

Balancing Residences and Green Spaces in a Growing City: Changes in Actual Use of Allotment Gardens in Vienna after 1990s

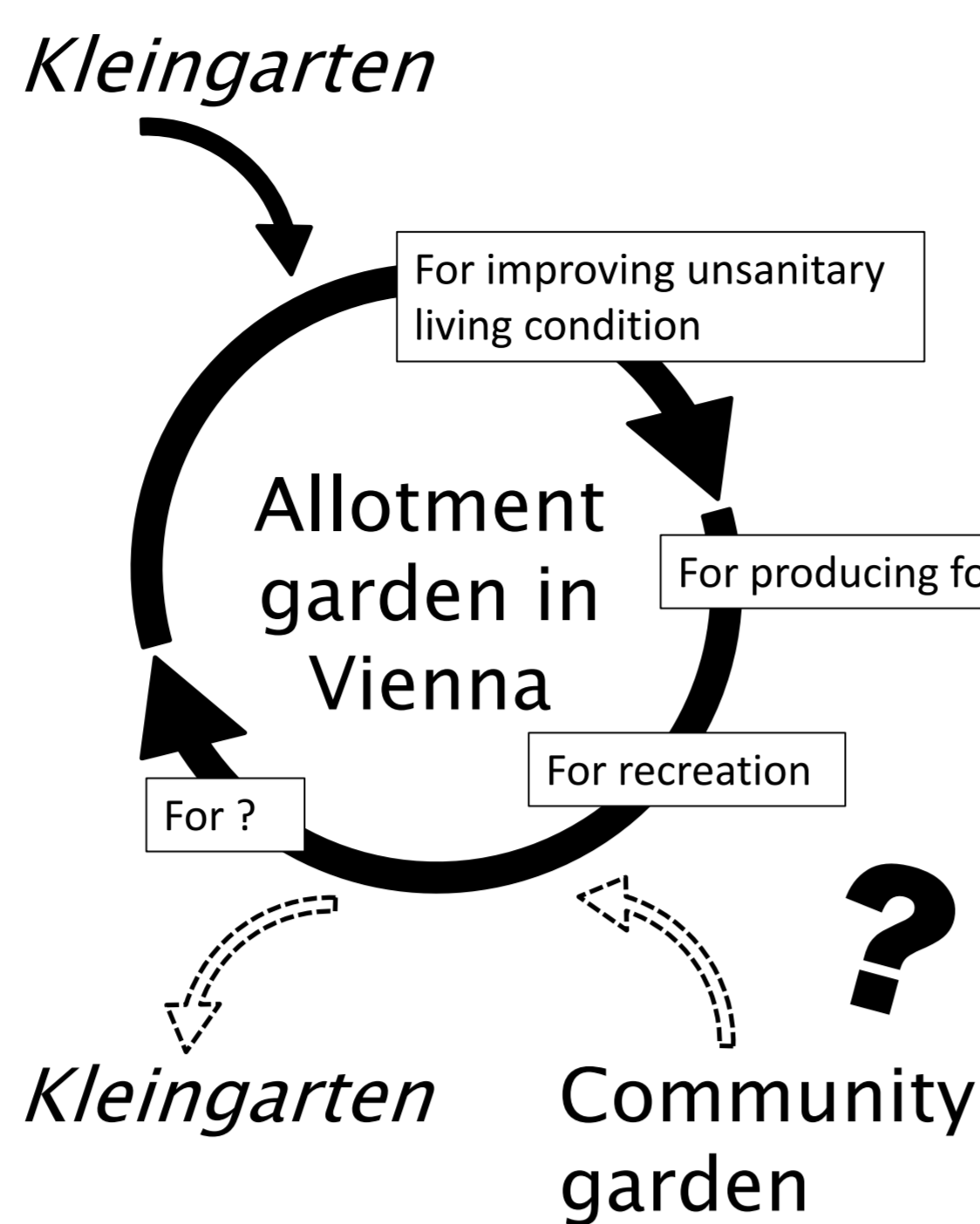
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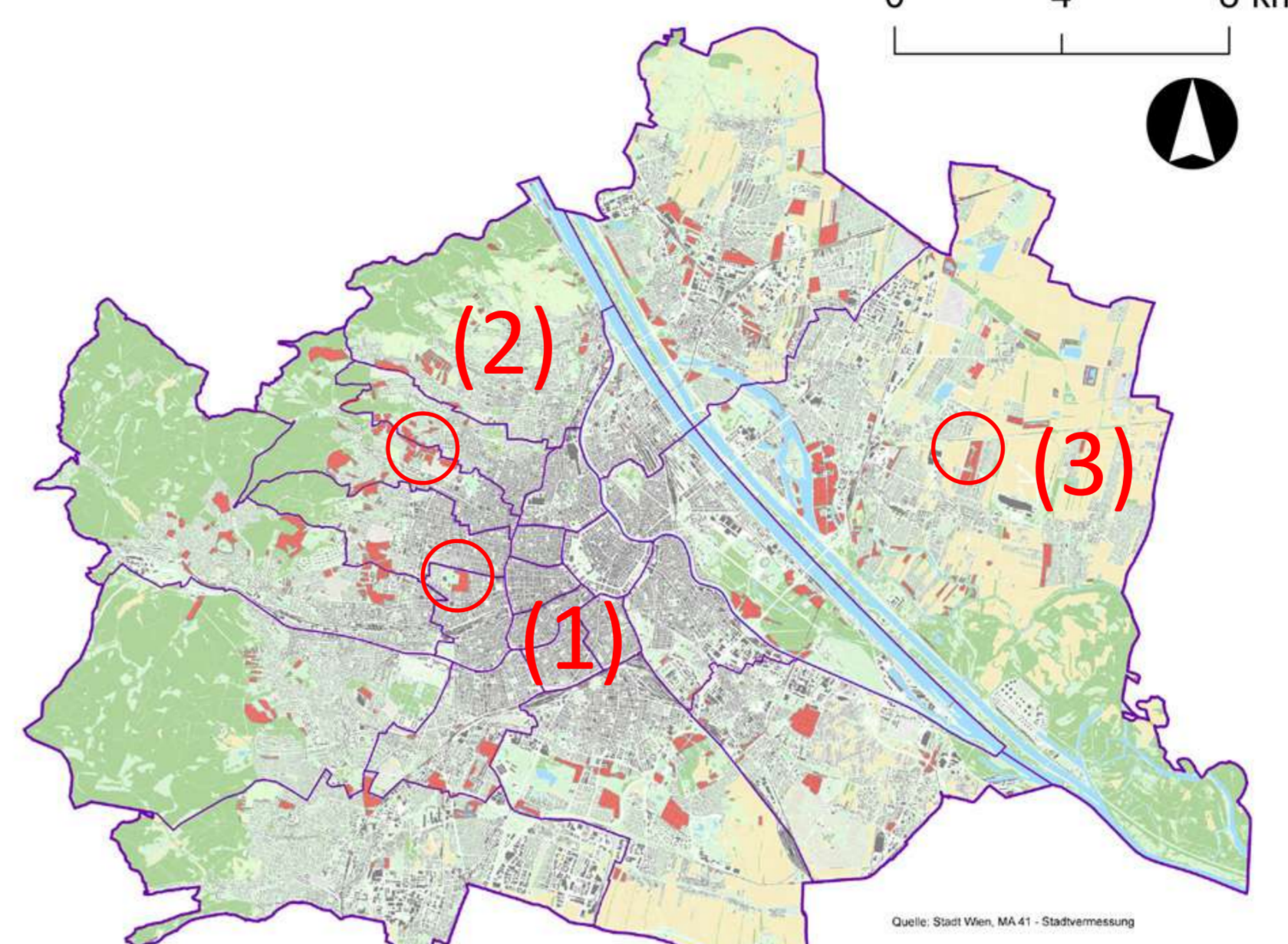
1. Background

Metabolism of allotment gardens?

Allotment gardens have been one of important green spaces in European cities for 100 years and changing with what urban people have needed. In the end of 19th century they started using allotment gardens, known as *Kleingärten* now, for improving unsanitary living conditions after the Industrial Revolution. Then, during the World Wars, they needed allotment gardens to cope with serious food shortage. After W.W.II ended, allotment gardens gradually became a place for recreation. Now they still exist and, uniquely in Vienna, have been becoming residences. On the other hand, new allotment gardens such as community gardens appeared. These process can be called metabolism of allotment gardens and this research tried to understand a part of them focusing on traditional allotment gardens.



2. Study sites



(1) Older EKL*

KGV*** Zukunft auf der Schmelz (Block 2)
119 Plots (Ave. 211.7m²)
Est. in 1921

(2) Older EKL-W**

KGV Alt-Klampfelberg-Kolonie (Gr. A)
50 Plots (Ave. 284.4m²)
Est. in 1915

(3) Newer EKL-W

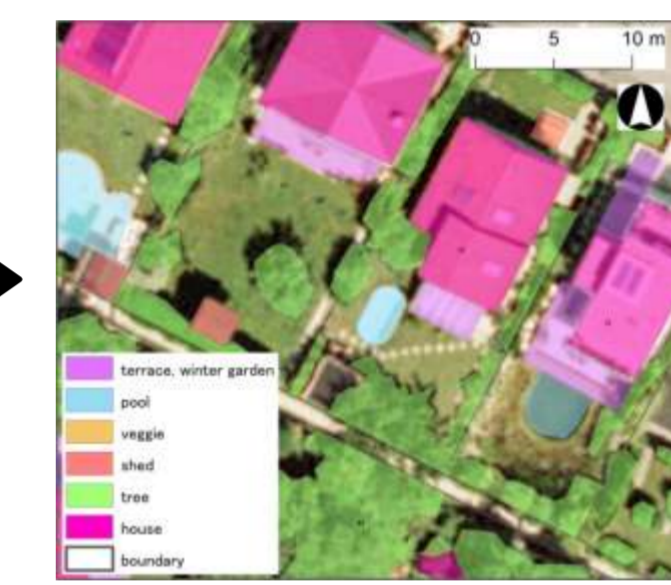
KGV Hausfeld
37 Plots (Ave. 331.6m²)
Est. in 1987

* EKL: Possible to use only in spring and summer
** EKL-W: Possible to live all year round
*** KGV (Kleingartenverein): Allotment garden association

3. Methods

Tracing current land uses and calculating areas

Using orthophotos (resolution: 15cm) took in 2010 or 2011 by City of Vienna and ArcGIS 10.1 current land uses were traced and their areas were calculated.



- Legend
1. House (roofs were traced)
 2. Terrace, Winter garden
 3. Pool, pond
 4. Shed
 5. Tree crown
 6. Veggie

Detecting changed plots

According to the above result and the interview to gardeners in August and September 2012, houses which were enlarged or rebuilt were detected.

Measuring effect on green spaces

Regarding the changed plots, the loss of green spaces was measured by comparing with unchanged plots.

Change of traditional allotment gardens in Vienna

Responding to growing housing demands, the Viennese allotment garden law was amended in 1992 so that gardeners can live there. Since then, some researches reviewed the new law and investigated changes in actual use of the traditional allotment gardens (*Kleingärten*). However, they were conducted ca. 10 years ago, that is, just after the amendment of the law. The following situation should be investigated to see the reaction.

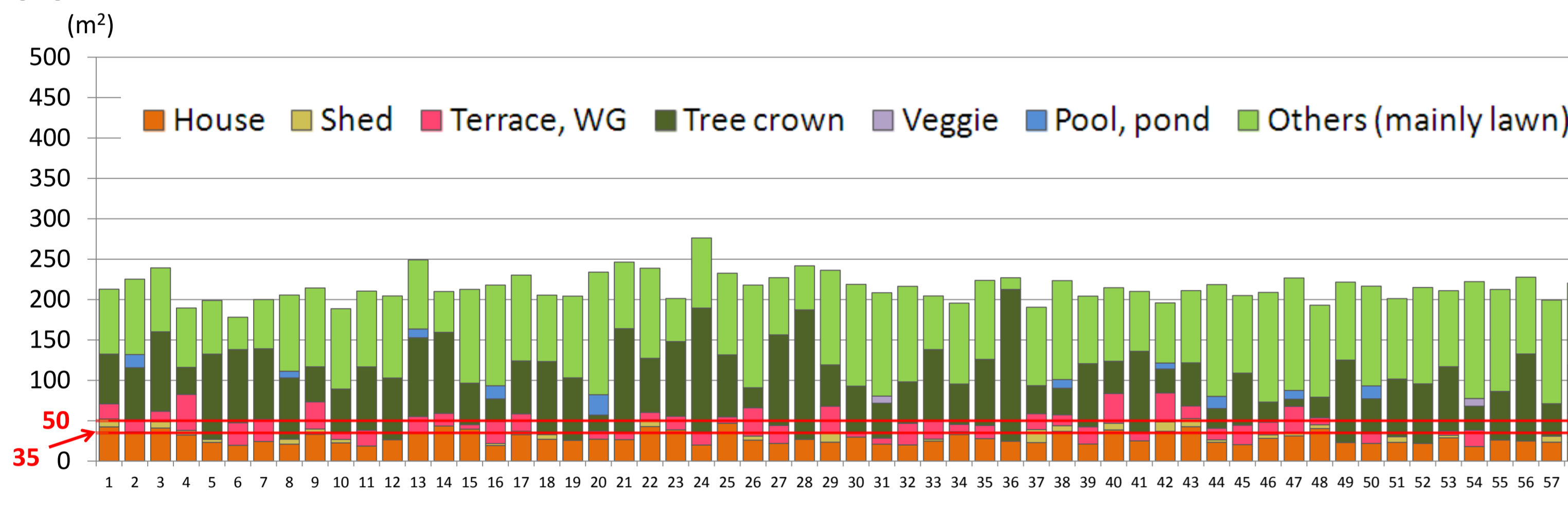


Since 1992, living in allotment gardens all year round was allowed and the maximum size of a house was changed from 35m² to 50m².

Aim: to investigate current land use inside allotment gardens in Vienna and to see the changes for these 10 years.

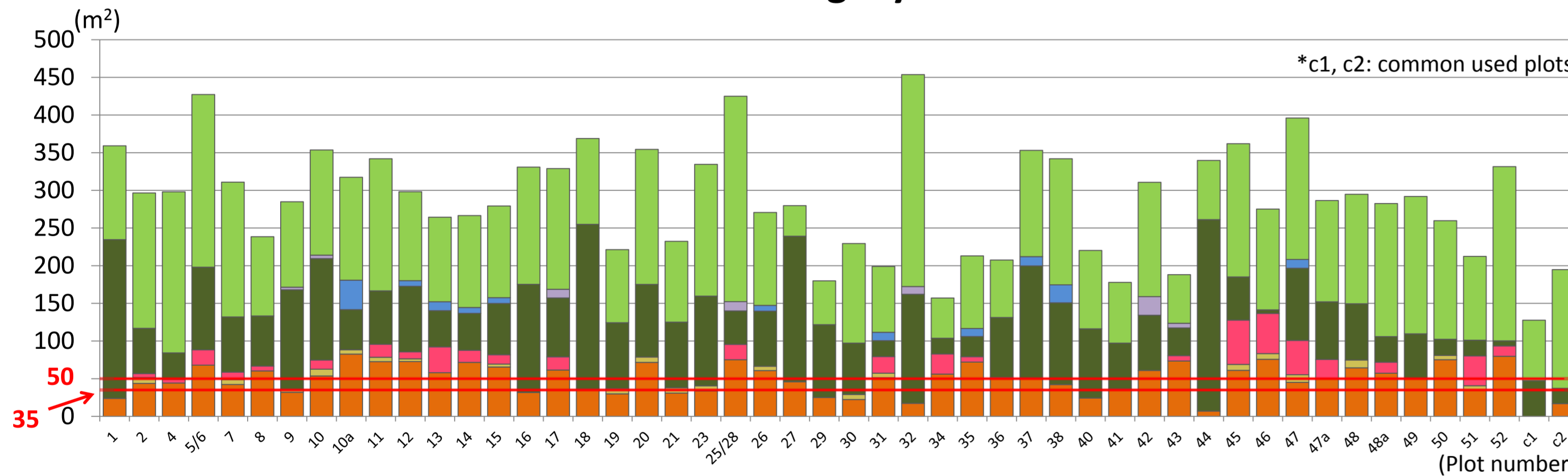
4. Results

(1) Older EKL: KGV Zukunft auf der Schmelz ...Maximum house size: Legally 35 m².

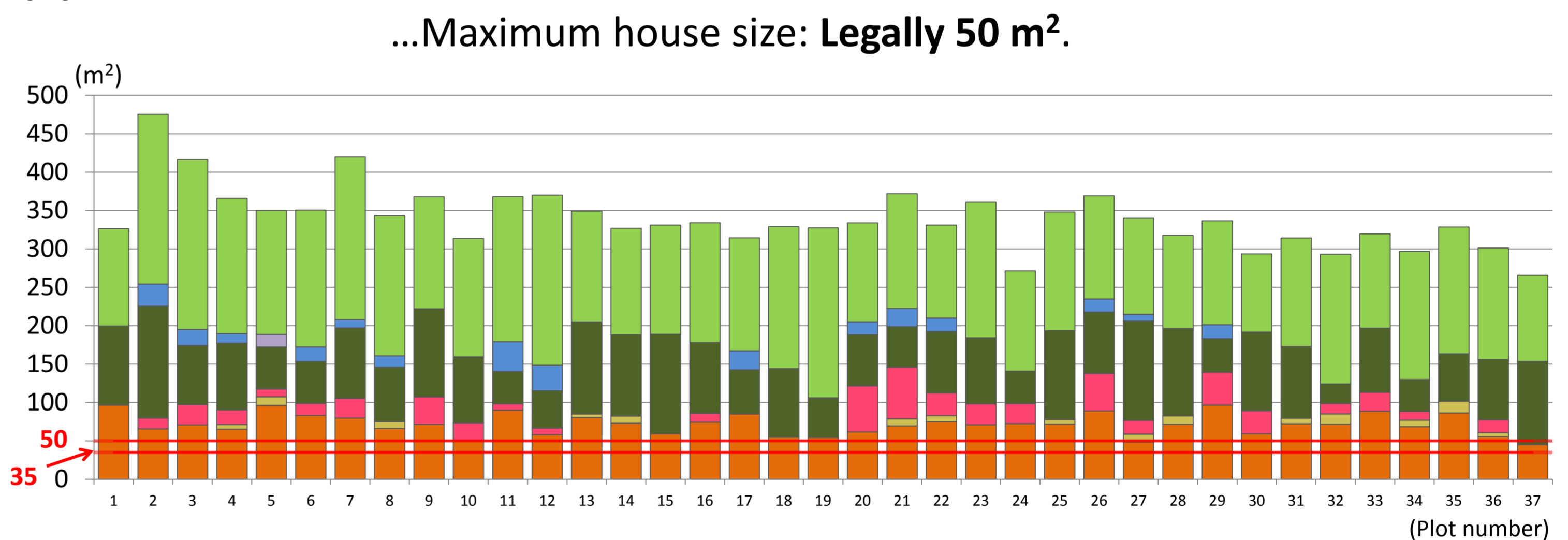


Most of the houses cannot be larger any more and terraces were already equipped to over half of the houses.

(2) Older EKL-W: KGV Alt-Klampfelberg-Kolonie (Gr. A) ...Maximum house size: Legally 50 m².



(3) Newer EKL-W: KGV Hausfeld ...Maximum house size: Legally 50 m².



Half of the house sizes are around 50m² and the houses have terraces, however, the rest houses are unchanged yet. → **Most variable**

Almost all the house sizes are already around 50m², and terraces are equipped to most of the houses.

Compare unchanged and changed plots

According the interview to a gardener, houses which were enlarged and rebuilt since 1999 houses were detected.

	House	Shed	Terrace, WG	Tree crown	Veggie	Pool, pond	Others	Total
Unchanged (26)	37.5 m ² (14%)	2.2 m ² (1%)	2.8 m ² (1%)	100.0 m ² (37%)	1.7 m ² (1%)	1.6 m ² (1%)	126.8 m ² (47%)	271.0 m ² (100%)
Enlarged (7)	61.5 m ² (20%)	4.6 m ² (2%)	15.8 m ² (5%)	83.2 m ² (28%)	0.7 m ² (0%)	9.4 m ² (3%)	134.8 m ² (45%)	300.5 m ² (100%)
Rebuilt (16)	63.2 m ² (21%)	3.1 m ² (1%)	19.9 m ² (7%)	53.6 m ² (18%)	1.6 m ² (1%)	2.8 m ² (1%)	156.3 m ² (53%)	297.7 m ² (100%)
Under construction (1)	79.8 m ² (24%)	0.0 m ² (0%)	13.6 m ² (4%)	6.9 m ² (2%)	0.0 m ² (0%)	0.0 m ² (0%)	231.2 m ² (70%)	331.5 m ² (100%)



(a) Growth of house and terrace

Unchanged → Enlarged: **10%***

Unchanged → Rebuilt: **13%***

(b) Loss of tree crowns

Unchanged → Enlarged: **11%***

Unchanged → Rebuilt: **19%***

Cermak (1999) said that over 90% of plots in its study sites, including the study site (2) of this research, had a house whose size was under 35m² in 1998. This means that changes in older EKL-W are going rapidly.

Older EKL and newer EKL-W have already changed and older EKL-W have been changing rapidly for these 10 years. Consequently houses with a terrace are getting larger and trees are disappearing.

5. Conclusion

The results showed that **changes are now going especially in older EKL-W and trees are disappearing** when houses are enlarged or rebuilt.

The idea of "allotment gardens as houses" is flexible and effective way to balance residential development and green conservation utilizing green stock. However, if these rapid changes are going as they are, valuable green stock in the city will be lost and traditional allotment gardens may not be a kind of gardens any more.

6. Future plan

Community gardens which appeared recently in Vienna will be investigated. What is the difference between them and traditional allotment gardens (*Kleingärten*)?

