiple disciplinary viewpoints. By collaboratively identifying and defining core concepts within their respective fields, researchers can gain a deeper understanding of each other's perspectives. This fosters meaningful dialogue and enables a more comprehensive analysis of the problem.

## 2. Objectives and process

In the context of the transdisciplinary learning and research environment created in RE-DWELL (see Deliverable 4.6), the vocabulary developed by Early Stage Researchers (ESRs) served two key purposes:

- 1 **To summarize the main findings of individual research lines:** ESRs, while working on their PhD thesis, engaged in focused research within a specific direction. The vocabulary allowed them to distil their findings into concise concepts, capturing the essential ideas and results of their work. These concepts served as summaries of the critical insights gained in their respective research areas, expressed in a language that could be easily understood by fellow researchers.
- 2 **To share concepts with peers, highlighting their relevance to the shared research issue:** Communication across disciplines requires making implicit knowledge and assumptions explicit. This involves not only describing a concept, but also explaining its relevance in the context of affordable and sustainable housing and the connections to other areas of research.

## 3. Implementation

The vocabulary was implemented as an online tool integrated into the [project website](#). It was designed and developed by the ARC research group from the coordinating team of the School



of Architecture La Salle, which had already experience with developing online vocabularies for housing studies carried out in previous EU projects<sup>1</sup>.

The vocabulary structure is as follows (Figure 2):

- **Concept:** The unique name assigned to each term.
- **Definitions:** Multiple descriptions of a term, each associated with one of the three RE-DWELL research areas.

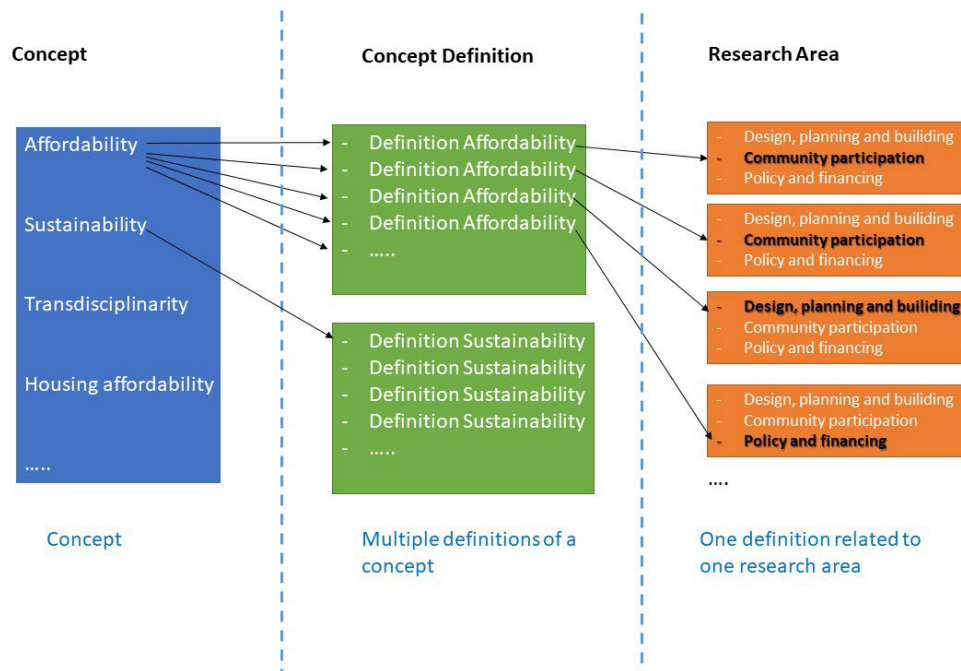


Figure 2. Structure of the vocabulary: concepts, definitions and research areas

The description of a vocabulary entry includes the following fields:

- Description
- Reference sources
- Research area

<sup>1</sup> Madrazo, L., & Massey, J. (2005). HOUSING@ 21. EU. A web-based pedagogic platform for the study of housing in Europe. In *Proceedings of the 23rd eCAADe Conference*. 23rd eCAADe Conference, Lisbon, 21-25 of September 2005.

- Related concepts
- Related cases
- Additional information (files, images, videos)

The entries in the vocabulary can be either single-authored or collaboratively written by network members, including ESRs, supervisors, and partner organizations. They are managed in the back office of the website (Figure 3). Guidelines and recommendations to describe the terms were provided to researchers (see Annex 2 - Guidelines).

The figure consists of two side-by-side screenshots of the RE-DWELL website's back office interface for managing the vocabulary.

The left screenshot shows a list of vocabulary entries. The table has the following columns: ID, name, Date Created, and Definitions. The entries include terms like Homelessness, Financial Viability, Green Land Value Tax, Grant-of-use cooperative housing, Energy Communities, Homeless, Techno-optimism, Housing Quality, Financial Wellbeing, Life Cycle Assessment (LCA), Circular Economy, Thermal Insulation and Airtightness, Prebound Effect, Ecosocial Policy, Social Infrastructure, social infrastructure, Product Platform, Flexibility, Third place, Deliberative Democracy, Environmentally Sustainable Social Housing, Framework, Urban Informality, Direct Action, Collaborative housing, Social Innovation, New Municipalism, Precariat, Financialization, Collaborative Planning, Design Activism, Spatial Agency, Capability Approach, Targeted Universalism, Housing Allowance, Trauma Informed Design, and Third place.

The right screenshot shows the 'New Definition' form. It includes a 'Definition' text area, a 'References' text area, an 'Area' dropdown menu (set to 'Design, planning and building'), an 'Owners' dropdown menu (set to 'Manuel, Leonora - supervisor'), and sections for 'Vocabulary Related', 'Case Related', 'Publications Related', 'Published' (checkbox), 'Images' (+ Add image), 'Files' (+ Add file), and 'Videos' (+ Add video). There are 'Cancel' and 'Save' buttons at the bottom right.

Figure 3. RE-DWELL website back office: Vocabulary

The information entered in the back-office is displayed on the public website (Figure 4). Additionally, it includes a relational map that visually represents the connections between the reference term and other concepts, cases, publications, and blog posts (Figure 5). This map allows users to navigate the website's content in an associative manner, exploring the interconnections between various elements.

RE-DWELL

About • Training • **Knowledge bases** • Resources • Buy items • Contact

Home • Knowledge base • Vocabulary • Energy Poverty Definition

Back to Vocabulary

## Energy Poverty

1. Cloos EBRT

**Area Policy and financing**

The in-depth study of energy poverty as a social phenomenon commenced in the late 19th century through the works of British social researchers Booth and Rowntree (O'Connor, 2018). This area was characterized by significant social and economic transformation, and these scholars were troubled by the living conditions and welfare of impoverished urban populations, who were residing in congested and unsanitary environments.

Throughout the 20th century, poverty in policy contexts became quite narrowly defined as a lack of income. However, it was another social concern in the UK that led to the development of concepts like fuel poverty or 'energy poverty' a century after Booth and Rowntree (1). Following the 1973 oil crisis, the Child Poverty Action Group took the initiative to address how increasing energy costs were affecting low-income households in the UK (Johnson & Rowland, 1978). As essentials like heating, electricity, and fuel became necessary for maintaining a decent standard of living in modern British society, this advocacy group pushed for government financial support. Later, Bradburn and Mutton (1983) introduced a narrower definition of energy poverty: 'The ability to afford adequate heat in the home'. Since then, studies on energy poverty have typically excluded motor fuel, as this falls under transport poverty, a related but separate area of study (Maitelli et al., 2017).

Energy poverty, as defined by Bouzarovski and Petrova (2015, p. 33), refers to 'the inability to secure or afford sufficient domestic energy services that allow for participation in society'. Although the precise boundaries of relevant domestic energy usage are still debated, this definition expands beyond mere heating as it encompasses energy used for cooling, which is particularly relevant in warmer climates (Thomson et al., 2019). Moreover, it enables a socially and culturally dependent understanding of what it means to participate in society (Middlemiss et al., 2019). On 15 September 2023, the European Union (2023) officially defined energy poverty as 'a household's lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, created by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes'.

The doctoral thesis and subsequent book by Rosalee Bradburn, 'Fuel significant breakthrough in energy poverty research. She emphasized the detrimental impact of inefficient housing on health and quality of life. In the decade that followed, substantial literature confirmed her qualitative findings (Thomson et al., 2017). Notably, studies have demonstrated the adverse effects of living in energy poverty on physical health (Liddell & Morris, 2010), mental health (Liddell & Quiney, 2015), stress levels (Loughlin & Hargrave, 2018), social isolation (Harrison et al., 2005), and absenteeism (Howden-Chapman et al., 2007).

Boardman's work introduced an indicator that has remained influential to this date, although it was not the first attempt to operationalise the concept of fuel poverty (Hetherwood & Hancock, 1978). His '2M' indicator categorises a household an energy poor if it needs to allocate twice the median share of its budget for energy expenses to heat its home adequately. Boardman calculated this threshold to be 30% at that time. Due to its simplicity and ease of comprehension, many governments directly adopted this 30% threshold without considering specific contextual circumstances. Since the early 1990s, numerous attempts have been made to develop alternative indicators. Highly influential ones include Low Income High Cost (LIHC) by John Hills (2012), Low Income Low Energy Efficiency (LILEE) that subsequently became the official British indicator (BEIS, 2022), and a 'hidden' energy poverty indicator by Meyer et al. (2018). Critics of these indicators focus, amongst other things, on their simplicity and perceived 'technocratic' approach (Cloon et al., 2023; Middlemiss, 2017).

This marked the beginning of significant government commitment, initially in the UK and later in other countries to address energy poverty. Although certain forms of cold weather payments had already been introduced by the UK's Conservative administrations, it was under the successive governments of Blair and Brown, following the publication of Boardman's work, that programmes such as the Winter Fuel Payment and Warm Home Discount were implemented (Boh et al., 2012). The UK examples highlight bipartisan support for addressing energy poverty, with both the Conservatives and Labour backing these efforts. This policy objective has also gained momentum in various legislative contexts, leading the EU to incorporate energy poverty alleviation as a fundamental pillar of the European Green Deal and a specific goal of its landmark Social Climate Fund (European Commission, 2021).

Over the last three decades, public interest in energy poverty as a 'wicked' problem has surged, particularly during the recent energy crisis. This crisis began in 2021 when energy markets tightened due to a post-pandemic economic rebound, and it worsened dramatically after Russia's invasion of Ukraine in February 2022 (BEA, 2023). Extensive research on the impact of this price surge on energy poverty levels has been carried out throughout Europe and globally (Guan et al., 2023; Stenhammar, 2023). Consequently, energy poverty has become a significant focal point in discussions related to the 'just transition', especially within the realm of energy justice, as it serves as a valuable concept for targeting policies towards a specific vulnerable group in this context (Carnoso & De Vido, 2023).

(1) Fuel poverty' and 'energy poverty' are used interchangeably, with the former being more common in the UK and the latter in mainland Europe (Bouzarovski & Petrova, 2015). Previously, scholars in the UK used 'energy poverty' to denote a lack of access to energy and 'fuel poverty' when affordability was the concern (Li et al., 2016). However, this distinction is no longer maintained.

**References**

BEIS. (2022). Methodology handbook LILEE with projection. <https://www.beis.gov.uk/energy-poverty/methodology-handbook>

Booth, B. (1991). Fuel Poverty: From Cold Homes to Affordable Warmth. Peter Pluck.

Bouzarovski, S., & Petrova, S. (2015). A global perspective on domestic energy demand on Overcoming the energy poverty-fuel poverty binary. Energy Research & Social Science, 10, 17-31. <https://doi.org/10.1016/j.erss.2015.07.012>

Bradburn, J., & Hutton, C. (1983). Social policy options and fuel poverty. Journal of Eco-nomic Psychology, 3(3-4), 249-256.

Carnoso, S., & De Vido, L. (2023). Towards eco-social policies to tackle the socio-ecological crisis: energy poverty as an interface between welfare and environment. Environmental Economics, 43(2), 247-276. <https://doi.org/10.1007/s10647-023-10123-7>

Cloon, T. M., Heikkinen, J. S. C. M., Elsing, M. G., Della Langa, C., & Muller, P. (2023). Beyond household energy poverty: Exploring the effect of energy poverty on the life cycle energy. Energy Policy, 181, 113454. <https://doi.org/10.1016/j.enpol.2023.113454>

European Commission. (2021). Proposal for a Regulation of the European Parliament and of the Council Establishing a Social Climate Fund. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0107&fromDoc=52021PC0107>

European Union. (2023). Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2018/848. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023D1791>

Guan, Y., Yan, J., Shan, Y., Zhou, Y., Hang, Y., Li, L., & Haidan, K. (2023). Burden of the global energy price crisis on households. Nature Energy, 8(5), 361-374.

Hargrove, B. E., Heyman, B., Marheine-Fore, N., Stockton, H., Rich, N., & Heiman, A. (2005). Keeping warm and staying well: Findings from the qualitative arm of the 10 m Homes Project. Health Soc Care Community, 13, 259-267. <https://doi.org/10.1111/j.1471-2591.2005.00596.x>

Hills, J. (2012). Getting the measure of fuel poverty: final report of the Fuel Poverty Review. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/145153](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/145153)

Howden-Chapman, F., Matheson, A., Crane, J., Viggers, H., Cunningham, M., Bailey, T., Cunningham, P., Woodson, A., Saville-Smith, K., O'Dea, D., Hancock, M., Bales, M., McKee, A., Chapman, B., & Stone, G. (2007). No. 21. Effect of residential energy prices on health inequality: cluster randomised study in the community. BMJ, 335(7679), 460. <https://doi.org/10.1136/bmj.335.7679.460>

IEA. (2023). Global Energy Crisis: How the energy price crisis started, how global energy markets are responding for daily life, and what governments are doing about it. <https://www.iea.org/en/global-report/energy-crisis>

Inghamson, B. C., & Hancock, R. M. (1978). Household expenditure on fuel distribution districts. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/145153](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/145153)

Johnson, M., & Rowland, M. (1978). Fuel Debt & The Poor.

Koh, L., Marcano, S., Gouveia, A., & Brennan, A. (2017). Fuel Poverty: Perspectives 10 on the front line. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/622222/fuel-poverty-perspectives-10-on-the-front-line.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/622222/fuel-poverty-perspectives-10-on-the-front-line.pdf)

Li, L., Liang, R., Liang, X., & Wu, Y. (2016). Energy poor or fuel poor: what are the differentiators? Energy Policy, 68, 478-481. <https://doi.org/10.1016/j.enpol.2014.11.024>

Liddell, C., & Quiney, C. (2010). May, Living in cold and damp homes: frameworks for a re-evaluation of energy poverty. Public Health, 124(5), 379-389. <https://doi.org/10.1016/j.puhe.2010.03.012>

Liddell, C., & Morris, C. (2010). Fuel poverty and human health: a review of recent evidence. Energy Policy, 38(6), 2987-2999. <https://doi.org/10.1016/j.enpol.2010.01.037>

Loughran, N., & Hargrave, T. (2016). Emotions and fuel poverty: The lived experience of social housing tenants in the United Kingdom. Energy Research & Social Science, 10, 17-31. <https://doi.org/10.1016/j.erss.2015.07.012>

Maitelli, D., Lusa, K., & Mandel, D. (2017). Transport poverty and fuel poverty in the U.K. From energy to mobility. Transportation Policy, 59, 93-105. <https://doi.org/10.1016/j.tranpol.2017.07.002>

Meyer, S., Laurence, H., Bart, D., Middlemiss, L., & Marwick, K. (2018). Capturing the unaffordable nature of energy poverty: Lessons from Bulgaria. Energy Research & Social Science, 45, 275-283. <https://doi.org/10.1016/j.erss.2018.01.017>

Middlemiss, L. (2017). A critical analysis of the new politics of fuel poverty in England. Critical Policy Policy, 47(3), 459-473. <https://doi.org/10.1080/03090844.2017.1331827>

Middlemiss, L., Ambrosio-Alcalá, P., Ferrer, H., Ollari, S., Ollari, S., Ollari, S., Ollari, S., Ollari, S., Ollari, S., Ryan, T., Small, C., & Tol, A. (2019). Energy poverty and social justice: a capabilities approach. Energy Research & Social Science, 45, 227-239. <https://doi.org/10.1016/j.erss.2018.01.017>

O'Connor, A. (2018). Poverty knowledge and the history of poverty research. In G. Bradburn & L. L. Barton (Eds.), The Oxford Handbook of the Social Science of Poverty (pp. 169-192). Oxford University Press.

Smeets, P. (2023). Fuel poverty in Governmental historical and critical aspects of its a 2022 energy crisis. Cambridge Working Papers in Economics, 2235. <https://www.cambridge.org/core>

Thomson, H., Bradburn, R., Bouzarovski, S., & Petrova, S. (2018). Energy poverty and its poor cooling: An overlooked issue in Europe. Energy and Buildings, 176, 21-29. <https://doi.org/10.1016/j.enbuild.2018.02.041>

Thomson, H., Small, C., & Bouzarovski, S. (2015). May 21, Health, Well-Being and Energy Poverty in Europe: A Comparative Study of 32 European Countries. In J. Environ & Public Health, 8(10), 1000-1010. <https://doi.org/10.3390/ehp8101000>

Created on 17-10-2023 | Updated on 06-10-2023

O'Connor, A. (2018). Poverty knowledge and the history of poverty research. In G. Bradburn & L. L. Barton (Eds.), The Oxford Handbook of the Social Science of Poverty (pp. 169-192). Oxford University Press.

Smeets, P. (2023). Fuel poverty in Governmental historical and critical aspects of its a 2022 energy crisis. Cambridge Working Papers in Economics, 2235. <https://www.cambridge.org/core>

Thomson, H., Bradburn, R., Bouzarovski, S., & Petrova, S. (2018). Energy poverty and its poor cooling: An overlooked issue in Europe. Energy and Buildings, 176, 21-29. <https://doi.org/10.1016/j.enbuild.2018.02.041>

Thomson, H., Small, C., & Bouzarovski, S. (2015). May 21, Health, Well-Being and Energy Poverty in Europe: A Comparative Study of 32 European Countries. In J. Environ & Public Health, 8(10), 1000-1010. <https://doi.org/10.3390/ehp8101000>

Created on 17-10-2023 | Updated on 06-10-2023

**Related definitions**

**Just Transition**  
Author: T. Cloos (EBRT)

Area Policy and financing  
Justice theory is as old as philosophical thought itself, but the contemporary debate often departs from the Rawlsian understanding of justice (Velezquez, Andre, Daniels, & Meyer, 1990). Rawls (1971) argued that societal harmony depends on the extent to which community members believe their political institutions treat them justly. His First...

Created on 01-09-2022 | Updated on 09-09-2022

Read more >

**Performance Gap in Retrofit**  
Author: S. Farman (EBRT)

Area: Energy, planning and building  
The performance gap in retrofit refers to the disparity between the predicted and actual energy consumption after a retrofit project, measured in kWh/m2/year. This discrepancy can be substantial, occasionally reaching up to five times the predicted energy usage (Thomson, 2018; Sunikka-Blau & Galvin (2012) identify four key factors as contributing to...

Created on 08-09-2023 | Updated on 01-10-2023

Read more >

**Social Value**  
Author: L. Reunanen (EBRT)

Area: Community participation  
Social value (SV) is a wide-ranging concept that encompasses the wider economic, social and environmental well-being impacts of a specific activity. Given its applicability across various sectors, diverse interpretations and definitions exist, often leading to its interchangeable use with other terms, such as social impact. This interchangeability may...

Created on 09-10-2023 | Updated on 02-12-2023

Read more >

**Financial Wellbeing**  
Author: K. Knight (Department)

Area: Energy, planning and building  
Financial wellbeing is an emerging concept with various definitions, many of which focus on the financial capabilities of individuals. A household's financial wellbeing encompasses its capacity to consistently meet current and ongoing financial responsibilities, fostering a sense of security about future obligations while enjoying the ability to make life choices (Aubrey ...

Created on 16-10-2024 | Updated on 04-10-2024

Read more >

**Related cases**

**Pre-1910s Middleclass Road Retrofit - An Example of Ca...**  
Created on 13-10-2023

**A Combined Energy Efficiency and Levelling Up...**  
Created on 25-09-2024

Efforts to target renovation subsidies, particularly in area...  
T. Cloos EBRT

Read more >

**Related publications**

Energy poverty alleviation by social housing providers: A qualitative investigation of targeted interventions in France, England, and the Netherlands  
ARTICLE  
Posted on 22-10-2024

Read more >

**Relational graph**

Case Study | Contact | Publisher | Regions

RE-DWELL

Quick links: Network, Work packages, Training, Programs, Projects

Legal information: Privacy policy, Terms & conditions, Cookie policy

Follow us: Twitter, LinkedIn, Instagram, Facebook, YouTube

© Design and programming by AEC Engineering and Architecture | La Sola

Figure 4. Vocabulary entry “Energy poverty” displayed on the website



The vocabulary and case library content has been exported as an RDF dataset, including metadata that third parties can use in applications related to housing affordability and sustainability at various scales. This dataset is publicly available on [Zenodo](#).

## 4. Vocabulary entries

Over the three-year project duration, a total of 80 vocabulary entries have been created ESRs, either individually or in collaboration with peers and supervisors. Each term is linked to a specific research area, distributed as follows:

- **Design, Planning, and Building:** 40 entries
- **Community Participation:** 21 entries
- **Policy and Financing:** 19 entries

This distribution reflects the predominant backgrounds of the ESRs, who primarily come from architecture and planning disciplines. Most entries were authored individually by ESRs, with 8 entries produced collaboratively among peers and 14 developed in partnership with supervisors.

Even though the vocabulary structured allowed for multiple definitions of the same term, provided by multiple authors, this feature was only used in three key terms: affordability (3 definitions), sustainability (5) and transdisciplinarity (3).

In addition to entries related to research areas, there have been entries focusing on research methodology such as “Capability Approach”, “Critical Utopian Action Research”, “Framework”, “Direct Action”, “Path Dependence.”

## 5. Vocabulary as learning tool and resource

During the network activities, we used the content collectively created in the vocabulary as a learning tool and resource in various contexts while adopting a diverse range of learning strategies to foster the collaborative creation of knowledge across fields and researchers.

- **RMT1 course: vocabulary workshop – October 2021.** A session of this [course](#) introduced students to have a knowledge of key housing terminology. The task for students was to propose the terms and critically reflect on their importance for their own research and for the overall field of affordable and sustainable housing. The collective work was summarized in a table, with the proposed concepts aligned to the researchers/institutions (Figure 7).

Resource for RMT1\_Task 1  
**LIST OF KEY TERMS SUGGESTED BY RE-DWELL RESEARCHERS**

Key term	RE-DWELL institution(s) that proposed the term
housing <b>affordability</b>	UREAD CSS UPV UNIZG FUNITEC TUD
housing <b>action-research</b> collaboration	ISCTE
housing <b>actors</b>	UGA
housing <b>advocacy</b>	UNIZG
housing <b>co-creation</b>	UCY
housing <b>co-design</b>	UCY
housing <b>co-housing</b>	CSS UNIZG
housing <b>co-production</b> of housing	UNIZG
housing <b>co-production</b> of knowledge	ISCTE
housing <b>collaborative</b> design process	UCY USFD
housing <b>collaborative</b> housing research	UCY USFD
sustainable <b>communities</b>	FUNITEC USFD
housing <b>cooperatives</b> / cooperation	CSS UPV
urban affordability <b>crisis</b>	TUD
urban affordability <b>decision support method</b>	UPV
housing <b>delivery</b>	UREAD
housing <b>eco villages</b>	FUNITEC
housing <b>energy poverty</b>	TUD
housing <b>finance</b>	CSS
housing <b>frame innovation</b>	TUD
housing, urban <b>governance</b>	ISCTE
housing, urban <b>green housing</b>	UGA UNIZG TUD
urban <b>health / healthy</b> housing	FUNITEC
urban <b>home</b>	CSS FUNITEC UREAD
housing <b>human-centered</b> (design)	TUD
housing <b>inclusive</b> (housing)	UPV
housing <b>industrialised</b> (housing)	TUD
housing <b>innovations</b>	FUNITEC
housing <b>integrated knowledge production</b>	UNIZG
housing <b>knowledge-in-practice</b>	ISCTE
housing <b>landlord</b> (and equivalents in other languages)	ISCTE
housing <b>learning by doing</b>	UREAD
Social <b>Life Cycle Assessment</b> (LCA- SLCA)	ISCTE
housing <b>liveability</b>	CSS
housing <b>market rental</b>	FUNITEC
housing <b>mass-customized</b> housing	CSS
housing <b>mixed methods</b>	UGA
housing <b>mortgage</b>	CSS
housing <b>multicriteria assessment</b>	UPV
housing <b>multidimensionality</b>	USFD
housing <b>negotiation</b>	UGA
housing <b>neighbourhood</b>	CSS
housing <b>objectivity / subjectivity</b>	UGA
housing <b>participation</b>	UREAD
housing <b>place</b>	UREAD
public <b>policies</b>	UGA UPV TUD
public <b>post-occupancy evaluation</b>	FUNITEC
housing <b>practice-based</b> research	ISCTE
housing <b>quality</b>	TUD
housing <b>quality of life</b>	UGA UREAD
housing <b>reflective practice</b>	ISCTE
housing <b>regeneration schemes</b>	UGA
housing <b>regime</b>	CSS
housing <b>research by design</b>	ISCTE
urban <b>resilience</b>	UGA FUNITEC TUD
housing <b>retrofit</b> / renovation	UREAD UPV
inter-, cross-, trans- <b>sectoral</b>	USFD
inter-, cross-, trans- <b>social</b> (rental) housing	CSS UNIZG FUNITEC USFD
inter-, cross-, trans- <b>social evaluation</b>	UGA
housing as <b>social investment</b>	UNIZG
housing <b>social mix</b>	UNIZG
housing <b>stakeholders</b>	UGA
housing <b>state funded</b> housing	UREAD
housing <b>subsidies</b>	CSS
housing <b>sustainability</b>	UREAD UNIZG FUNITEC TUD UPV
housing <b>tenure</b>	CSS UREAD
housing <b>transdisciplinary</b> research	ISCTE
housing <b>transitions</b>	UGA
social / urban <b>urban development</b>	TUD
social / urban <b>vulnerability</b>	FUNITEC UGA
social / urban <b>welfare regime</b>	CSS
social / urban <b>well-being</b>	UGA UPV FUNITEC

Figure 7. Concepts proposed by researchers produced in the RMT1 course

The responses provided by researchers to the course evaluation form confirmed the usefulness of the vocabulary tool:

*“The session 5 on vocabulary was very useful for me, as it related to research methods.”*

*“The best part of the whole course! It was interesting and useful to understand the importance of identifying my research key terms from the start. Besides, it simplified the idea of definitions.”*

*“Most relevant as we are at the stage of dealing with definitions and fit well with ESRs timing.”*

*“The vocabulary tasks have been extremely useful and related to my individual work. It has also helped to forged new connections with ESRs which have led to other fruitful conversations about our projects and the potential to write a joint paper.”*



## - Budapest workshop – March 2022

A session dedicated to working on the vocabulary was included in the [workshop programme](#). It consisted of two parts.

**1. Peer review of entries.** ESRs were tasked with peer-reviewing a vocabulary entry written by another peer (Figures 8 and 9), answering the following questions:

- Is it relevant to the network's research?
- Is it intelligible and well-written?
- Are the references used correctly? Do they provide authoritative arguments that are well integrated into the narrative?
- Do the references conform to APA style?

**2. Hands-on team activity.** The ESRs, organized into teams, worked with the content produced so far in the vocabulary (Figure 10):

- Relating terms
- Creating groups of terms

The image shows a slide titled "Specific comments" with three bullet points. To the right, there are three text excerpts from a document, each with a yellow highlight. The slide footer includes the RE-DWELL logo, the text "Budapest Workshop | Peer Review", and the number "4".

**Specific comments**

- Better to reference peer reviewed sources for the base definition rather than conference proceedings (Smith, 2007).
- Clarify the design stages, from the briefing stage until deconstruction for instance - is an LCCA cradle-to-cradle? What about profiting from waste materials? Or in relation to energy efficiency; energy-positive buildings can supply back to the grid (and provide income).
- Would start this sentence with "However,..." as this sentence contradicts the previous statement - also preferable not to start the sentence with "Moreover" twice in close succession.

The life cycle costs (LCC) of owning or renting a house incorporate initial capital acquisition costs, financing costs, operational costs, and finally its disposable costs when applicable (Goh & Sun, 2016; Kubba, 2010; Smith, 2007). LCC is the sum of all these costs that are reduced to the present-day values

Life Cycle Cost Analysis (LCCA) is commonly adopted in the building industry by cost estimating engineers to assist investment decision making (Liu & Qian, 2019). It is used as an economic analysis method to estimate the costs of different design alternatives over its whole life cycle from early design stages where the most influential building decisions are made. For instance, research has shown that

designing and constructing the building. Moreover, 80% of the operation, maintenance, and replacement costs can be influenced in the first 20% of the design process (Karatas & El-Rayes, 2014). Thus, LCCA would have a substantial influence when performed early in the design process to allow any needed design refinements or modifications to take place (Kubba, 2010). Moreover, prioritizing the reduction of initial costs when selecting a design alternative, regardless their effect on maintenance and repair costs, may not lead to an economically efficient building during its life cycle (Rad et al., 2021).

RE-DWELL  
MBCA-ETH

Budapest Workshop | Peer Review

4

Figure 8. Peer review of the term "Life Cycle Cost Analysis" by Aya Elghandour, conducted by Annette Davis

### Specific Suggestions

- Start with the definition: **sustainability is...**
- Try to be consistent on the way you quote (*italics* or *regular*)
- Quotations here don't offer much. Paragraph 3 in your own words might have a better flow and more direct understanding. It is slightly 'wordy'.

1 • Sustainability has been a **focus point of interest** for the past 20 years for researchers, policy makers, corporations as well as local communities, and activist groups, among others (Purvis et al., 2015). A relatively general and ambiguous term, sustainability is primarily defined as **"meeting the needs and desires of the present without compromising the ability of future generations to meet their own needs"** (United Nations, 1987) and is often interpreted as the strategies adopted towards sustainability with the latter being the overall goal/vision (Desenford, 2000).

2 • The ambiguity and vagueness that characterises both of these terms has contributed to their leap into the global mainstream as well as the broad political consensus regarding their value and significance (Mebratu, 1998; Purvis et al., 2015), rendering them one of the dominant discourses in environmental, socio-political and economic issues (Tulloch, 2013). It is, however, highly contested whether their institutionalisation is a positive development. Tulloch, and Tulloch & Nielson (2013; 2014) argue that these terms - as they are currently understood - are the outcome of the **"colonisation of environmental thought and action"** which, **during the 1960s and 1970s**, argued that economic growth and ecological sustainability within the capitalist system were contradictory pursuits. This "colonisation" resulted in the disempowerment of such discourses and their subsequent **"subordination to neoliberal hegemony"** (Tulloch & Neilson, 2014, p. 26). Thus, sustainability and sustainable development, when articulated within neoliberalism, not only reinforce it, through practices such as greenwashing, but also fail to address the intrinsic issues of a system that operates on, safeguards, and prioritises economic profit over social and ecological well-being (Jakobsen, 2022).

3 • Murray Bookchin, in *"The Ecology of Freedom"* proposes that social and environmental issues are profoundly entangled, and their origin can be traced to **"the very notion of the domination of nature by man [which] stems from the very real domination of human by human"** (1982). In order to re-radicalise sustainability, we need to undertake the utopian task of revisiting our intra-relating, breaking-down the underlying hierarchical relations, and re-stitching our social fabric. As Nabeel Hamdi suggested, (2004, p. xix) **"in order to do something big [...] one starts with something small and one starts where it counts"**. The intra-relating between and within the different molecules a society consists of, i.e. the communities, is what defines how sustainability is understood and practised (or performed) within both these different communities and the society they form. In other words, a reconfigured, non-hierarchical, non-dominating intra-relate is what can allow for an equitable, **long-term setting for human activity and interaction** (Dempsey et al., 2011, p. 290), i.e. a sustainable community/society.



Figure 9. Peer review of the term "Sustainability through community participation" by Effrosyni Roussou, conducted by Androniki Pappa

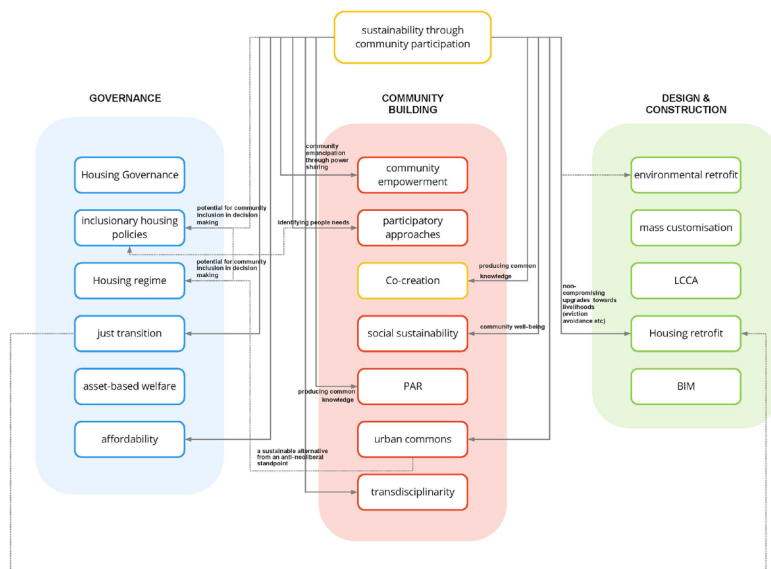


Figure 10. Clustering and interrelating concepts from the vocabulary, by Effrosyni Roussou

The responses provided by researchers to the vocabulary session in the workshop evaluation were the following:

*"It was really good and more useful to discuss in small groups"*

*"I really like the way in which the session was addressed. Instead of giving another presentation of a peer review, we had the chance to discuss with our colleagues and give and get more insights about our writing in a more informal but informative fashion."*



*“(...) I genuinely appreciate shifting the work to groups, and it was helpful and more efficient.”*

## 6. Competencies

The collaborative construction of a shared vocabulary enables researchers to develop competencies in systems thinking, interpersonal skills, and knowledge co-creation within an interdisciplinary context.

The process of developing a shared vocabulary fosters collaboration and the integration of diverse perspectives. By collectively defining terms and concepts, researchers can gain a deeper understanding of the interconnections and relationships within the various fields involved in affordable and sustainable housing. Establishing a common language helps bridge gaps between disciplines, enabling researchers to leverage their unique strengths and insights. Integrating this vocabulary tool into training activities not only facilitates knowledge acquisition but also promotes critical thinking and fosters meaningful discussions among researchers from different fields.

## 7. Conclusions

The vocabulary served as a repository of shared knowledge, providing researchers with access to their peers' research, summarized in key concepts. The glossary fostered an environment of collective learning, enabling participants to learn from each other's research findings, methodologies, and perspectives. By engaging with the vocabulary, network members expanded their understanding of various topics related to affordable and sustainable housing, reaching beyond their areas of expertise.

The vocabulary will remain publicly accessible beyond the project's lifetime and has the potential to grow further, with additional contributions from former ESRs and other interested parties who are granted access. This will allow it to continue serving as a valuable resource for future researchers, helping them frame issues related to affordable and sustainable housing from a transdisciplinary perspective. Moreover, the current vocabulary can be used by third parties as a learning resource in educational activities, particularly at the graduate and postgraduate levels.

## Annex 1 - Concepts

Table 1 summarizes the terms included in the vocabulary, with links to the corresponding website content for further details.

Table 1. Vocabulary entries

Concept	Area	Related terms	Related case studies	Authors
<a href="#">Affordability (8)</a>	Policy and financing	<a href="#">Affordability (30)</a> <a href="#">Affordability (41)</a> <a href="#">Social Housing</a> <a href="#">Measuring Housing Affordability</a> <a href="#">Housing Allowance</a> <a href="#">Financialization</a> <a href="#">Deliberative Democracy</a> <a href="#">Financial Wellbeing</a> <a href="#">Housing Quality</a> <a href="#">Techno-optimism</a> <a href="#">Homelessness</a> <a href="#">Thermal Insulation &amp; Airtightness</a>		<a href="#">Christophe Verrier (ESR3)</a>
<a href="#">Affordability (30)</a>	Design, planning and building	<a href="#">Affordability (8)</a> <a href="#">Financial Wellbeing</a>	<a href="#">Diagoon Houses</a> <a href="#">Housing Retrofit Subsidies in the Netherlands</a> <a href="#">Knight's Walk (Lambeth's Homes)</a>	<a href="#">Leonardo Ricaurte (ESR 15)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">Housing Regime</a> <a href="#">Mass Customisation</a> <a href="#">Life Cycle Costing</a> <a href="#">Measuring Housing Affordability</a>	<a href="#">La Borda</a> <a href="#">The Elwood Project, Vancouver, Washington</a>	
<a href="#">Affordability (41)</a>	Policy and financing	<a href="#">Affordability (8)</a> <a href="#">Housing Regime</a> <a href="#">Housing Affordability</a> <a href="#">Financial Wellbeing</a> <a href="#">Green Land Value Tax</a> <a href="#">Viability</a>		<a href="#">Marietta Haffner (supervisor)</a> <a href="#">Alex Fernandez (ESR 12)</a>
<a href="#">Asset-based Welfare</a>	Policy and financing			<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">BIM</a>	Design, planning and building	<a href="#">Transdisciplinarity</a> <a href="#">Mass Customisation</a> <a href="#">Life Cycle Costing</a>	<a href="#">Solar Decathlon Europe 2022</a>	<a href="#">Annette Davis (ESR 1)</a> <a href="#">Aya Elghandour (ESR 4)</a>
<a href="#">Building Decarbonisation</a>	Design, planning and building	<a href="#">Sustainability</a> <a href="#">Sustainability Built Environment</a>	<a href="#">85 Social Housing Units in Cornellà</a> <a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">Deben Fields (Garrison Lane)</a> <a href="#">ESG finance and social housing decarbonisation</a> <a href="#">Knight's Walk (Lambeth's Homes)</a> <a href="#">North Wingfield Road social housing complex.</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Capability Approach</a>	Community participation	<a href="#">Community Empowerment</a>		<a href="#">Zoe Tzika (ESR 10)</a>

Concept	Area	Related terms	Related case studies	Authors
<a href="#">Circular Economy</a>	Design, planning and building	<a href="#">Design for Disassembly</a> <a href="#">Industrialised Construction</a> <a href="#">Life Cycle Assessment (LCA)</a>	<a href="#">WikiHouse: South Yorkshire Housing Association</a>	<a href="#">Annette Davis (ESR 1)</a>
<a href="#">Co-creation</a>	Community participation	<a href="#">Social Value</a>	<a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Diagoon Houses</a> <a href="#">Die Baupiloten Berlin</a> <a href="#">La Borda</a> <a href="#">Marmalade Lane</a> <a href="#">Navarinou Park</a> <a href="#">Patch22</a>	<a href="#">Andreas Panagidis (ESR 8)</a> <a href="#">Effrosyni Roussou (ESR 9)</a>
<a href="#">Collaborative Governance</a>	Community participation	<a href="#">Housing Governance</a> <a href="#">Community Empowerment</a>	<a href="#">Fondazione per l'Innovazione Urbana (FIU)</a> <a href="#">Lleialtat Santseca Civic Centre</a> <a href="#">Self-Organisation in a New Dutch Suburb: Housing development in Oosterwold</a>	<a href="#">Andreas Panagidis (ESR 8)</a>
<a href="#">Collaborative housing</a>	Policy and financing	<a href="#">Participatory Approaches</a>		<a href="#">Lucia Chaloin (ESR 3)</a>
<a href="#">Collaborative Planning</a>	Design, planning and building	<a href="#">Co-creation</a> <a href="#">Collaborative Governance</a> <a href="#">Placemaking</a>	<a href="#">Broadwater Farm Urban Design Framework</a>	<a href="#">Andreas Panagidis (ESR 8)</a>
<a href="#">Community Empowerment</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Social Sustainability</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">Co-operative housing project in Croatia: the case of the city of Križevci</a> <a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Diagoon Houses</a> <a href="#">La Borda</a> <a href="#">LiLa4Green</a> <a href="#">Marmalade Lane</a> <a href="#">Mehr als wohnen – More than housing</a> <a href="#">Navarinou Park</a> <a href="#">Rural Studio</a> <a href="#">The Elwood Project, Vancouver, Washington</a>	<a href="#">Zoe Tzika (ESR 10)</a>

Concept	Area	Related terms	Related case studies	Authors
<a href="#">Community-led Housing</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Urban Commons</a>	<a href="#">Can70 senior cooperative housing: Aging in community</a> <a href="#">Co-operative housing project in Croatia: the case of the city of Križevci</a> <a href="#">La Borda</a> <a href="#">Mehr als wohnen – More than housing</a>	<a href="#">Zoe Tzika (ESR 10)</a>
<a href="#">Critical Utopian Action Research</a>	Community participation			<a href="#">Anna Martin (ESR 7)</a>
<a href="#">Deliberative Democracy</a>	Community participation	<a href="#">Affordability</a> <a href="#">Co-creation</a> <a href="#">Housing</a> <a href="#">Governance</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Just Transition</a> <a href="#">Urban Commons</a> <a href="#">Community-led Housing</a> <a href="#">Post-occupancy Evaluation</a> <a href="#">Public-civic Partnership</a>		<a href="#">Leonardo Ricaurte (ESR 15)</a> <a href="#">Anna Martin (ESR 7)</a>
<a href="#">Design Activism</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Urban Commons</a>	<a href="#">Die Baupiloten Berlin</a>	<a href="#">Effrosyni Roussou (ESR 9)</a>
<a href="#">Design for Dissassembly</a>	Design, planning and building		<a href="#">85 Social Housing Units in Cornellà</a> <a href="#">APROP   Temporary social housing for people at risk to residential exclusion</a> <a href="#">Flexwoningen Oosterdreef</a> <a href="#">Patch22</a>	<a href="#">Annette Davis (ESR 1)</a>

Concept	Area	Related terms	Related case studies	Authors
			<a href="#">Solar Decathlon Europe 2022</a> <a href="#">WikiHouse: South Yorkshire Housing Association</a>	
<a href="#">Direct Action</a>	Community participation	<a href="#">Urban Commons</a> <a href="#">Spatial Agency</a> <a href="#">Design Activism</a>	<a href="#">Navarinou Park</a>	<a href="#">Effrosyni Roussou (ESR 9)</a>
<a href="#">Ecosocial Policy</a>	Policy and financing	<a href="#">Just Transition</a>		<a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Energy Communities</a>	Design, planning and building			<a href="#">Anna Martin (ESR 7)</a>
<a href="#">Energy Poverty</a>	Policy and financing	<a href="#">Just Transition</a>	<a href="#">A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds'</a> <a href="#">Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health</a>	<a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Energy Retrofit</a>	Design, planning and building	<a href="#">Housing Retrofit Sustainability</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">HOUSEFUL: Els Mestres, Sabadell</a> <a href="#">Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health</a> <a href="#">The Sutton Estate Regeneration, Chelsea</a>	<a href="#">Saskia Furman (ESR 2)</a>
<a href="#">Environmentally Sustainable Social Housing</a>	Design, planning and building	<a href="#">Social Sustainability</a> <a href="#">Sustainability</a> <a href="#">Sustainability Built Environment</a> <a href="#">Mass Customisation</a> <a href="#">Social Housing</a> <a href="#">Life Cycle Assessment (LCA)</a>	<a href="#">Deben Fields (Garrison Lane)</a> <a href="#">Knight's Walk (Lambeth's Homes)</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Financial Wellbeing</a>	Design, planning and building	<a href="#">Affordability</a> <a href="#">Community Empowerment</a> <a href="#">Just Transition</a> <a href="#">Social Sustainability</a> <a href="#">Urban Commons</a> <a href="#">Life Cycle Costing</a> <a href="#">Housing</a>	<a href="#">A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds'</a> <a href="#">Can70 senior cooperative housing: Aging in community</a> <a href="#">ESG for Social Housing</a> <a href="#">Housing Retrofit Subsidies in the Netherlands</a> <a href="#">La Borda</a> <a href="#">Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and Health</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Aya Elghandour (ESR 4)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">Affordability</a> <a href="#">Energy Poverty</a> <a href="#">Social Value</a> <a href="#">Financialization</a>	<a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	
<a href="#">Financialization</a>	Policy and financing	<a href="#">Affordability</a> <a href="#">Asset-based</a> <a href="#">Welfare</a>		<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">Flexibility</a>	Design, planning and building	<a href="#">Community Empowerment</a> <a href="#">Design for Dissassembly</a> <a href="#">Industrialised Construction</a> <a href="#">Open Building</a>	<a href="#">Diagoon Houses</a> <a href="#">Flexwoningen Oosterdreef</a> <a href="#">La Borda</a> <a href="#">Marmalade Lane</a> <a href="#">Patch22</a>	<a href="#">Carolina Martín (ESR 14)</a>
<a href="#">Framework</a>	Design, planning and building	<a href="#">Co-creation</a> <a href="#">Housing Retrofit Participatory Approaches</a> <a href="#">Housing Regime Sustainability</a> <a href="#">Sustainability Built Environment</a> <a href="#">Housing Policy</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">ESG finance and social housing decarbonisation</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Grant-of-use cooperative housing</a>	Design, planning and building		<a href="#">Can70 senior cooperative housing: Aging in community</a> <a href="#">La Borda</a>	<a href="#">Zoe Tzika (ESR 10)</a>
<a href="#">Green Land Value Tax</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Affordability</a>	<a href="#">Housing Retrofit Subsidies in the Netherlands</a>	<a href="#">Alex Fernandez (ESR 12)</a>
<a href="#">Homelessness</a>	Policy and financing	<a href="#">Affordability</a> <a href="#">Just Transition</a>		<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">Housing Affordability</a>	Design, planning and building	<a href="#">Sustainability</a> <a href="#">Life Cycle Costing</a> <a href="#">Affordability</a> <a href="#">Social Housing</a>	<a href="#">ESG finance and social housing decarbonisation</a> <a href="#">LILAC_Low Impact Living Affordable Community_Leeds</a> <a href="#">Mason Place Apartments</a> <a href="#">Rural Studio</a> <a href="#">The Social Climate Fund: Materialising Just Transition Principles?</a> <a href="#">WikiHouse: South Yorkshire Housing Association</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Aya Elghandour (ESR 4)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">Community-led Housing</a>	<a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	
<a href="#">Housing Allowance</a>	Design, planning and building	<a href="#">Affordability Housing Policy</a>		<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">Housing Governance</a>	Policy and financing		<a href="#">ESG finance and social housing decarbonisation Housing Fund of the Republic of Slovenia</a>	<a href="#">Marko Horvat (ESR 6)</a> <a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Housing Policy</a>	Policy and financing		<a href="#">ESG finance and social housing decarbonisation Housing Retrofit Subsidies in the Netherlands</a>	<a href="#">Marietta Haffner (supervisor)</a> <a href="#">Alex Fernandez (ESR 12)</a>
<a href="#">Housing Quality</a>	Design, planning and building	<a href="#">Affordability</a> <a href="#">Energy Retrofit</a> <a href="#">Community Empowerment</a> <a href="#">Asset-based Welfare</a> <a href="#">Social Sustainability</a> <a href="#">Sustainability Built Environment</a> <a href="#">Housing Affordability</a> <a href="#">Measuring Housing Affordability</a> <a href="#">Post-occupancy Evaluation</a> <a href="#">Design Activism</a>		<a href="#">Aya Elghandour (ESR 4)</a>
<a href="#">Housing Regime</a>	Policy and financing	<a href="#">Housing Governance</a>	<a href="#">ESG finance and social housing decarbonisation</a>	<a href="#">Anna Martin (ESR 7)</a>
<a href="#">Housing Retrofit</a>	Design, planning and building		<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">HOUSEFUL: Els Mestres, Sabadell</a> <a href="#">Housing Retrofit Subsidies in the Netherlands</a> <a href="#">Pre-1919 Niddrie Road Retrofit – An Example of Care for Climate and</a>	<a href="#">Saskia Furman (ESR 2)</a> <a href="#">Zoe Tzika (ESR 10)</a> <a href="#">Alex Fernandez (ESR 12)</a>



Concept	Area	Related terms	Related case studies	Authors
			<a href="#">Health</a> <a href="#">The Sutton Estate Regeneration, Chelsea</a>	
<a href="#">Indoor Thermal Comfort</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Participatory Approaches</a> <a href="#">Energy Retrofit</a> <a href="#">Just Transition</a> <a href="#">Social Sustainability</a> <a href="#">Sustainability</a> <a href="#">Social Housing</a>	<a href="#">Knight's Walk (Lambeth's Homes)</a>	<a href="#">Saskia Furman (ESR 2)</a>
<a href="#">Industrialised Construction</a>	Design, planning and building	<a href="#">BIM</a> <a href="#">Mass Customisation</a> <a href="#">Design for Disassembly</a>	<a href="#">85 Social Housing Units in Cornellà</a> <a href="#">APROP   Temporary social housing for people at risk to residential exclusion</a> <a href="#">Diagoon Houses</a> <a href="#">Flexwoningen Oosterdreef</a> <a href="#">Patch22</a> <a href="#">Solar Decathlon Europe 2022</a> <a href="#">WikiHouse: South Yorkshire Housing Association</a>	<a href="#">Annette Davis (ESR 1)</a> <a href="#">Carolina Martín (ESR 14)</a>
<a href="#">Just Transition</a>	Policy and financing	<a href="#">Housing Governance</a>	<a href="#">A Combined Energy Efficiency and Levelling Up Scheme: the Dutch 'Volkshuisvestingsfonds'</a> <a href="#">ESG finance and social housing decarbonisation</a> <a href="#">Targeting and Policy Efficiency: Exploring the Intended Reform of the Warm Home Discount</a> <a href="#">The Social Climate Fund: Materialising Just Transition Principles?</a>	<a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Life Cycle Assessment (LCA)</a>	Design, planning and building	<a href="#">BIM</a> <a href="#">Life Cycle Costing</a> <a href="#">Design for Disassembly</a> <a href="#">Industrialised Construction</a>	<a href="#">WikiHouse: South Yorkshire Housing Association</a>	<a href="#">Annette Davis (ESR 1)</a>
<a href="#">Life Cycle Costing</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Energy Retrofit</a> <a href="#">Community Empowerment</a> <a href="#">Affordability</a> <a href="#">Sustainability</a>	<a href="#">Dalarnas Villa - Built Research Project Investigating Sustainability</a> <a href="#">WikiHouse: South Yorkshire Housing Association</a>	<a href="#">Aya Elghandour (ESR 4)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">Sustainability Built Environment</a> <a href="#">Transdisciplinarity</a> <a href="#">Mass Customisation</a>		
<a href="#">Mass Customisation</a>	Design, planning and building	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Affordability</a> <a href="#">Transdisciplinarity</a>		<a href="#">Carolina Martín (ESR 14)</a>
<a href="#">Measuring Housing Affordability</a>	Design, planning and building	<a href="#">Affordability</a> <a href="#">Sustainability</a> <a href="#">Life Cycle Costing</a> <a href="#">Housing Affordability</a>	<a href="#">ESG finance and social housing decarbonisation</a> <a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Aya Elghandour (ESR 4)</a>
<a href="#">New Municipalism</a>	Design, planning and building			<a href="#">Andreas Panagidis (ESR 8)</a>
<a href="#">Open Building</a>	Design, planning and building	<a href="#">Participatory Approaches</a> <a href="#">Sustainability Built Environment</a> <a href="#">Mass Customisation</a> <a href="#">Design for Dissassembly</a> <a href="#">Industrialised Construction</a>	<a href="#">Patch22</a>	<a href="#">Carolina Martín (ESR 14)</a>
<a href="#">Participatory Approaches</a>	Community participation	<a href="#">Co-creation</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Die Baupiloten Berlin</a> <a href="#">La Borda</a> <a href="#">LiLa4Green</a> <a href="#">Marmalade Lane</a> <a href="#">Navarinou Park</a> <a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	<a href="#">Mahmoud Alsaeed (ESR 5)</a> <a href="#">Leonardo Ricaurte (ESR 15)</a> <a href="#">Androniki Pappa (ESR 13)</a>

Concept	Area	Related terms	Related case studies	Authors
<a href="#">Path Dependence</a>	Policy and financing	<a href="#">Housing Governance</a> <a href="#">Housing Regime</a> <a href="#">Housing Policy</a>		<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">Performance Gap in Retrofit</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Energy Retrofit</a> <a href="#">Housing Policy</a> <a href="#">Energy Poverty</a> <a href="#">Building</a> <a href="#">Decarbonisation</a>		<a href="#">Saskia Furman (ESR 2)</a>
<a href="#">Placemaking</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Urban Commons</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">Die Baupiloten Berlin</a> <a href="#">LiLa4Green</a> <a href="#">Navarinou Park</a>	<a href="#">Androniki Pappa (ESR 13)</a>
<a href="#">Post-occupancy Evaluation</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Performance Gap in Retrofit</a>	<a href="#">Deben Fields (Garrison Lane)</a>	<a href="#">Leonardo Ricaurte (ESR 15)</a>
<a href="#">Prebound Effect</a>	Design, planning and building	<a href="#">Housing Retrofit</a> <a href="#">Energy Retrofit</a> <a href="#">Performance Gap in Retrofit</a>		<a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Precariat</a>	Policy and financing	<a href="#">Social Sustainability</a> <a href="#">Housing Affordability</a>		<a href="#">Anna Martin (ESR 7)</a>
<a href="#">Product Platform</a>	Design, planning and building	<a href="#">Mass Customisation</a> <a href="#">Housing Affordability</a> <a href="#">Design for Disassembly</a>		<a href="#">Carolina Martín (ESR 14)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">Industrialised Construction</a>		
<a href="#">Public-civic Partnership</a>	Community participation	<a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Urban Commons</a> <a href="#">Placemaking</a>		<a href="#">Androniki Pappa (ESR 13)</a>
<a href="#">Social Housing</a>	Policy and financing	<a href="#">Affordability</a> <a href="#">Housing Retrofit</a> <a href="#">Housing Governance</a> <a href="#">Housing Regime</a> <a href="#">Asset-based Welfare</a>	<a href="#">85 Social Housing Units in Cornellà</a> <a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">ESG finance and social housing decarbonisation</a> <a href="#">HOUSEFUL: Els Mestres, Sabadell</a> <a href="#">LILAC_Low Impact Living Affordable Community_Leeds</a> <a href="#">Mason Place Apartments</a> <a href="#">North Wingfield Road social housing complex.</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Social Infrastructure</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Urban Commons</a> <a href="#">Collaborative Governance</a> <a href="#">Placemaking</a> <a href="#">Spatial Agency</a>		<a href="#">Androniki Pappa (ESR 13)</a>
<a href="#">Social Innovation</a>	Policy and financing			<a href="#">Adriana Diaconu (supervisor)</a> <a href="#">Lucia Chaloin (ESR 3)</a>
<a href="#">Social Sustainability</a>	Community participation	<a href="#">Housing Governance</a> <a href="#">Collaborative Governance</a>	<a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Diagoon Houses</a> <a href="#">Flexwoningen Oosterdreef</a> <a href="#">La Borda</a> <a href="#">LiLa4Green</a> <a href="#">Lleialtat Santsenca Civic Centre</a> <a href="#">Mason Place Apartments</a> <a href="#">Navarinou Park</a> <a href="#">Rural Studio</a>	<a href="#">Andreas Panagidis (ESR 8)</a>

Concept	Area	Related terms	Related case studies	Authors
			<a href="#">The Elwood Project, Vancouver, Washington</a> <a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	
<a href="#">Social Value</a>	Community participation	<a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Energy Poverty</a> <a href="#">Post-occupancy Evaluation</a> <a href="#">Placemaking</a>	<a href="#">Broadwater Farm Urban Design Framework</a> <a href="#">Co-operative housing project in Croatia: the case of the city of Križevci</a> <a href="#">ESG for Social Housing</a> <a href="#">Marmalade Lane</a>	<a href="#">Leonardo Ricaurte (ESR 15)</a>
<a href="#">Spatial Agency</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Sustainability</a> <a href="#">Urban Commons</a> <a href="#">Social Value</a>	<a href="#">85 Social Housing Units in Cornellà</a> <a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Die Baupiloten Berlin</a> <a href="#">La Borda</a> <a href="#">Navarinou Park</a> <a href="#">Participatory Planning: Re-examining Community Consultation as a process that integrates the Urban Room method with a digital mapping tool</a>	<a href="#">Effrosyni Roussou (ESR 9)</a>
<a href="#">Sustainability Built Environment</a>	Design, planning and building	<a href="#">Social Sustainability</a> <a href="#">Transdisciplinarity</a>	<a href="#">Deben Fields (Garrison Lane)</a> <a href="#">ESG finance and social housing decarbonisation</a> <a href="#">Knight's Walk (Lambeth's Homes)</a> <a href="#">North Wingfield Road social housing complex. Patch22</a>	<a href="#">Karim Hadjri (supervisor)</a> <a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Sustainability (5)</a>	Community participation			<a href="#">Joris Hoesktra (Co-supervisor)</a> <a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Sustainability (11)</a>	Design, planning and building			<a href="#">Mahmoud Alsaeed (ESR 5)</a>
<a href="#">Sustainability (13)</a>	Community participation			<a href="#">Andreas Panagidis (ESR 8)</a>
<a href="#">Sustainability (18)</a>	Design, planning and building			<a href="#">Saskia Furman (ESR 2)</a>

Concept	Area	Related terms	Related case studies	Authors
<a href="#">Sustainability (32)</a>	Community participation	<a href="#">Co-creation</a> <a href="#">Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a> <a href="#">Energy retrofit</a> <a href="#">Indoor Thermal Comfort</a> <a href="#">Life Cycle Costing</a> <a href="#">Housing Affordability</a> <a href="#">Measuring Housing Affordability</a> <a href="#">Building Decarbonisation</a> <a href="#">Spatial Agency Framework</a> <a href="#">Environmentally Sustainable Social Housing</a> <a href="#">Housing Quality</a>	<a href="#">DARE to Build, Chalmers University of Technology</a> <a href="#">Deben Fields (Garrison Lane)</a> <a href="#">ESG finance and social housing decarbonisation</a> <a href="#">HOUSEFUL: Els Mestres, Sabadell</a> <a href="#">Marmalade Lane</a> <a href="#">Rural Studio</a> <a href="#">York's Duncombe Square Housing: Towards Affordability, Sustainability, and Healthier Living</a>	<a href="#">Effrosyni Roussou (ESR 9)</a>
<a href="#">Targeted Universalism</a>	Policy and financing	<a href="#">Just Transition</a>		<a href="#">Tijn Croon (ESR 11)</a>
<a href="#">Techno-optimism</a>	Design, planning and building		<a href="#">HOUSEFUL: Els Mestres, Sabadell</a>	<a href="#">Saskia Furman (ESR 2)</a>
<a href="#">Thermal Insulation and Airtightness</a>	Design, planning and building	<a href="#">Affordability</a> <a href="#">Housing Retrofit</a> <a href="#">Energy Retrofit</a> <a href="#">Indoor Thermal Comfort</a> <a href="#">Window Guidance</a> <a href="#">Performance Gap</a>		<a href="#">Saskia Furman (ESR 2)</a>

Concept	Area	Related terms	Related case studies	Authors
		<a href="#">in Retrofit Building Decarbonisation</a>		
<a href="#">Third place</a>	Design, planning and building	<a href="#">Social Sustainability</a> <a href="#">Urban Commons</a> <a href="#">Placemaking</a> <a href="#">Social Value</a>		<a href="#">Leonardo Ricaurte (ESR 15)</a>
<a href="#">Transdisciplinarity (35)</a>	Design, planning and building	<a href="#">Co-creation</a> <a href="#">Critical Utopian Action Research</a> <a href="#">BIM</a> <a href="#">Sustainability Built Environment</a> <a href="#">Mass Customisation</a> <a href="#">Life Cycle Costing</a>		<a href="#">Annette Davis (ESR 1)</a>
<a href="#">Transdisciplinarity (9)</a>	Policy and financing			<a href="#">Marko Horvat (ESR 6)</a>
<a href="#">Transdisciplinarity (7)</a>	Community participation			<a href="#">Androniki Pappa (ESR 13)</a> <a href="#">Alexandra Paio (supervisor)</a>
<a href="#">Trauma Informed Design</a>	Design, planning and building		<a href="#">Hope Street</a>	<a href="#">Anna Martin (ESR 7)</a>
<a href="#">Urban Commons</a>	Community participation	<a href="#">Co-creation Participatory Approaches</a> <a href="#">Community Empowerment</a> <a href="#">Social Sustainability</a>	<a href="#">Lleialtat Santsenca Civic Centre</a> <a href="#">Mehr als wohnen – More than housing</a> <a href="#">Navarinou Park</a>	<a href="#">Androniki Pappa (ESR 13)</a>
<a href="#">Urban Informality</a>	Design, planning and building			<a href="#">Andreas Panagidis (ESR 8)</a>

Concept	Area	Related terms	Related case studies	Authors
				<a href="#">Effrosyni Roussou (ESR 9)</a> <a href="#">Zoe Tzika (ESR 10)</a> <a href="#">Androniki Pappa (ESR 13)</a>
<a href="#">Viability</a>	Design, planning and building	<a href="#">Affordability</a>	<a href="#">Housing Retrofit Subsidies in the Netherlands</a>	<a href="#">Alex Fernandez (ESR 12)</a>
<a href="#">Window Guidance</a>	Policy and financing	<a href="#">Housing Retrofit</a> <a href="#">Housing Regime</a> <a href="#">Just Transition</a> <a href="#">Asset-based</a> <a href="#">Welfare</a>		<a href="#">Marietta Haffner (supervisor)</a> <a href="#">Alex Fernandez (ESR 12)</a>



## Annex 2 - Guidelines

This Annex contains the guidelines provided to users.

### RE-DWELL Vocabulary

The RE-DWELL Vocabulary is part of the collaborative construction of a knowledge repository on affordable and sustainable housing. The vocabulary consists of definitions of key terms related to the combined research conducted by the 15 early-stage researchers. Each term has multiple definitions, each connected to one of the three main research areas: Design, Construction and Planning; Community Involvement; and Policy and Funding.

The joint construction of this vocabulary allows the researchers' projects to be interwoven. As such, the vocabulary is a tool for conducting transdisciplinary research on affordable and sustainable housing.

Entries are reviewed by RE-DWELL researchers and supervisors. The vocabulary is regularly updated.

### Vocabulary construction

The proposal to write an entry comes from the early-stage researcher, and their supervisors. The term can be related to the ESRs' research project, a paper jointly written by researchers, a secondment, etc. ; writing an entry is an opportunity for a deeper study of the concept, to delimit their meanings, and to share them with other researchers.

The description of a term must take into account the theme of the network research: affordable and sustainable housing. Each entry can be related to only of the three research areas. If there are many involved, the most relevant one should be selected.

The recommended number of characters for each entry (not including references) is 600-800 words.

The name of the term must be kept simple, a single term (e.g. "BIM") or a compound of two or three terms (e.g. "Housing retrofit").

The entry can be written by one single researcher or by several researchers.

Figures might be included; they need to be referenced in the text.

A reference list must be included. APA is used as referencing style.

References are entered in the RE-DWELL group in Mendeley. In the VOCABULARY folder, a new folder is created with the name of the term and the references are inserted there.

### Editorial process

The entry is peer-reviewed, first by the supervisor and if necessary by a second RE-DWELL supervisor/co-supervisor.

The peer-reviewed entry is sent to the coordinator for final editorial reviewing. The .doc file is uploaded to Teams RE-DWELL ESRs/VOCABULARY/TERMS/[NAME OF TERM]/REVIEW

Once the reviewing is completed, the final entry is uploaded to the website by the coordinator.