2 Data and research

This chapter will introduce and explore the very essence of this study: the dataset. Two main themes are central here. Firstly, the choices made with regard to the composition of the dataset are made explicit. What sites and what data are included in the inventory and which ideas are behind that? Secondly, the characteristics and biases of the dataset are explored to assess how these influence the analyses' results.

Contrary to most studies, focusing on individual sites or specific regions, this dataset includes settlement data from a variety of regions, covering no less than four modern countries and a variety of research traditions, spread through space as well as time. This results in a highly heterogeneous dataset, which backgrounds, characteristics and biases need to be explored before starting analysing the data.

Firstly, I will discuss the conceptual basis on which the dataset is built; the choices that are made. Subsequently, the research differentiated research background of the dataset is explored by looking at the differentiation of research volume through time and the scale of research. Furthermore, a number of important research traditions are discussed. Next, five subregions are defined and shortly discussed. The use of this subregional division brings some structure into the dataset. Lastly, I will set the dataset against the main objectives of this study: exploring developments in settlement organisation, house building and their regional differentiation.

2.1 Constructing a dataset

Constructing a dataset is always subject to choices, related to the objectives of the study in question. Before working with a dataset, it is therefore important to make these choices explicit. As outlined in the previous chapter, the main objective of the present study constitutes the reconstruction and analysis of villa development. This objective requires the availability of quality archaeological data, including detailed information on morphology (structure, form and material of the built environment) as well as chronology (more or less detailed phasing of the development of houses and settlements; absolute and relative dating). As a consequence, only well-excavated and -published sites can be used when approaching this study’s objectives. Overall, we could state that the availability of a well-documented house plan, preferably well-dated and adequately phased, is the minimum requirement. In an ideal situation, data on the broader settlement context and more long-term developments are also available. Consequently survey data are not included in the dataset. A related requirement concerns publication. Generally, only sites that have been published could be included into the dataset.

Apart from data quality, another objective also has a profound influence on the composition of the dataset. In chapter 1 it was argued that in order to acquire a better understanding of villa development, the use of an essentialist villa definition is to be avoided. Parallel to this preposition, no such definition was used for the inventory of rural settlements. This means that rural settlement in general was inventoried without selecting data on the basis of, for example, monumentality or Roman-style architectural elements. As a result, the dataset contains sites that will generally be regarded as ‘villas’ by archaeologists, as well as sites that are referred to as ‘native’, traditional settlements. In general terms, rural settlement refers to those loci that are the homes of local communities living off and working on the land they inhabit. Defensive sites (so-called oppida or similar sites), sites with a clear ritual function and sites with a village-like character and centre-functions (traditionally termed vicus) are not included within the dataset.

In relation to these conditions, it should thus be emphasised that the inventory, while striving to be thorough, certainly does not aim to be complete and exhaustive. The inventory is not a goal in itself and does not necessarily create a reliable image of rural settlement in the Roman period.

67 We generally did not have the opportunity to return to primary data. In some cases, so-called grey literature could be used (unpublished reports etc.). For the German region, many sites have only been published in preliminary publications. Detailed phasing and description are lacking here. The same applies to the French region, as many sites have been preliminarily published in the 'Carte archéologique de la Gaule' (CAG) or the 'Bilan scientifique de la région Picardie' (BSR). Furthermore, many reports are only available at French research institutes.
2.2 Basic characteristics: size and distribution

The result of the inventory, the dataset, is presented in the site catalogue of appendix 1. For all sites, some basic characteristics and a basic description are presented. The complete dataset consists of 270 sites. In order to make the extensive dataset more comprehensible and create an enhanced view on regionality, the research area has been divided into five subregions, which I will first introduce:

- **The northern sand and clay areas**: this region comprises the area directly south of the Roman *limes* (situated along the Rhine), and is dominated by sand and clay soils. It covers the Dutch coastal area, the Dutch and German river area and the sandy plains south of this river area, covering large parts of Dutch Brabant and northern Limburg as well as the northern part of the Rhineland west of the Rhine.

- **Flanders**: this region predominantly covers the sand and clay soils of the northernmost parts of Belgium, extending over large parts of the Flemish provinces of East and West Flanders, Antwerp, Brabant and Limburg, around and west of the cities of Bruges, Ghent and Antwerp.

- **The Dutch and German loess region**: this region comprises the relatively narrow loess belt clamped between the northern sandy region and the mountainous Eifel region in the south. The Dutch loess region covers the southernmost part of the province of Limburg alone.

- **The Belgian loess region**: this region encompasses the loess belt clamped between the northern Dutch and Flemish sandy region and the southern mountainous Ardennes region.

- **Northwestern France**: this region covers the French departments of Nord, Pas-de-Calais, Somme, Oise and Aisne (the latter three together forming the Picardy region).

In table 2.1 the number of inventoried sites is presented per subregion. For the northern sand and clay areas 45 sites were included, for the Dutch and German loess region 84, for Flanders 19, for the Belgian loess region 74, and for Northwestern France 48. Fig. 2.1 visualises the distribution of these sites within the landscape of the research region. A number of general patterns can be identified. An especially tight cluster of sites can be distinguished in the Dutch and German loess region. For the Dutch region, most of the sites were excavated before 1950, the heyday of the villa-archaeology in this region. The many sites in the German region can be associated with the research that takes place in the mining areas there. In addition, a cluster of sites in the Dutch river area can be related to the well-developed settlement archaeology of this region.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of sites</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern sand and clay areas</td>
<td>45</td>
<td>17 %</td>
</tr>
<tr>
<td>Flanders</td>
<td>19</td>
<td>7 %</td>
</tr>
<tr>
<td>Dutch and German loess region</td>
<td>84</td>
<td>31 %</td>
</tr>
<tr>
<td>Belgian loess region</td>
<td>74</td>
<td>27 %</td>
</tr>
<tr>
<td>Northwestern France</td>
<td>48</td>
<td>18 %</td>
</tr>
</tbody>
</table>

Table 2.1 Number of sites per subregion.
2.3 The research background

Below, the research background of the dataset is explored by looking at a number of important research traditions throughout the research region, the variability in the volume of research through time and the scale and quality of research.

2.3.1 Research traditions

Within the extensive research region and throughout the 19th and 20th century, we can divide between a number of research traditions that will be discussed below. In general it can be stated that from around the 1960s onwards, there has been an explosion in archaeological research, related to the significant economic growth and related developments in the landscape. From then on, much research has the character of rescue- or development-led archaeology.

The oldest villa research had a different character, however. During the 19th and earlier 20th century, a rich archaeological research tradition existed in the Dutch and Belgian loess region.\(^{68}\) Excavations were commonly led by individuals interested in ancient history (often priests) or antiquarian societies. In Dutch Limburg, the state museum of antiquity (Rijksmuseum voor Oudheden, Leiden) also took part in these initiatives, especially during the first half of the 20th century.\(^{69}\) Excavations were generally focused on the most monumental parts of rural settlements, usually the main houses and bath buildings. Unfortunately, lack of detailed phasing as well as the underexposure of less monumental settlement phases and broader settlement context render this kind of research less useful for approaching the objectives of this study.

From around the 1970s onwards, a tradition of settlement research developed in the Dutch sand and clay regions. This research consisted of large-scale excavations embedded in long-term research projects,

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68 See De Maeyer 1937, 1940; Braat 1934, 1941.
69 Well-known archaeologists associated with this museum are Braat, Remouchamps and Holwerda.
initiated and led by the archaeological state service\textsuperscript{70} and several universities. The state service initiated research projects from the late 1970s and 1980s, highlighting the Dutch Kromme Rijn and Eastern River areas.\textsuperscript{71} The different universities had their own core research regions. Leiden University focused on the region surrounding the town of Oss, while the University of Amsterdam (UvA) and the Free University in Amsterdam (VU) focussed on the Meuse-Demer-Scheldt (MDS) and Kempen regions, particularly the surroundings of Weert and Someren. The latter University has directed its focus at the Dutch river area as well (excavating for example Tiel-Passewaaij and Geldermalsen-Hondsgemiet). In recent years, the existing tradition of settlement archaeology has been continued within the commercial archaeological system, predominantly in relation to the large-scale expansion of cities (many of which were so-called Vinex-neighborhoods) and infrastructural developments.

An intensive development-led archaeology also developed in northern France, especially from the 1990s onwards.\textsuperscript{72} With the creation of the INRAP institute, much excavations have been carried out in regions that saw the large-scale development of roads, railroads and commercial areas (labelled Zone d’Activité Commerciale (ZAC) in French), providing opportunities for archaeology to expand the knowledge of rural settlement in these regions dramatically. In this region in particular, large areas have been surveyed and excavated, creating some unique new insights into the structure and development of the rural landscape and settlement, without a priori focussing on the most monumental and easily visible settlement traces. Pre- and non-monumental settlement traces, broader settlement context and the relationship between pre-Roman and Roman period rural settlement are potentially themes that can be studied on the hand of the results of such research.

Associated with even further reaching and destructive developments is the rescue archaeology in the German part of the research region, west of Cologne. Especially from the 1970s onwards, large scale opencast mining activities have destroyed large stretches of land, offering unique opportunities for archaeological research. In the three main mining areas, Inden, Garzweiler and Hambach, a remarkably large number of settlements could be completely excavated, while entire stretches of land were thoroughly examined.

### 2.3.2 Variability in the volume of research

As the quality of the documentation is a factor of importance, the data best suitable for approaching this study’s objectives are the most recent; generally from the 1970s-1980s onwards. Considerably more aged research presents us with more or less useful plans but lacks detailed information on chronology, development and broader settlement context. Viewed from this perspective, it is interesting to get some insight into the temporal pattern of research. Therefore, a period of research has been determined for each site, divided into three chronological groups: before 1950, between 1950 and 1979 and after 1980. Regarding the region as a whole, it appears that of the sites included in the dataset, 48 sites were excavated before 1950, 51 between 1950 and 1979 and no less than 171 after 1980 (see table 2.2).

<table>
<thead>
<tr>
<th>Period</th>
<th>Northern sand and clay areas</th>
<th>Dutch and German loess region</th>
<th>Flanders</th>
<th>Belgian loess region</th>
<th>Northwestern France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1950</td>
<td>2</td>
<td>23</td>
<td>0</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>1950's-1970's</td>
<td>7</td>
<td>19</td>
<td>3</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>1980's-2000's</td>
<td>36</td>
<td>42</td>
<td>16</td>
<td>32</td>
<td>45</td>
</tr>
</tbody>
</table>

Table 2.2 Overview of the sites used in this region per period of research per modern country.

\textsuperscript{70} The ‘Rijksdienst voor het Oudheidkundig Bodemonderzoek’ (ROB), currently known as the ‘Rijksdienst voor het Cultureel Erfgoed’ (RCE).

\textsuperscript{71} Vos 2009, 6-9.

\textsuperscript{72} See Haselgrove 2007.
Fig. 2.2. Variety in the volume of research per period: before 1950, between 1950 and 1979 or between 1980 and 2010. Also see table 2.2.

Fig. 2.2 visualises the distribution of sites in relation to the period in which the excavation was carried out. Interestingly, most recent research has been carried out in Northern France and Flanders, while in the Dutch and Belgian loess region the number of excavations has been relatively low after 1950. In these regions, much research dates before 1950.

2.3.3 Scale and quality of research

Another important variable involves the scale of research, which varies from almost completely excavated landscapes to fragmentarily documented traces of individual buildings and is generally related to the data’s value to this study. Table 2.3 presents an overview of the scale of research, divided into four classes. The category of A-sites comprises large-scale excavations whereby complete settlements were excavated. Overall, good-quality chronological data on developments in settlement organisation and house building are available with regard to these sites. The B-category constitutes partially excavated settlements. Here, excavation reaches beyond the level of the individual building, but not the entire settlement complex is documented. Sites ranged under category C include settlements of which only the main house was excavated. In many cases, the development trajectory of house building could be reconstructed. Lastly, category-D sites are fragmentarily excavated sites that nonetheless provide useful data on settlement morphology, chronology or development. Of course, many more D-category sites can be found within the research region, but these were not classified as useful for the present study and therefore were not included in the inventory.

It should be emphasised that the scale of excavation and the quality of publication are not necessarily related. Unfortunately, much large-scale research in France and Germany has not been published with the degree of detail it deserves. As a result it is possible that large-scale research could still be of only limited use for approaching this study’s research questions.
<table>
<thead>
<tr>
<th>Data class</th>
<th>Number of sites</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A sites</td>
<td>60</td>
<td>22%</td>
</tr>
<tr>
<td>B sites</td>
<td>92</td>
<td>34%</td>
</tr>
<tr>
<td>C sites</td>
<td>94</td>
<td>35%</td>
</tr>
<tr>
<td>D sites</td>
<td>24</td>
<td>9%</td>
</tr>
</tbody>
</table>

Table 2.3 Overview of the variety of data quality within the dataset. Four classes of data quality have been defined.

Fig. 2.3 visualises the distribution of sites in relation to the scale of research. Much large-scale research (A-category) has been done in the German loess region, the northern sand and clay areas and northwestern France. C-category sites are concentrated in the Belgian, Dutch and German loess belt. It becomes apparent that, within the regions that saw a substantial amount of recent research, sites of category A and B are in fact predominant.

2.4 Representativity and biases

For a good assessment of the analyses’ results it is essential to gain some insight into the potential biases of the dataset that forms the starting point. It is important to realise that the picture created here is not necessarily the reflection of a historical reality. All kind of factors may potentially affect and have affected the way in which we reconstruct rural settlement in the Roman period.

A first important bias concerns the character of the research. Important factors include the focus of research, the choices that are made, the available documentation techniques, and the leading motivations for research. As has previously been discussed, the general tendency to excavate the most monumental
traces of rural settlement is one key issue. This has created a bias whereby non-monumental settlement traces have been underexposed. This bias has only started to be diminished during the last decades, with the excavation of non- or little monumental settlements like at Heerlen-Trilandis, Veldwezelt, Kesselt, Onnaing, Arras and Bohain-Vermandois. In addition, pre-monumental settlement phases are being documented in increasing detail. At many older excavations, these pre-monumental phases were not recognised and thus only part of settlement development can be studied. The advantage of development-led archaeology is that no a priori choice is made with regard to the excavation; what is excavated is determined by modern developments and not so much on the basis of academic choice. This situation reduces the bias towards larger, monumental complexes and allows us to shed more light on the variety and complexity of rural settlements.

A second bias is created by the occasionally severe erosion affecting archaeological records, destroying traces of posts, beam and even stone foundations left in the soil. As stated in chapter 1, Loess soil is particularly sensitive to erosion. Sites where only the cellars or hypocausts, the sturdiest and most deeply founded parts of a house, are preserved illustrate this type of severe erosion particularly well.73

A further bias that should be mentioned concerns the access, or actually lack thereof, to research published as ‘grey literature’. Compared to my home-country, The Netherlands, it was more difficult to gain access to such publications in the other countries of the research area.

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73 Examples can be found at Veldwezelt, Riemst-Lafeht, Lanaken-Smeermaas, Venette-Bois de Plaisance-zone 1 and 4, Amiens-Le Champ Pillard, Beauvais-Rue de Witten-‘Les Champs Dolents’, Gouvieux-La Flache, Neuville-Saint-Amand-La Vallée de Neuville and Verneuil-en-Halatte.
2.5 Questioning the dataset: house architecture, settlement lay-out and regional differentiations

The presented dataset offers a broad scope of possibilities for studying interesting themes as well as new entrances for reconstructing broader processes in settlement development within the extensive research region and the longer time period between the Late Iron Age and the Late Roman Empire. In the following chapters, this dataset is used as the basis for these analyses.

As has previously been emphasised, the main topic for this study is reconstructing both long-term and short-term development trajectories in rural settlements. Three main categories can be defined: reconstructing developments in settlement organisation, reconstructing developments in house building and reconstructing regional and local differentiation with regard to these developments. In the next chapter, we will first explore the spatial, morphological and architectural dimensions of developments in settlement organisation and house building. In chapter 4 and 5 we will move on to explore the social and economic dimensions of these developments.