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EARLY ARCHITECTURE AT THE CAPE UNDER THE VOC (1652-1710): THE CHARACTERISTICS AND INFLUENCE OF THE PROTO-CAPE DUTCH PERIOD

Rowallan Hugh Fitchett

VOLUME I

A thesis submitted to the Faculty of Architecture, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy

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ABSTRACT

This thesis is set within the historical context of the commercial empire of the VOC (Dutch East India Company), which established a refreshment post for its ships at the Cape of Good Hope, South Africa, in 1652.

The central proposition of the thesis is that the architectural principles established at the Cape between 1652 and 1710 had a greater influence on subsequent developments than has previously been acknowledged.

This proposition challenges the widely accepted theory that Cape Dutch architecture developed as an evolution from vernacular beginnings. Research in the field to date has focused largely on Cape Dutch buildings, dating from after the mid-18th century, and on later survivals of vernacular types. As a result the buildings erected prior to 1710, defined here as proto-Cape Dutch, have been largely ignored.

To redress this imbalance, the thesis investigates the proto-Cape Dutch period in its own right, by presenting the widest possible range of building types erected during this period. Since few of these buildings survive, the evidence for the thesis was derived largely from archival material. This comprised three types of contemporary sources: the official records of the VOC, the written accounts of visitors to the Cape, and the drawings of visiting artists. Some sources were clearly unreliable, but in several cases it was possible to reconcile evidence which initially appeared to be contradictory.

The interpretation and evaluation of this research is addressed in Part 1 of the thesis. The architectural evidence is presented in Part 2, where the process of analysis and reconciliation is revealed. This process facilitated the detailed reconstruction of some of the more prominent buildings of the proto-Cape Dutch period no longer in existence. The thesis contends that such buildings, with sophisticated plans and Renaissance proportions, were the stimulus for the development of Cape Dutch architecture later in the 18th century.

The thesis thus comprises three major components: the development of a research method; the re-evaluation through this method of a number of buildings known primarily from documentary sources; and the proposition based on this re-evaluation that Cape Dutch architecture was a simplification of the precedent established by the more sophisticated buildings of the proto-Cape Dutch period. The method employed and the conclusions drawn from the evidence may suggest applications in similar colonial circumstances elsewhere.

LIST OF KEY WORDS

Cape Dutch architecture - Civil engineering works - Dutch colonial architecture - Fortifications - Hospitals - Non-residential buildings - Proto-Cape Dutch architecture - Religious buildings - Residential buildings - Town planning

DECLARATION

I declare that this thesis is my own unaided work. It is submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

R.H. Fitchett

Rowallan Hugh Fitchett.

15th day of March, 1996.

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PREFACE

The initial reason for undertaking this thesis was to reveal the existence and establish the importance of the full range of colonial buildings erected at the Cape between 1652 and 1710, as far as was possible within the research parameters outlined in Chapter 1.3.1. This formed part of a wider study involving the entire period of VOC (Vereenigde Oost-Indische Compagnie) rule at the Cape from 1652 to 1795, and an on-site survey of most of the surviving buildings of the Cape Dutch period dating from the mid-18th century onwards, which continued to maintain many of their traditions well into the 19th century.

The primary purpose of the thesis is to propose an alternative to the theory that the Cape Dutch architecture of the later 18th century was developed in an evolutionary manner from vernacular origins, a theory first postulated by Walton in the 1950s and still current today.

The alternative theory presented here contends that Cape Dutch architecture was derived not from vernacular origins, but from the precedent established by the buildings of the Company and its senior officials. This theory was derived empirically from an analysis of the planning, proportioning and exterior form of these proto-Cape Dutch buildings. Evidence for the complexity of the more imposing buildings erected prior to 1710 was provided by contemporary visual material, which was confirmed by written descriptions, comprising both official sources and travellers' accounts.

These descriptions reveal that the transverse plan, characterized by a hall extending the full depth of a symmetrical plan, was already present in a number of the houses in Cape Town by 1710, and in Wilhem Adriaen van der Stel's country seat at Vergelegen. The plans of the latter house and of his father Simon van der Stel's Constantia conformed with Renaissance proportioning systems, as did the hospital commissioned by the elder Van der Stel. Double-storeyed houses with triple-gabled facades have been identified in Cape Town (Henning Hüsing) and at Constantia (Simon van der Stel). Vergelegen, although only single-storeyed, also had a triple-gabled facade, now articulated by pilasters and introducing the motif of half-width windows flanking the entrance door.

The Cape Dutch farmhouses surviving from the mid-18th century are reduced versions of these exemplars. They are single-storeyed rather than double-storeyed, they have single instead of triple facade gables, they have gable-ended wings rather than the hipped roofs of their predecessors, and their planning dispenses with the rigours of Renaissance proportioning.

Nevertheless, the basic architectural principles established by the proto-Cape Dutch exemplars were continued in the Cape Dutch architecture of the later 18th century. These were the continued use of the transverse plan, whether in U-, T- or H-shaped form, and the accentuation of the central entrance by the presence of a decorative gable above and the use of half-width windows on either side.

The correspondence in both periods of these two architectural principles, namely facade

articulation and interior spatial continuity, is notable in comparison with the absence of such characteristics in the vernacular. It is this discrepancy which suggests the improbability of Cape Dutch architecture having developed in an evolutionary manner from vernacular roots. A precedent was required, and this had already been provided by a number of buildings erected at the Cape prior to 1710.

The thesis is divided into two parts, comprising the academic argument and the supporting architectural evidence. Part 1 (the academic argument) comprises an introduction, a chronological overview, an explanation of the term "Cape Dutch architecture" as referred to in the thesis, the argument itself, and the conclusion.

The introduction (Chapter 1) presents the problem and the argument. It also includes the literature review and the research method and evaluation of sources. It concentrates on the shortcomings of the evolutionary theory derived from vernacular models. These shortcomings, and the inappropriateness of using the English colonial experience in North America as a parallel to the Dutch developments at the Cape, are expanded upon in the literature review and research method.

The chronological overview (Chapter 2) places the buildings and events presented in both parts of the thesis within a historical setting. The major developments concerning architectural works are outlined, as is their context with regard to the expansion of the settlement. The periods of office of all the Commanders and Governors at the Cape, many of whom are hardly known today, have also been outlined.

The chapter on Cape Dutch architecture (Chapter 3) concerns only those characteristics which were influenced by the proto-Cape Dutch period, as identified above. The aspects which have been omitted as peripheral to this argument, particularly those of a stylistic nature, are readily available in secondary sources.

The argument contesting the evolutionary theory (Chapter 4) is constructed on the basis of an identification of the architectural principles employed in the major buildings erected prior to 1710. These principles are compared with those of the Cape Dutch architecture of the later 18th century. The argument reveals that although the buildings of the later period are less imposing and less sophisticated than their predecessors, their primary characteristics were derived from the proto-Cape Dutch period. Cape Dutch architecture was therefore not developed in an evolutionary manner, but was based instead on locally established precedent.

The conclusion (Chapter 5) locates the evidence presented in the argument (Chapter 4) within the wider Renaissance phenomenon, and reveals the unlikelihood of the major proto-Cape Dutch buildings having been designed by craftsmen with no knowledge of Renaissance theory.

The findings presented in Part 1 are based on the material contained in Part 2, which has been cross-referenced from the argument (Chapter 4). Part 2 contains the architectural evidence and covers the full range of buildings and civil engineering

works erected during the proto-Cape Dutch period. All known buildings have been presented, as opposed to the major examples selected for the argument (Chapter 4), and these have been cross-referenced where relevant. Construction methods have also been described, and the names of the "architects" and master craftsmen have been identified where possible.

There is, however, very little information on the designers of the buildings of the proto-Cape Dutch period that can be derived from contemporary sources. In only three cases can the designers of individual buildings be firmly identified, and none of these persons were architects. Two of them were the Commanders of the settlement (Van Riebeeck and Wagenaer) and the third was the surveyor (Wittebol). Some of these persons clearly did have access to architectural treatises (see Chapter 12.1), as did other designers not mentioned in the VOC records. The absence of names, although unfortunate in precluding the tracing of the influence of individual designers on architectural developments, does not significantly affect the analysis of the buildings erected.

The architectural evidence is not merely a presentation of factual material, but contains the detailed interpretations and reconstructions of individual buildings. These were derived from the analysis and reconciliation of often contradictory documentary evidence. This process is expanded upon in the notes where excessive argument would interrupt the text unduly. Part 2 is therefore of equal importance to Part 1, and both parts should be read in conjunction.

The notes and references appear as end-notes, following the running-note system. While it might have been preferable to have used foot-notes, this was precluded by the length of some of them, which are more than a page long and would have disrupted the text unnecessarily. Since the notes to each chapter and sub-chapter begin with a new sequence of numeration, a list of notes with page references has been provided at the beginning of Volume III.

The importance of reading the notes together with the text must be stressed here. While many refer merely to source material, others involve expansion of the evidence, additional argument, further clarification, and cross-referencing to other chapters in the thesis. The simultaneous reading of notes and text is facilitated by the location of the notes in a separate volume.

The notes are followed by the figures and the figure references, which give the provenance of the illustrations. Again, it would have been preferable to have integrated them with the text, but this was impracticable as many of them are referred to on a number of occasions. Notes and figure references are indicated by square brackets [...], to distinguish them from the curved brackets (...) used for textual material in parentheses.

Page references to source material refer to the entire entry with regard to the Journal and Resolutions. However, in the case of Letters despatched and received, which are

often very lengthy, specific page references are provided for the entries quoted.

Where translations of sources have been used, references to the original material have been provided where possible. Spelling inconsistencies will be observed in the case of names and places, and sometimes in the case of architectural elements. This is because the usage of the sources consulted has been followed throughout. It would be inconsistent with an empirical approach to make arbitrary decisions on the "correct" versions of 17th century Dutch spelling.

Contemporary Dutch spelling has been used throughout, rather than Afrikaans, notably in the case of "Wilhem Adriaen van der Stel", whose name appears most frequently in the VOC records with this spelling. However, where quoting secondary sources, the spelling "Willem Adriaan" has been used. More recent vernacular terms developed in the field of Cape Dutch architecture have also been avoided in favour of standard English terminology. Examples are the "leg-of-mutton gables", "eyebrows" and "bats' eyes" used to describe swept dormers, and the "wolwe-ends" used for half-hipped ends.

The designation of currency also varies throughout the thesis, following the usage in the sources consulted. In some cases, for instance, 8000 guilders may also be described as f8000 in the same paragraph of the original document.

Apart from the use of metric dimensions when describing material from recent secondary sources, contemporary dimensions have been used throughout. These were based on the Rhineland foot (now known locally as the "Cape foot"), which was 314mm long as opposed to the 304mm of the English foot.

The reason for this is that the original dimensions reflect the clarity of the proportional intentions of the designer far more effectively than metric conversions. An example is the plan of Vergelegen, where the dimensions of the main rooms are 24 x 24 ft, 36 x 24 ft and 18 x 24 ft, revealing proportions of 1:1, 3:2 and 3:4 respectively. These dimensions converted into the metric system produce figures of 7,536m, 11,304m and 5,652m, precluding the derivation of proportional relationships without the aid of a calculator.

Moreover, measurements based on whole numbers were central to the proportioning systems developed in the Renaissance by architects such as Alberti and Palladio. The duodecimal system also offered greater flexibility in proportioning arrangements than the decimal system which replaced it, as noted by Le Corbusier in "Le Modulor". The use of metric dimensions has thus been rejected as anachronistic and obfuscatory. For readers who require such dimensions to visualize the extent of the plans in question, the conversion factor is 1 foot to 314mm, and scale bars for both dimensioning systems have been provided on the author's drawings.

The nomenclature of dimensions larger than a single Rhineland foot was provided by the Visiting Commissioner Ryckloff van Goens on the 16th April 1657 in his instructions to Van Riebeeck regarding the first land grants to the freeburghers:-

"In giving out the lands you will use Rhineland measure, as is customary in Holland and Zealand (sic). 1 foot being = to 12 inches; 12 feet = 1 rood; 100 roods = 1 ? (omitted); and 600 roods square = 1 morgen; 2,000 roods = 1 mile, i.e., exactly a Dutch or German mile; 15 miles = 1 degree of latitude, and 360 degrees the whole circumference of the globe." (Leibbrandt, H C V. Letters and documents received, 1649-1662, Part II. Cape Town, 1899, p226).

The reasons for the establishment of the settlement are outlined in Chapter 6.1, and its expansion is specifically addressed in Chapter 2, Chapter 8.1 and Chapter 9.1. To summarize the context briefly, the settlement was established in 1652 as a refreshment station for the VOC fleets approximately half way between Holland and Batavia. Its expansion began in 1657 with the granting of land to the first freeburghers (Company's employees who had taken their discharge and remained at the Cape), and the work-force was increased in 1658 with the introduction of slave labour. The settlement was largely confined to the Cape Peninsula until 1679, when the first land grants were made to freeburghers in the inland districts. These were initially in the Stellenbosch district, but were followed by others during the period of this thesis at the Drakenstein, Wagenmakers Vallei (now Wellington) and Waveren (now Tulbagh) districts. The effect of this expansion was to deprive the indigenous Khoi of their traditional grazing lands, leading to the disintegration of their entire society.

Although comparatively large in geographical extent, the Cape settlement comprised only 3698 people in 1709, including 1775 slaves. The small number of settlers resulted in an equally small number of buildings, which facilitated the inclusion of all known buildings from the proto-Cape Dutch period in the thesis. Conversely, the diversity of building types required by a settlement of this nature permitted the analysis of buildings across a broad architectural spectrum.

To conclude this preface, the method and findings of the thesis will be briefly reiterated. The architectural evidence of all the buildings derived from the sources consulted is presented in the context of a broader Renaissance world. Discrepancies between contemporary descriptions and the evidence of surviving buildings such as Constantia and Vergelegen were reconciled through a process of analysis. This revealed the accuracy of these early accounts, which have been dismissed by most previous writers as they do not correspond with the buildings standing today. The method adopted in this thesis, whereby the sources were treated as truthful eye-witness accounts until proved to be based on hearsay, has resulted in conclusions markedly different from those previously postulated.

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PART 1: THE ARGUMENT

1. INTRODUCTION

1.1 THE PROBLEM AND THE ARGUMENT

The purpose of this thesis is to investigate the development of Dutch colonial architecture at the Cape from 1652 to 1710, and to reveal its influence on the Cape Dutch architecture of the later 18th century. This extremely important early period, defined here as proto-Cape Dutch, has not been covered in detail in the standard sources, which have made only selective reference to the buildings in question [1].

The two major works on Cape Dutch architecture, Pearse [2] and Fransen and Cook [3] mention only the proto-Cape Dutch predecessors of Cape Dutch buildings which are still in existence. Pearse refers to the Castle [4], the original Company's guest house [5], Constantia [6] and Vergelegen [7]. To these Fransen and Cook have added the Schreuder house in Stellenbosch [8]. None of these buildings, however, survive in their original proto-Cape Dutch form, and they have been described only within the context of their existing fabric.

Of these five buildings, the restorations of the Castle and the Schreuder house incorporate significant changes made after 1710. Attempts have also been made to reconstruct the original form of the Company's guest house and Constantia on the basis of subtraction from the existing buildings, and Vergelegen on the basis of addition to the existing structure. However, none of these reconstructions correlate with early descriptions of the three buildings.

Other proto-Cape Dutch buildings that have received attention in less well-known sources are the Cape Town church [9] described by Bax [10] and more recently by Fransen [11], and the Stellenbosch church [12] described by Hugo and Van der Bijl [13]. Walton [14] has also described the early mills at Cape Town, Stellenbosch and Drakenstein [15]. The tercentenary of Stellenbosch in 1979 stimulated a renewed interest in its development, and Smuts [16] illustrates a number of pre-1710 sketches of farmhouses in the district [17]. These have been augmented by further examples in Walton [18] and Vos [19].

Of these buildings, the mills and the Cape Town and Stellenbosch churches have been described without reference to their context. This applies also to the early farmhouses in the Stellenbosch district, where no reference is made to contemporary buildings in Cape Town or on the Peninsula.

An interest in the early period has also been stimulated by the excavations of historical archaeologists, but their work has been published only in archaeological journals and its influence is therefore limited to specialists in the field. Some of these excavations, moreover, have not yet been published.

The early buildings that have been investigated include the trial excavations of the Fort [20] undertaken by Abrahams [21] and the excavations of the Castle moat [22] under the supervision of Hall [23]. Schrire [24] has uncovered the Company's post at Saldanha Bay [25], and Vos [26] the so-called "Posthuijs" at Muizenberg, subsequently restored [27]. Vos [28] has also excavated the early buildings of Stellenbosch [29], and Markell [30] the outbuildings of Vergelegen [31]. Two other sites that have been exposed by Hall are Onrust, near Stellenbosch [32] and Paradijs, on the Cape Peninsula [33], but the former is not precisely dated to pre-1710 and the latter dates from 1719/20, thus falling outside the scope of this thesis [34].

Another building from the proto-Cape Dutch period to have received recent attention is Nieuwland [35], the original foundations of which were exposed during restoration [36]. This house has been interpreted by Brink as a contradiction of the theory that the Cape Dutch architecture of the later 18th century developed from a transverse symmetrical three-roomed structure [37]. Brink contends that the early houses were longitudinal rather than transverse [38], and questions the interpretations of the pre-1710 inventories first studied by Woodward [39], whose reconstructions are derived from the plan types of examples dating from after the mid-18th century.

The increased interest in the proto-Cape Dutch period is clearly evident in the work done by researchers in recent years. However, most still subscribe to an evolutionary development in one form or another. The only serious challenge to the nature of such a development is that provided by Brink, who questions the early existence of the symmetrical plan, and suggests that the houses of the proto-Cape Dutch period were

based on the asymmetrical town houses of Amsterdam.

However, neither Brink nor the other archaeologists have located their findings within the broader context of the proto-Cape Dutch period. Recent research has thus also concentrated on isolated examples, as was the case with earlier studies, and conclusions have been drawn without reference to the full range of examples dating from this early period.

The first priority of this study was to establish the characteristics of as wide a range of buildings as possible during the proto-Cape Dutch period. This revealed the existence of a number of formally planned symmetrical buildings, as described in the accounts of contemporary visitors to the Cape, and confirmed by contemporary drawings. This evidence led to the central argument of this thesis that the principles of Cape Dutch architecture were derived from the high architecture of the proto-Cape Dutch period.

The primary purpose of the thesis, therefore, is to challenge the linear and evolutionary development of Cape Dutch architecture suggested, if not stated outright, in the majority of secondary sources on the 18th century architecture of the Cape [40]. This evolutionary theory was first posited by Walton in 1950 [41], and has formed the basis for studies of the proto-Cape Dutch period since 1952, when "Homesteads and Villages of South Africa" was published [42]. Its effect has been that researchers have concentrated on surviving examples of the vernacular, to the virtual exclusion of the co-existent high architecture, in an attempt to trace a linear development for Cape Dutch architecture from the simple to the complex.

The secondary sources also suggest that this development resulted from and was paralleled by the growing sophistication of the freeburghers at the Cape, who followed the latest stylistic changes emanating from Europe. There is also the suggestion that the Cape farmers were the equivalent of a minor aristocracy, given the frequency with which the term "manor house" is used, instead of the more accurate "farmhouse". The evidence presented in the second part of this thesis reveals, however, that the development was neither linear and evolutionary, nor was it brought about solely by an increasing architectural awareness on the part of the freeburghers.

This thesis contends that:-

1) The development of architecture at the Cape reached an early level of sophistication that was only later to be followed in a simplified form by the buildings of the freeburghers.

2) The major buildings of the proto-Cape Dutch period were designed in accordance with the architectural principles of the Renaissance [43].

3) The examples that created the precedent for the freeburghers to emulate were the public buildings erected by the VOC and the private residences of its senior officials.

4) Cape Town, as the sole point of entry, was the place where influences from Europe were assimilated, adapted and disseminated to the outlying districts.

Since the thesis has two purposes, it has been subdivided into two parts. The first presents the argument, while the second records the evidence. The latter also includes the analysis and reconciliation of the evidence required for the presentation of the argument, which is frequently expanded upon in the notes.

The argument is that the period of the VOC at the Cape from 1652 to 1710 was of far greater significance than has previously been acknowledged. A close analysis of this period challenges the evolutionary development still generally accepted today. Instead of discounting the evidence provided by the written and visual sources because it does not conform with a linear development, this evidence has been viewed from a fresh perspective.

What the evidence reveals is that a relatively sophisticated architecture had been introduced in public and domestic buildings by 1710. Double-storeyed houses with triple gables and Renaissance proportions, conforming to the types introduced in Holland only sixty years before, were already in existence by this time. These house types were introduced by the Governors and their senior officials, people who had access to recent developments in Holland. Moreover, the wealthier freeburghers were already emulating such houses by 1710 [44]. The designers of these buildings, however, are unknown.

As Lewcock states [45], the influences from Europe did not reach the country districts directly. These new ideas were first assimilated in Cape Town and then disseminated to the interior. After the Company's officials were forbidden in 1707 to engage in private farming and building activities [46], following the disruptions of the Van der Stel period [47], the town became the sole local source of architectural innovation. This probably accounts for the remarkable degree of architectural homogeneity which characterized the emergence of Cape Dutch architecture during the later 18th century. This architectural homogeneity has been noted by most writers in the field.

On the other hand, there is very little evidence during the proto-Cape Dutch period of the simple three-roomed symmetrical cottage which was the supposed precursor of the more complex Cape Dutch houses of the later 18th century. Nor is it likely that even this "basic" type was derived from vernacular origins. Moreover, no one has yet explained why the later farmhouses were such simplified versions of the buildings already existing in 1710. They constituted a retrogression, whereby large rectangular hip-roofed houses with internal valley gutters were reduced to buildings with a number of projecting wings, whereby triple gables were reduced to single centre gables, and where double-storeyed houses were reduced to a single storey.

The reason for this simplification could have been the effects of the smallpox epidemic of 1713, which reduced the population by a quarter. However, this did not affect all the freeburghers, and it is not unlikely that some profited from the misfortune of others. It is more likely that the answer lies in the Company's reaction to the pretension of Governor Wilhem Adriaen van der Stel's estate at Vergelegen, where the farm was sold as four separate portions, and the residence was demolished on official orders [48].

No subsequent Governor or VOC official was permitted to own a farm, let alone build on such an imposing scale. The buildings constructed by Van der Stel and his senior officials had been erected without sanction, and the edict of 1706 stipulated that all the Company's employees should live only in their official quarters at the Castle. This edict resulted, as intended, in a cessation of large scale architectural projects of a residential nature, and a concomitant break in the continuity of precedent. It could be that this termination of the Renaissance tradition was the reason for the apparent hiatus in architectural development over the next four decades, resulting in the comparative

simplicity of the Cape Dutch architecture which appeared in the mid-18th century.

This thesis therefore argues that Cape Dutch architecture was not the result of an evolutionary development. Instead, it arose from an attempt on the part of the free-burghers to emulate the earlier buildings of the VOC and its officials, and those of any freeburghers wealthy enough to build on a similar scale. As with much vernacular architecture, the result was an attractive but less sophisticated version of the original.

Recent work in the field, as presented by archaeologists such as Hall and Brink, has concentrated on the vernacular [49], to the virtual exclusion of the high architecture of the period, thereby perpetuating the evolutionary theory. Both cite Walton, who first proposed an evolutionary development from simple vernacular roots, as the most relevant authority on Cape Dutch architecture, and dismiss the contributions made by architectural historians who have worked in the period dating from after c1750.

However, Walton's examples are those of surviving buildings in isolated districts, all of which date from well after 1710. These are more likely to have been examples of a vernacular tradition that continued in parallel with the high architecture revealed in the evidence of this thesis. An evolutionary development from buildings of this type is unlikely without an outside catalyst. Walton himself has questioned his initial stance that it was the "three-roomed symmetrical cell" which developed into the transverse plan, by acknowledging that some of these developed in a linear direction, thereby creating asymmetrical longhouses [50].

Vos, moreover, has attempted to apply the vernacular developments identified by Deetz [51] and Glassie [52] in colonial North America to the situation at the Cape. However, the American experience was markedly different from that at the Cape, and is therefore hardly admissible as a parallel [53].

Firstly, the initial date of English colonization in America was half a century earlier, in 1607 [54], when Medieval practices were still common, especially in England as opposed to Holland. Secondly, the Pilgrim Fathers as members of the yeoman class, according to Deetz and Glassie, would not have been as well educated as the VOC officials, and did not fully understand Renaissance architectural treatises even when they had access to them [55]. Thirdly, and of central importance, is that the Pilgrim

Fathers were attempting to escape authority, whereas the VOC was attempting to impose authority. This is exemplified by the first building erected by the Dutch at the Cape, the Fort de Goede Hoop, axially symmetrical in plan and designed in Holland. The analogy between the Cape and New England is therefore largely untenable.

Lewcock, writing in the mid-1960s, stated: "Further speculation on sources or development is largely futile until a prolonged, methodical examination has been made of all the available documents, title deeds, paintings and measurements. It is a field in which only the topsoil has so far been disturbed" [56].

This thesis is an attempt to dig deeper into the sources describing the proto-Cape Dutch period in terms of written and visual evidence. It is also an attempt to bridge the gap between traditional architectural historians, who are accused of concentrating on high architecture and its stylistic details to the exclusion of the vernacular; and vernacular historians, who are equally dismissive of the importance of high architecture.

The thesis presents as far as possible the whole range of built works during the period in question, from Governors' residences to drainage ditches around vegetable gardens. It attempts, moreover, to draw attention to a common mind-set that existed across this spectrum. However, after having addressed and analysed all this evidence, the author's conclusion is that it was the academic architecture of the Company and its officials that stimulated the development of the Cape Dutch architecture of the later 18th century, rather than an evolutionary development from vernacular origins.

1.2 LITERATURE REVIEW

As outlined in the introduction, this period has been largely ignored by existing authorities, who have concentrated on the style and origins of the Cape Dutch architecture of the later 18th century, with only passing reference to the proto-Cape Dutch buildings of the 17th and early 18th centuries. The most widely cited of these authorities are Pearse, Biermann, Walton, Fransen and Cook and, more recently, Obholzer. (Full references to all sources consulted will be given in the detailed discussion which follows this broad outline).

The generally accepted view that Cape Dutch architecture had its origins in Holland was challenged by Van der Meulen, stimulating a lively debate in the 1960s, in which Lewcock and Roosegaarde-Bisschop were the two contributors who made reference to the buildings of the proto-Cape Dutch period.

Less well-known sources who have contributed to a knowledge of the early period are Ras, Bax and Hugo, but their work has concentrated on individual buildings which have not been located within the wider context of 17th and early 18th century architecture at the Cape. Smuts has provided useful information on early Stellenbosch, but also without significant reference to developments elsewhere at the Cape during this period.

More recently an interest has been shown in the proto-Cape Dutch period by Abrahams, Hall, Schrire, Vos, Markell, Woodward, Malan and Brink. With the exception of Woodward, however, they have also concentrated only on individual buildings (or a village in the case of Vos on Stellenbosch). These sources make little reference to the contemporary drawings or descriptions of other buildings no longer extant, with the result that their conclusions have not been placed within the broader context of the period.

All four groups of secondary sources contributed towards the compilation of this thesis, as will be outlined below. However, its central argument could only be derived from an analysis of the broad range of evidence provided by the primary sources.

The first group comprises the standard works on the architectural history of the Cape Dutch period. Of these, Pearse is most widely known for his "Eighteenth Century Architecture in South Africa" [1]. This work consisted predominantly of Cape Dutch buildings of the later 18th century, illustrated by measured drawings. The only proto-Cape Dutch examples described were the Castle [2], the guest house in the Company's garden above Cape Town (the plan of which he attempted to identify within that of the present "Tuynhuys", or "Government House" as it was known in his time) [3], and the residences of Simon van der Stel at Constantia [4] and his son Wilhem Adriaen at Vergelegen [5]. His descriptions of both Constantia and Vergelegen, however, were based on the evidence of the structures surviving today, which do not correspond with their contemporary pre-1710 descriptions.

A less well-known work by Pearse is "The Cape of Good Hope 1652-1833" [6], which devotes over a third of its pages to the period prior to 1710. It contains contemporary descriptions of many of the buildings of this period, accounts which are largely absent in work of later writers apart from Walton. However, this work is primarily concerned with social history, and does not present an architectural interpretation of the material except in the case of the Castle, the guest house, Constantia and Vergelegen. These interpretations, though, were largely a reiteration of the descriptions presented in "Eighteenth Century Architecture in South Africa".

Biermann's doctoral thesis [7] is primarily concerned with an analysis of Cape Dutch stylistic origins in the Netherlands, with little reference to developments during the proto-Cape Dutch period. Nevertheless, he did introduce three propositions which have been expanded upon in this thesis. The first was that the classicist architecture of the official buildings coexisted with the vernacular architecture of the farmhouses from the outset of the colony. These classicist buildings were derived from the "pattern books" of Renaissance writers, and set the standards to which the vernacular could aspire. The second was that the design of the country farmhouses was derived from the town houses of Cape Town, which were already gabled and double-storeyed by the end of the 17th century. The third was that the Van der Stels' estates at Constantia and Vergelegen served as specific models, the former for the U-plan and the latter for the H-plan, thus providing an alternative to an evolutionary theory [8]. More recently Biermann re-stated his argument concerning the influence of Vergelegen in "Oor die bronne van ons volksbarok" [9].

Walton has done invaluable work in recording the vernacular architecture of the Cape, as first published in "Homesteads and Villages of South Africa" [10]. However, he appears to have been responsible for the introduction of the theory that the Cape Dutch farmhouse on the transverse plan was developed in an evolutionary manner from the simple cottages still seen in the rural districts. The refutation of this theory is the central argument of the present thesis.

More recently, in "Old Cape Farmsteads", Walton has drawn attention to the existence of the longhouse during the early period [11]. He suggests that this type of house, which was extended longitudinally rather than rearwards, was usually relegated to

subsidiary uses when more formal types were erected. However, he still subscribes to a coexisting evolutionary development from a basic three-roomed symmetrical house to the U-, T- and H-plan houses of the later 18th century.

Walton has also studied early examples of buildings such as mills [12], the "kapsteilhuis" [13], dovecots [14] and lime-kilns [15], based on contemporary evidence. It should be noted, though, that his research into early buildings has concentrated mainly on vernacular examples, and has therefore not addressed the public buildings of the VOC and the houses erected by its senior officials.

Fransen and Cook were responsible for the first comprehensive gazetteer on Cape Dutch architecture [16], "The Old Houses of the Cape" [17], later revised and enlarged as "The Old Buildings of the Cape" [18]. This is an invaluable source for locating the Cape Dutch buildings still in existence, but its purpose was not to reveal the architectural development of the proto-Cape Dutch period. The only early buildings described in addition to those found in Pearse are the "Posthuijs" at Muizenberg [19] and the Schreuder house in Stellenbosch [20].

Fransen's doctoral thesis [21] is an expansion of Biermann's research, concentrating largely on a stylistic analysis of the development of Cape Dutch architecture. Again, the early buildings are presented as simpler antecedents of existing structures, with an emphasis on their details. The two examples which he has covered more extensively, Constantia [22] and the Cape Town church [23], have not been set within their contemporary 17th and early 18th century context. This thesis challenges his reconstructions of the Cape Town church in detail [24] and of Constantia in principle [25], on the basis of contemporary descriptions.

Obholzer, Baraitser and Malherbe also make reference to buildings within the period of this thesis [26], but with an emphasis on the details of existing buildings, particularly of their interiors. The buildings cited as dating from prior to 1710, however, are not set within the context of contemporary structures since demolished, and their dating is sometimes questionably early. This applies particularly to the houses within this period described as T-planned [27], a plan type which appears only to have developed later than the proto-Cape Dutch period [28].

The second group of sources centres on Van der Meulen's argument for a German influence at the Cape [29]. His theory that Cape Dutch architecture was developed from German prototypes was initially the subject of intense criticism. However, it is now widely accepted that Cape Dutch architecture had its origins in a region and a culture larger than that of Holland alone.

Van der Meulen was also the first person to stress the importance of the transverse plan, which he identified as the central characteristic of Cape Dutch town houses and farmhouses. However, he ascribed its origins to the German vernacular, thereby perpetuating the evolutionary theory in a different guise. He also had little to say about the early period, except in the case of buildings which he considered supportive of his argument.

Lewcock's response [30] to Van der Meulen raised three points central to the argument of this thesis, derived from Biermann's thesis but expanded upon and stated more explicitly. Firstly, it was the official buildings which "set the standards of fashion" [31] followed in the buildings of the freeburghers. Secondly, the symmetrical transverse plan was derived not from the vernacular, but from the architectural treatises of Renaissance writers [32]. Thirdly, the architecture of the country districts was more likely to have been spread from Cape Town than received directly from Europe [33].

Roosegaarde-Bisschop's response [34] to Van der Meulen and Lewcock contributes nothing on the proto-Cape Dutch period except in a negative sense. He was the first person to dismiss the accuracy of contemporary drawings because of their apparent lack of correspondence with Dutch architecture of the time [35]. This view is still widely held, despite the correspondence of these drawings with contemporary descriptions [36].

The third group of sources comprises writers whose background was not that of architectural history, but were nevertheless interested in the field with regard to particular building types or particular places.

Ras' masters dissertation [37] on the Castle and other early fortification works [38] was useful in providing information from sources outside the research parameters of this thesis. However, it made no attempt at architectural interpretation. The publications of

Bax [39] on the early churches at the Cape [40] were useful in providing information from the church records, which were also outside the research parameters of this thesis. His architectural conclusions, however, are unconvincing [41]. Similar criticism can be applied to Hugo and Van der Bijl's work [42] on the church and other early buildings in Stellenbosch [43], whose research into the records of the Landdrost and Heemraden was equally useful, but whose architectural conclusions are often questionable [44].

Smuts [45], who edited a history of Stellenbosch [46] on its tercentenary in 1979, was also valuable in the provision of historical information derived from sources not consulted in the preparation of this thesis. His volume was also the first to publish the sketches of the farmhouses appearing on the earliest land grants (as expanded upon by Walton in "Old Cape Farmsteads"). However, the architecture of the Stellenbosch district was presented as an isolated phenomenon, and was not correlated with contemporary developments in Cape Town and on the Peninsula.

The fourth group of sources comprises the inventorial work of the art historian Woodward and the excavations of historical archaeologists. These are important contributions, introducing new methods to the study of the proto-Cape Dutch period. However, the discipline of historical archaeology has only recently been established in South Africa, and very few sites have yet been excavated and published.

Abrahams' trial excavations of the Fort [47] have revealed a correspondence with the 1656 plan of this structure [48]. Hall's work on the Castle moat [49], on the other hand, showed that this was not constructed according to the specification outlined in the Resolutions of the Council of Policy [50].

Schrire's excavation of Oudepost I, the VOC outpost at Saldanha Bay [51], is extremely useful in revealing the unpretentious and asymmetrical form of the "lodge" [52], as the planning of such buildings was not described in the VOC records. The early farmhouse at Onrust near Stellenbosch, excavated by Hall [53], also had an asymmetrical plan in the form of a longhouse [54]. Hall's work on the Company's wood-cutter's house at Paradijs in Newlands [55] likewise reveals an initial asymmetrical plan, which was only replaced with a symmetrical arrangement in the mid-18th century [56].

Vos was responsible for the excavation of the "Posthuijs" at Muizenberg [57], revealing

a symmetrical three-roomed plan in contrast to the three examples mentioned above [58]. Vos has also undertaken excavations of the earliest buildings in Stellenbosch [59], as presented in his masters dissertation, but this work has yet to be published in archaeological journals. Moreover, only two of the houses which have been extensively excavated (the Schreuder house and "Colonieshuis 3") correlate conclusively with the buildings depicted by E V Stade in 1710 [60].

Another archaeological finding concerns the out-buildings at Vergelegen, which had triple aisles separated by piers. These were excavated by Markell [61], and correspond dimensionally with the valuation report of 1710 [62]. However, as with all the other archaeological work undertaken to date, these findings have not been placed within the wider context of the proto-Cape Dutch period as revealed by documentary sources.

Woodward introduced the use of probate inventories to the study of early Cape houses in her masters dissertation [63]. However, her interpretation of the inventories was based on the assumption that the U-plan and T-plan houses of the later 18th century were common in its first decade, an assumption subsequently criticized by Brink [64]. On the other hand, Brink's contention that the symmetrical plan dates only from the 1730s, and that the "voorhuis" was located in the corner of an L-shaped house as in the town houses of Amsterdam, is likewise contradicted by contemporary drawings and verbal descriptions, although some houses of this type might have existed at the time.

Both interpretations illustrate the shortcomings of using probate inventories alone as a record of architectural history. While extremely useful in confirming the manner in which individual rooms were occupied, it must be stressed that these were not architectural descriptions, but legal documents.

Where the probate inventories are useful is when they can be correlated with archaeological findings, as detailed by Malan [65]. Until now, however, a firm correlation between inventorial and archaeological evidence (as published) has been established at two sites only. These are the Schreuder house in Stellenbosch and the wood-cutter's house at Paradijs in Newlands, and in both cases the interpretation of the correlation is open to question [66]. As argued by Glassie [67], moreover, it will only be after a far more widely representative sample has been obtained that a pattern can be

established and that firm conclusions can be drawn.

Nevertheless, preliminary interpretations have already been made by Brink in the case of the "voorhuis" [68] and of the Company's house at Nieuwland [69]; and by Hall, who reintroduces the evolutionary theory by stating that the larger houses incorporated the "core form" of the simpler cottages recorded by Walton in the more isolated districts [70]. Both of these interpretations have disregarded the contemporary verbal and visual documentary evidence of buildings no longer in existence and not yet excavated, evidence which appears to contradict their preliminary conclusions.

This review has addressed all the significant literature on the proto-Cape Dutch period, derived predominantly from the disciplines of architecture and archaeology. The end-notes contain detailed commentary on perspectives from other disciplines [71], which are also referred to in the sources consulted.

1.3 RESEARCH METHOD AND EVALUATION OF PRIMARY SOURCES

1.3.1 RESEARCH METHOD

The research method adopted for this thesis was of an empirical nature, in contrast to the "a priori" approaches which have characterized most previous work on Cape Dutch architecture.

From these "a priori" approaches a number of theories have been posited on the development of the Cape Dutch "style". These include the evolutionary theory [1], the theory of Dutch origins [2], and the theory of German origins [3]. More recent theories concern comparisons between the development of Cape Dutch architecture and the colonial experience in New England [4], and the contention that the earliest houses at the Cape were based on the asymmetrical Amsterdam town house model [5].

None of these theories has been tested against a broad study of the contemporary evidence of the proto-Cape Dutch period. Moreover, they all address the field only partially, omitting those buildings which do not fall within their terms of reference. The art and architectural historians have concentrated on the stylistic elements of "high"

Cape Dutch architecture, whereas the vernacular historians and historical archaeologists have focused on the "low" to the virtual exclusion of the "high".

This thesis contends that all aspects of architecture contribute to the development of a coherent and consistent style, and that it is therefore unproductive to focus on one aspect only [6]. It also contends that "a priori" theories are inappropriate for a field in which a substantial body of knowledge has not yet been established. The empirical method, on the other hand, permits a more dispassionate and all-inclusive approach to the study of a largely unresearched field.

The method adopted in the compilation of this thesis was derived from a broader study of the period of the VOC at the Cape. This involved firstly a search of the Cape Archives for all visual material dating from 1652 to 1795. Secondly, it involved an extensive field survey of some 900 farms and many towns and villages which followed the Cape Dutch tradition, resulting in a collection of 25 000 documentary photographs. Thirdly, research was undertaken into all the available visual material in the Algemeen Rijksarchief in 's-Gravenhage, in the Rijksprentenkabinet at the Rijksmuseum in Amsterdam, in the Collectie Bodel-Nijenhuis at the University of Leiden, and in the Public Record Office at Kew and Chancery Lane in London. Fourthly, the Resolutions of the Council of Policy (which comprise the official record of the decisions made by the governing body at the Cape) were read in their entirety from 1652 to 1743, and partially from 1744 to 1795 on the basis of the marginal notes (which highlighted the matters under discussion).

This extensive initial research revealed that the period least covered in the secondary sources was central to subsequent developments, and was arguably of greater architectural significance than the Cape Dutch architecture which was to emerge some 40 years later. The selection of the proto-Cape Dutch period as the subject of this thesis was thus made on the basis of broader research into the whole period of VOC rule at the Cape.

The cut-off date of 1710 is historically significant for three reasons. The first is that Wilhem Adriaen van der Stel, who had been responsible for major architectural commissions (including the Cape Town church [7], the rebuilt guest house in the

Company's garden [8], the house at Nieuwland [9] and his own estate at Vergelegen [10]), was dismissed as Governor in 1707 and sent back to Holland in 1708. The second is that the village of Stellenbosch was destroyed by fire in December 1710. Both these events probably constituted a turning-point in architectural development at the Cape. The third reason is that the first comprehensive depictions of buildings at the Cape date from E V Stade's visit earlier in 1710, thus allowing a correlation between the historical events responsible for this turning-point and contemporary visual evidence.

Once the chronological extent of the thesis had been established, further documentary research was undertaken into the official VOC sources. These comprised the Company's Journal, the Letters despatched and received, and the Edicts proclaimed by the Council of Policy. Since time constraints precluded a complete survey of the original hand-written documents in the case of the Journal and Letters, reference was made to verbatim transcriptions from 1652 to 1666 [11] and to Leibbrandt's precis from 1667 to 1710 [12]. The Edicts dating from 1652 to 1710 were derived from the transcriptions of Jeffreys and Naude [13].

In addition, the accounts of contemporary visitors to the Cape were consulted intensively, as will be seen in the evaluation of their accuracy in Chapter 1.3.2. The published reports of recent archaeological excavations were also consulted, as were the measured drawings of architectural restoration projects, where available. Original title-deeds and probate inventories were not included in the research programme, but are referred to when they are described in the secondary sources [14].

The primary sources outlined above constituted the research parameters of the thesis. All have been read in their entirety, as many architecturally significant facts are revealed by apparently peripheral descriptions. An example is Valentyn's account of a musical evening at Constantia [15], which provides evidence that the courtyard was surrounded by three ambulatories or "galderyen". Another is Mentzel's account of the pudenda of a Khoi servant-woman [16], which reveals that the "voorhuis" of the farmhouse was used a dining room in the 1730s.

Moreover, an otherwise insignificant entry in the Journal, referring to an unidentified

case left at the Cape in Van Riebeeck's time, reveals that three architectural treatises were retained at the Cape [17]. One of these was the work of Hendrick de Keyser, the foremost architect in Holland in the first quarter of the 17th century. The notable similarity between the Cape Town church commissioned by Wilhem Adriaen van der Stel and De Keyser's Noorderkerk in Amsterdam [18] is strongly suggestive that this work was consulted in the design of the church. It is also possible that it influenced the designs of other buildings, as could also have occurred with the treatises of Vignola and Vitruvius, which constituted the other two volumes.

The material derived from these sources concerns the field of architecture in its widest interpretation. The evidence presented covers the whole range of building works, including fortifications and civil engineering works such as bridges, jetties and reservoirs. In the field conventionally associated with the realm of architecture, it is concerned with the "ordinary" houses and out-buildings of the Company and the free-burghers, the "high architecture" of the public buildings, and the "fashionable" residences of the senior officials and of the wealthiest burghers. It also addresses the issues of town-planning and urban design. Aspects which are not specifically related to individual buildings, but are nevertheless significant to an understanding of the period, have been presented at the end of Part 2. These include construction methods and materials (Chapter 11), and architects and craftsmen (Chapter 12).

The analysis of the material derived from these sources was only undertaken once the research had been substantially completed. It was therefore possible to compare all available descriptions of individual buildings and to address any apparent contradictions.

The reconciliation of apparently contradictory evidence is central to the method developed in this thesis. It is contended here that, with one exception, all contemporary verbal and visual descriptions were honest attempts to portray what their authors had seen with their own eyes. There is no reason to discredit any of their accounts when based on personal observation rather than on hearsay. The distinction between the two is not difficult to identify, but is crucial in that both Valentyn [19] and Kolbe [20] have been dismissed as inaccurate, largely because of their plagiarism [21]. The only description, both graphic and verbal, which must be considered a distortion of reality is

that of Vergelegen in Wilhem Adriaen van der Stel's "Korte Deductie" [22], as it does not correspond with the contemporary evidence of the official valuation report of the estate compiled in 1709 [23].

The reconciliation process involved the re-establishment of the designs of the buildings for which sufficient information was available. These "designs" were drawn and re-drawn until the "contradictions" of the partial contemporary evidence were reconciled. In the case of Constantia [24] these contradictions concerned the old foundations discovered during its restoration in 1926. At Vergelegen [25] they concerned discrepancies between two systems of measurement as described in contemporary sources. The hospital [26] was reconstructed on the basis of an analysis of the length of Valentyn's "paces", which also provided the key to the plan of the church [27]. Here the verbal evidence of Kolbe and Valentyn also had to be reconciled with Stade's depiction, and contrasted with previous reconstructions.

This reconciliation process was also applied to three of the buildings in Stellenbosch: the drostdy [28], "Colonieshuis 3" [29] and the Schreuder house [30]. In the case of the drostdy the reconstruction was based on a correlation between the documentary evidence and contemporary practice on the Peninsula, since no archaeological evidence was available. The reconstructions of the two houses were derived from a reconciliation of three types of evidence: contemporary descriptions or inventories; Stade's visual evidence of 1710; and the archaeological excavations. All three reconstructions differ from those presented in the past, as none of the latter attempted to reconcile all of the evidence. This selective use of evidence has unfortunately characterized most previous work in the field.

An empirical method was thus adopted for this thesis as the most appropriate for a largely unrecorded period. It permitted the identification of the widest possible number of examples which could be derived from a systematic study of the material contained within the research parameters. All these examples have been presented in Part 2, and all those for which sufficient evidence was available have been described and analysed.

The buildings and engineering works described in Part 2 cover the whole range of architectural types, in order to establish the common architectural principles which

characterized the proto-Cape Dutch period. The identification of these principles and the selection of the examples discussed in Chapter 4 was made only after the analysis of the individual buildings appearing in Part 2 had been completed. The final argument was thus held over until the findings of the research and analysis had been established, in order as far as possible to avoid a preconceived theory.

The author acknowledges that an empirical method does not prevent the presence of bias. The overt bias here is a specifically architectural approach to the material. The thesis contends that architectural history is neither a single component of the wider field of art history, nor a mere reflection of social and cultural history as perceived by historical archaeologists and others. It is a discipline in its own right, whose primary purpose is to inform the broader discipline of architecture itself.

The architectural approach employed here was derived from the work of two writers in particular, Rex Martienssen [31] and Arnaldo Bruschi [32]. Martienssen revealed a previously unrecognized order in the siting of the buildings within the sanctuaries of Hellenic Greece, and Bruschi probed into the mind of Bramante to reveal the processes of his exceptionally intellectual approach to architectural design.

It is on the inspiration of these two writers that this thesis has been constructed. Neither Martienssen nor Bruschi appear to have followed a predetermined "methodology", and the value of their contributions is largely because each developed an independent approach to the study of architectural history.

The research method and analytical techniques employed in this thesis have likewise been independently developed, but with reference to the direction suggested by these two writers. These directions were central to the development of the author's approach to the teaching of architectural history, which in turn had a profound influence on the interpretation of the research material from which the argument of the thesis is derived.

Martienssen's method was to explore the whole spectrum of Greek architecture, from temples to houses [33]. His analysis of the entire field enabled him to reveal the architectural principles common to the period as a whole [34]. He then demonstrated the effect of these principles by recreating the spatial experience of worshippers at the temple complexes [35]. His method was thus largely responsible not only for the

inclusiveness of the material presented in the "Evidence" of this thesis (Part 2), but also for the development of the analytical method on which the "Argument" is based (see Chapter 4).

Bruschi's contribution was first to reveal the contradictions that confronted Bramante in the design of buildings such as the courtyard of S Maria della Pace [36] and the Tempietto [37], and then to show how he reconciled these in the development of his designs. In contrast to Martienssen's analyses, which were made without the advantage of contemporary written documents, the design processes revealed by Bruschi were based on factual evidence of the problems confronting Bramante. It was Bruschi's method that provided the inspiration for the reconciliations between apparently conflicting sources required in this thesis for the suggested reconstructions of buildings no longer in existence.

Both Martienssen and Bruschi were working either from ruins and extant buildings, or documented archaeological and architectural drawings. This was seldom the case in the present thesis, and it has been only through a different application of their methods that it has been possible to reconstruct the alternative plans presented here.

1.3.2 PRIMARY SOURCES AND THEIR EVALUATION

Given that the buildings of the proto-Cape Dutch period have been covered only selectively by the secondary sources, as outlined in the literature review (Chapter 1.2), it was necessary to re-examine the primary sources in detail.

The foremost of these are the Resolutions of the Council of Policy at the Cape [1], which was accountable to the Directors of the VOC (the Council of Seventeen in Amsterdam). The Resolutions do not always give a record of whether and when action was taken, but they do reveal the official decisions and intentions of the governing body. Moreover, they sometimes detail the discussions that took place on architectural matters, thereby providing a broader understanding of contemporary opinions than the final decisions recorded in the Journal and the Letters despatched. They thus constitute the most impartial record of architectural developments at the Cape.

The Resolutions are invaluable with regard to architectural matters in disclosing the

attitude of the Company's officials towards building works at the Cape during this early period. In theory, all significant projects had to be approved first by the Visiting Commissioners, who inspected the Cape twice a year when the outward and return fleets landed. Confirmation was then required from the Council of Seventeen, in order to avoid unnecessary expenditure.

The Resolutions, however, are not consistent in the amount of information that they reveal. Those of Van Riebeeck and his successor Wagenaer are very detailed, but they are followed by a relative dearth of architectural information until the brief period when the conscientious Hendrick Crudop was Acting Commander, prior to the arrival of Simon van der Stel in 1679.

The period of Simon van der Stel and his son Wilhem Adriaen (1679-1707) was particularly notorious for the lack of information on architectural works in the Resolutions. This is understandable in relation to their own illegal building operations concerning their country residences at Constantia [2] and Vergelegen [3], but is less easily explained with regard to official buildings such as the new hospital [4], which received no mention in the Resolutions. This raises the possibility that there were other important buildings, as yet unknown, which were not mentioned in the Resolutions or, for that matter, in the Journal, the Letters and the travellers' descriptions. A case in point is Nieuwland, where the garden is described but the house is not mentioned in any of the sources [5].

The second of the primary sources consulted was the Journal, the day to day record of activities at the Cape, kept in the manner of a ship's log by the Commander or Governor (or, if he was absent, by the most senior official present). While usually less detailed than the Resolutions, it does reveal whether or not building projects were commenced and completed, and also records damage to buildings and repairs that were carried out.

The original Journal (as transcribed) was consulted for the period of the first two Commanders, Van Riebeeck and Wagenaer (1652-1662 and 1662-1666) [6]. For the remainder of the Journal until 1710, reference was made to Leibbrandt's precis, as mentioned under research method (Chapter 1.3.1) [7]. However, Leibbrandt's

published work is not continuous, and omits the entries from 1677 to 1698.

The third primary source was the Letters despatched from, and received at, the Cape. These often expand upon the decisions taken in the Council of Policy and confirm events briefly referred to in the Journal. Here, apart from Boeseken's transcription of Wagenaer's letters [8], Leibbrandt's "Precis of the Archives" was used as the sole source [9]. The latter has a parallel text in Dutch and English, but only the translation was abridged, the original being reproduced in its entirety. Again, however, Leibbrandt's published work does not cover the whole period of this thesis, omitting the entries from 1663 to 1695 and 1709 to 1710 (Letters despatched) and from 1663 to 1694 and 1709 to 1710 (Letters received).

The impression gained from Leibbrandt is that the Journal and Letters were less informative on architectural matters after the arrival of Simon van der Stel. This impression is supported by the fact that the brevity of his letters to the Council of Seventeen, particularly with regard to building works, was a matter of concern at the time, and was one of the reasons for Simon van der Stel's dismissal as Governor in 1699 [10].

It has been necessary to make a number of corrections to the translations appearing in Leibbrandt's precis and in the Van Riebeeck Society edition of Valentyn's account of the Cape discussed below. The translators of these works were not conversant with architectural terminology, and therefore could not be expected to identify the precise meaning of the relevant words used in the original texts. Valentyn's "dubbelhuijsen" in the town [11] are a particularly notable example, the specific meaning of which has not yet been understood even by the architectural historians who make reference to his "Beschryvinge" of the Cape [12].

Further translations from the original Dutch were also necessary in the case of documents which have not yet been translated into English. An invaluable source in this regard was a contemporary English-Dutch and Dutch-English dictionary, published only seventeen years after the end of the period of this thesis [13]. This provided precise early 18th century definitions for the words used in the primary sources, and these were correlated with contemporary English usage as defined in the Compact

Edition of the Oxford English Dictionary [14].

The next source of evidence concerns the accounts of contemporary visitors to the Cape, who often gave far more detailed architectural descriptions than those in the official records. The two major contemporary sources outside the VOC records are Kolbe (a German astronomer) [15] and Valentyn (a Dutch-Reformed minister in the service of the VOC) [16]. Both have strengths and weaknesses regarding their accounts of the Cape, but it is not difficult to identify their authenticity when a larger body of evidence is addressed. Kolbe has often been described as inaccurate and unreliable, and Valentyn has been accused of excessive plagiarism, particularly from Kolbe. Both authors, therefore, need to be evaluated in terms of their correlation with other evidence.

Kolbe's descriptions are usually less architecturally explicit than those of Valentyn, but are invaluable with regard to buildings which he knew well, such as the guest house in the Company's garden [17]. His explanation that the slave lodge was roofed under a monopitch, rather than flat-roofed as stated by other observers [18], is also extremely significant.

However, the accuracy of his observation must be questioned with regard to other buildings. An example is the church, which he described as having a flat roof in the centre, surrounded by a balustrade. As will be seen in the analysis of the church [19], this was probably a confusion between the beams for the projected loft above the crossing and the railing protecting the walkway surrounding the spire above the tower.

Valentyn's descriptions of the church [20], the hospital [21] and Simon van der Stel's Constantia [22], are extremely precise with regard to the information which he discloses. These give exact dimensions in terms of Rhineland feet, and "paces" which have a length of 1,8 feet as revealed by analysis [23]. However, his account of Vergelegen [24] is not only less enlightening, but contradictory in terms of the other evidence. This suggests that he did not have the opportunity to make the thorough investigation of the complex that appears to have characterized his method elsewhere.

It must be noted, though, that Valentyn seldom gives a complete record of all the rooms in a building in the sequence in which they are encountered, concentrating instead on

the major spaces, as in his description of Constantia. Comprehensive accounts of the internal accommodation of buildings were not unknown at the time, however, as demonstrated by the anonymous author of "Neutrale Gedagten" mentioned below [25]. Using an architectural analogy to expose the contradictions in the evidence presented by Wilhem Adriaen van der Stel in his "Korte Deductie" [26], the author gave a detailed account of the size and arrangement of the rooms in the imaginary house he used as his metaphor.

Another invaluable source is Tachard (a French Jesuit priest and astronomer), who described the first guest house in the Company's garden, in which he was accommodated and which he also used as an observatory [27].

Bogaert (a ship's surgeon), who visited the Cape on many occasions and acted as courier for the freeburghers' memorandum concerning the irregularities of Wilhem Adriaen van der Stel, also provides information on Vergelegen which would otherwise have passed unrecorded [28].

Concerning Vergelegen, the "Korte Deductie" [29], the "Neutrale Gedagten" [30] and the "Contra-Deductie" [31] are also of central importance. The first was Governor Wilhem Adriaen van der Stel's attempt to clear his name after his dismissal as Governor of the Cape; the second was a critique of this work by the anonymous author referred to above, which revealed fundamental discrepancies and contradictions in the evidence of the ex-Governor; and the third was the freeburghers' response to the "Korte Deductie", which contained a number of sworn statements by eyewitnesses at the Cape providing a clearer picture of Van der Stel's establishments at Vergelegen and further afield.

Stavorinus' account of Vergelegen as it was in 1774 has also been addressed [32]. Although written 65 years after the demolition of the ex-Governor's residence, it is extremely instructive in the very contradictions that it presents, thereby revealing that the house which he described was built later than the residence erected by Wilhem Adriaen van der Stel.

The last source used on a regular basis is Mentzel [33], who arrived at the Cape only in the early 1730s and departed in 1741 [34]. His account, moreover, was written in the

1780s when he was already in his old age. It is therefore necessary to determine which of his descriptions were made on the basis of first-hand experience, and which were based on the accounts of subsequent writers, some of whom he acknowledges. He could also have had personal communications with later visitors to the Cape.

As with Kolbe and Valentyn, however, it is seldom difficult to identify his own personal descriptions, in the light of the anecdotal information that accompanies them. His account of the slave lodge [35] and of the use of the "voorhuis" of the farmhouse as a dining room [36] are relevant in this regard.

Given that Mentzel arrived at the Cape more than twenty years after the termination of the period of this thesis, his descriptions have been used only in a confirmatory capacity. They have therefore not been used to introduce evidence unrecorded in sources contemporary with the proto-Cape Dutch period.

Where precise datings of the most prominent visitors' descriptions are not available, they have been dated according to their year of departure from the Cape. Kolbe is thus dated 1713, Valentyn 1714, and Mentzel 1741.

The contemporary drawings are of even more significance than the written sources. While the earliest travellers' records are sketchy and inaccurate, the six pen-and-ink drawings of E V Stade dating from 1710 are very convincing. These include two drawings of Cape Town, one from the roadstead [Fig 53] and one from Leeuwenhof [Fig 54], the garden house of the Fiscal Blesius in Table Valley. The second depicts a fountain in the foreground which corresponds with a similar feature shown on the title-deed of the property [Fig 108]. Moreover, in the view from the roadstead a lean-to structure is depicted outside the water-front bastion of the Castle. This was an outer guard-room, as confirmed by independent written descriptions [37]. This drawing is a notable indication of Stade's concern for accuracy, given the military inappropriateness and aesthetic awkwardness of the guard-room in question.

Stade's other drawings were of Simon van der Stel's Constantia [Fig 137], Stellenbosch [Fig 223], Drakenstein [Fig 225], and a farm at the Paarl [Fig 183]. With the exception of Constantia, they reveal a progressive diminution in architectural elaboration the further he moved away from Table Bay. Whereas gabled or pedimented buildings were

by now common in the town, there were only two in Stellenbosch itself and one on its outskirts, and none at all at Drakenstein and the Paarl.

The diversity of building types and decorative treatment revealed by Stade suggests that his drawings were far more accurate than has previously been acknowledged [38]. His only distortions were to shift his buildings in relation to each other in order to provide an unobstructed view of their facades, as will be referred to later in the case of the two drawings of Cape Town [39] and those of Constantia [40] and Stellenbosch [41], and to exaggerate the size of the churches, as seen at Cape Town and Stellenbosch.

It is instructive, moreover, that the most controversial feature in Stade's views of the town and Constantia, namely the triple-gabled facade, is confirmed by the prints of Vergelegen published in the "Korte Deductie" of Wilhem Adriaen van der Stel [Fig 227] and the "Contra-Deductie" of Adam Tas and Jacobus van der Heiden [Fig 230].

The drawings of Heydt [42] which date from 1741, the date of Mentzel's departure from the Cape, are also useful as confirmatory evidence, although less revealing than those of Stade. Roosegaarde-Bisschop [43] and Fransen [44] state that these are more convincing than Stade's views, and suggest that the triangular flanking dwarf-gables depicted by the latter were a "shorthand" for the vertical sided dormer windows shown by Heydt. They suggest, moreover, that Stade's drawings were all equally inaccurate.

However, a comparison between Stade's and Heydt's drawings of the town [Figs 54 and 35] reveals the latter's to be far less convincing, not only with regard to the total absence of detail in the buildings, but also to their topographical setting. The Heydt sketch taken from the top of Table Mountain, moreover, has little correspondence with the contemporary plans of 1749 [Fig 51] and 1753 [Fig 52].

Heydt's view of the town is clearly inaccurate, but his more detailed representation of Constantia [Fig 138] is correct as regards the positions of individual buildings. His depiction of the residence could also be accurate, if the dwarf gables had been replaced with pedimented dormers after the collapse of the centre gable, since his engraving was made thirty years after Stade's drawing. However, the representation of these elements could have resulted from adjustments made during the engraving process, as will be discussed in Chapter 8.5.

An even later visual source is Johannes Rach, who visited the Cape in 1762 and 1763. His drawings [eg Fig 66] are the first detailed depictions of Cape Town since those of Stade, half a century earlier [45]. They reveal a town that, although more decorative, consisted of buildings smaller and architecturally less ordered than many of those in 1710. This evidence thus supports the argument that there was an architectural retrogression at the Cape after the departure of Wilhem Adriaen van der Stel.

It is the contention of this thesis that, with the exception of the "Korte Deductie", all the sources outlined above were fundamentally correct in their verbal and visual descriptions, apart from minor inaccuracies. The misrepresentations and exaggerations of which they have been repeatedly accused in the secondary sources are largely groundless. These have had to be proposed in order to justify the theory that Cape Dutch architecture followed an evolutionary development from the simple to the complex. The written and graphic evidence, however, suggests that the opposite was the case.

To conclude, the research method has been empirical in nature. All the contemporary sources consulted within the research parameters (see Chapter 1.3.1) have been read in their entirety, as it is often the apparently peripheral material that offers an architectural insight. All these sources have been allowed to speak for themselves and lead the evidence presented in the thesis [46].

The reconciliation of evidence from different sources which initially appeared to have been contradictory was a central component of the research method. This method of reconciliation, which is outlined in Chapter 1.3.1, has permitted informed reconstructions of the more prominent buildings.

It is this evidence, derived from the reconciliations described in detail in Part 2, that forms the basis of the architectural analyses presented in Chapter 4.

2. CHRONOLOGICAL OVERVIEW

Since the "Argument" (Part 1) is organized on the basis of an analysis of architectural principles, and the building types appearing in the "Evidence" (Part 2) are presented geographically, it is necessary to include a brief chronological overview. This outlines the expansion of the settlement and the major buildings erected. The dates provided here are for the commissioning or commencement of the buildings, not for their completion, unless otherwise stated. Reference is also made in the text to the Commanders and Governors under whose authority architectural and building works were commissioned. Their sequence of command was as follows [1]:-

1652-1662: Jan van Riebeeck (Commander).
1662-1666: Zacharias Wagenaer (Commander).
1666-1668: Cornelis van Quaelbergh (Commander).
1668-1670: Jacob Borghorst (Commander).
1670-1671: Pieter Hackius (Commander).
1671-1672: Council of Policy (Governing Committee).
1672: Albert van Breugel (Acting Commander).
1672-1676: Isbrand Goske (Governor).
1676-1678: Joan Bax genaemt van Herentals (Governor).
1678-1679: Hendrick Crudop (Acting Commander).
1679-1691: Simon van der Stel (Commander).
1691-1699: Simon van der Stel (Governor).
1699-1707: Wilhem Adriaen van der Stel (Governor).
1707-1708: Joan Cornelis d'Ableing (Acting Governor).
1708-1711: Louis van Assenburgh (Governor).

2.1 ESTABLISHMENT: 1652-1662 (JAN VAN RIEBEECK)

This period was of crucial importance as it was at this time that the first architectural adaptations were made in response to the climatic conditions of the Cape and the availability of local resources. Both differed considerably from those with which the Dutch were familiar, in Holland itself and in the colonies at Batavia and Brazil.

It was a period of experimentation, when many of the construction methods which were to characterize the Cape Dutch architecture of the mid-18th century were first developed, and others were rejected as impracticable. These experiments were first carried out on the buildings within the Fort, begun in 1652 [1].

The planning and exterior form of the early domestic buildings was also of an experimental nature, most of them differing markedly from the supposed antecedents of the later town houses and farmhouses. This gives them an importance greater than their own intrinsic value. These buildings were the tradesmen's and innkeepers' houses in the town, the first of which were built in 1658 [2], and the freeburghers' houses on the Peninsula, the earliest of which were constructed in 1657 [3].

It was also the period during which the first Company's outposts were established. Although the settlement did not extend beyond the Cape Peninsula, posts were set up at Robben Island (1653), Dassen Island (1654) and Saldanha Bay (1657) [4].

2.2 CONSOLIDATION: 1662-1679 (ZACHARIAS WAGENAER TO HENDRICK CRUDOP)

Although a number of major buildings were planned if not executed during this period, it was one characterized by consolidation rather than expansion. Most of the buildings erected were of a utilitarian nature and, although there were tentative steps to expand into the interior [1], the settlement was still largely confined to the Cape Peninsula.

The most important engineering works were the Castle (1666) [2] and the reservoir (1663), which was provided in 1670 with a stone channel leading water to the jetty [3]. A parsonage (1670) [4] and a guest house for the accommodation of visiting dignitaries (1674) [5] were built in the Company's garden. Work was also commenced on a new church (1678) [6] and a larger slave lodge (1679) [7], both of which encroached upon the lower end of the garden.

The residential quarter of the town had increased in size, extending along the Parade below the church and beginning to continue towards the mountain on the eastern side of the garden, as shown in a map dating from 1679 [8]. There was also greater variety in

the planning of the houses, although few of them yet conformed to any of the "standard types" established later [9].

As well as the farmlands at Rondebosch, where the Company's garden house Rustenburg had been built by 1671 [10], cattle grazing was undertaken at Hout Bay from 1668, and the first loan farms were granted there in 1677. Grazing lands were also granted in 1678 beyond the Steenbergen in the southern Peninsula [11].

The first agricultural lands across the Cape Flats were at Hottentots-Holland, where a Company's post was established in 1672 [12]. This was later leased to freeburghers, but the first land grants in this district were made only in 1679. These were at the Eerste River for sheep grazing, and at the Tijgerberg for agricultural purposes [13]. However, it was not until the arrival of Simon van der Stel later in the year that the colonization of the interior was begun in earnest [14].

Robben Island continued to be used for the collection of shells for lime and as a place of detention [15], and a sheep station was erected on Dassen Island in 1668 [16]. A permanent post was also established at Saldanha Bay in 1669 to protect it against the French, who had ambitions to annexe it [17].

Unfortunately there are very few visual records of the three-dimensional appearance of the buildings of this period. It is therefore not possible to see precisely how the early experiments of Van Riebeeck were adapted during this period of consolidation.

2.3 EXPANSION: 1679-1710 (SIMON VAN DER STEL TO LOUIS VAN ASSENBURGH)

The period of the Van der Stels at the Cape (1679-1707) was characterized by an aggressive expansionist policy, as described in documentary sources and illustrated in maps of the period.

As far as defensive works are concerned, the Castle was provided with a new landward entrance (1682), the subdividing "cat" wall (1685), and the adjacent "Dolphin Courtyard" (1706) [1]. The decision was also made in 1710 to erect what was later to

be named the Chavonnes Battery, although construction did not commence until 1715 [2].

The town had continued to expand towards Signal Hill, and town-planning regulations were introduced in 1710 to prevent houses from being built on the Parade [3]. Building regulations stipulating minimum eaves heights for houses were introduced in 1686, and the continued use of timber-framed construction was prohibited in 1691. All buildings would now have to be erected with masonry walls [4].

The church site and the slave lodge (now completed) were joined by a new hospital at the lower end of the gardens in 1699 [5], and in 1701 new foundations were laid for a larger church, work on its predecessor having been postponed [6]. A new Company's stable was built in 1705 [7] next to the guest house in the garden (now rebuilt), and this period also saw the erection of the first warehouses along the water-front, together with a new abbatoir and market [8].

Further expansion also occurred on the Peninsula, Simon van der Stel's residence at Constantia (1685) [9] and the Company's house at Nieuwland (1700) [10] being the most noteworthy and influential buildings. A freeburghers' lime-kiln had been erected at Kalk Bay by 1683 [11], and a Company's fishing station had been built at the present Fish Hoek by 1687 [12]. False Bay was investigated as a possible winter anchorage on a number of occasions, but it was only from 1743 that it was used on a permanent basis, when the necessary harbour facilities were erected at Simon's Bay [13].

The most dramatic expansion was beyond the Cape Flats. Apart from the establishment of a number of Company's posts [14], lands were granted to freeburghers in four new farming districts. These were Stellenbosch (1679), Drakenstein (1687), Wagenmakers Valleij (1698) and the Land of Waveren (1700), resulting in an almost complete encroachment on the best grazing lands of the Khoi who had previously inhabited this region [15].

With the exception of Stellenbosch and Drakenstein, these districts were no more than isolated farming communities. At Stellenbosch a village was established in 1685, with a church, drostdy and mill (all completed in 1687) [16]. Drakenstein, however, was no more than a hamlet, with a few houses clustered around a shed used for church services

from 1688, and a mill which had been built by 1702 [17].

Expansion also occurred eastwards in the form of the numerous private cattle posts belonging to Wilhem Adriaen van der Stel [18]. This Governor was also the owner of Vergelegen, the largest estate at the Cape and a primary cause of his dismissal in 1707. His residence on the estate was the largest, the most imposing and the most sophisticated yet seen at the Cape. Begun in 1701 and completed in 1705, it was demolished on official orders in 1709 [19].

The demolition of Vergelegen marks the end of the proto-Cape Dutch period, in that no further buildings of such scale and sophistication would be erected by the Company's officials. However, it is also of significance that the village of Stellenbosch was largely destroyed by fire in December 1710 [20]. Many of its buildings were probably rebuilt from their foundations, and could have incorporated innovations suggested by exemplars such as Vergelegen. It is therefore possible that this conflagration marked the end of the early stage of architectural development in the country districts, and was followed in the reconstruction process by buildings more similar to those of the Cape Dutch architecture of the later 18th century. If this were the case, Stellenbosch could have been a secondary filter of influences from outside, received and disseminated initially in Cape Town itself.

3. PRIMARY CHARACTERISTICS OF CAPE DUTCH ARCHITECTURE

Since the title of this thesis includes the designation "proto-Cape Dutch", it is necessary for an explanation to be given of what the author understands to be the central characteristics of Cape Dutch architecture. These characteristics, this thesis contends, were derived from the precedents established by the VOC and its senior officials during the proto-Cape Dutch period extending from 1652 to 1710.

Until Van der Meulen's doctoral thesis, which suggested German rather than Dutch origins for Cape Dutch architecture [1], the appropriateness of this stylistic label had never been questioned. Most of the more recent commentators in the field, however, accept that the surviving buildings erected at the Cape from the mid-18th century onwards have their origins in a cultural and geographical area wider than that of Holland alone.

The term "Cape Dutch" has been retained in general usage not for reasons of architectural provenance, but because of the political regime at the Cape under the VOC during which this architecture developed. Ironically, though, it was only in the last 45 years of Dutch rule that the style apparently became standardized [2], but it continued to be followed in the country districts with only minor modifications for another 85 years. This was under a period of British rule, interrupted only by the brief sovereignty of the Batavian Republic between 1803 and 1806.

"Cape Dutch" as a term was first acknowledged, with reservations, by Pearse in 1933 [3], but was only given authority in 1953 by De Bosdari [4]. As generally understood, it encompasses only the thatched and whitewashed farmhouses with decorative gables dating from after 1750, which comprise the majority of illustrations in popular sources. The handful of extant double-storeyed and flat-roofed town houses are seen as interesting variations, but seldom considered as the equally central counterfoil to the "traditional" farmhouse type.

The public and military buildings of the VOC period, moreover, are largely unknown to the general public and ignored by most commentators in the field, again probably because so few are still in existence. Apart from the church at Tulbagh [5] and the arsenal at Stellenbosch [6], the only three such buildings surviving unaltered (or, to be

more accurate, in the form of restorations) from prior to 1795 are the Castle [7], the Burgher watch-house [8] and the "Tuynhuys" [9], all in Cape Town.

The perception of Cape Dutch architecture as primarily residential is due not only to the percentage of surviving examples of the respective types of rural residential, urban residential, and public and military buildings. It is also because this perception, although contradicted by the 18th century reality, was entrenched by Pearse. His central and pioneering work [10] favoured the domestic and particularly the farmhouse over other building types, an attitude which has been a central characteristic of most subsequent research.

The author does not subscribe to this selective view of the Cape Dutch period, on the analogy that the non-religious architecture of ancient Egypt, built of brick and therefore almost entirely non-existent today, is of no less significance than the extant stone remains of the pyramids and the temples. The Egyptian analogy is ironically inverted in studies of Cape Dutch architecture, those of recent publication in particular, where the vernacular has been given precedence over the more academic buildings of the VOC and its officials.

The author acknowledges, however, that the common perception of Cape Dutch architecture is of gabled farmhouses and flat-roofed town houses dating from the second half of the 18th century. It is therefore necessary to provide a brief analysis of the architectural principles and elements that characterized these building types, in order to clarify the influence of the proto-Cape Dutch period which is the subject of this thesis.

The basic elements of the town house plan in Cape Town [11] had been established by the third quarter of the 18th century. These comprised a symmetrical row of three rooms facing the street, with additional accommodation behind. The front row consisted of a central entrance hall ("voorhuis") flanked by a room on either side, usually also entered centrally and thus establishing a cross-axis. The "voorhuis" was narrower than its flanking rooms, owing to the space limitations of the comparatively narrow plots in the town.

Immediately behind the "voorhuis" was an inner hall ("galdery" or, as commonly described today, "agterhuis"), usually separated from the entrance hall by glazed double

doors. The "galdery" was normally wider than the "voorhuis" and also gave access to a room on either side, but through less formally placed doorways than in the front row of rooms. The wider "galdery" also permitted direct access to rearward extensions if a larger house was required.

These rear wings were built on either side of a narrow central court, which served as a source of light and ventilation. Further enlargements were effected by building an upper storey, reached by a steep and narrow staircase which was seldom given any architectural prominence. The plan was also characterized by an absence of passages, the "voorhuis" and the "galdery" serving as the circulation spaces. An example of the extended town house plan is provided by the double-storeyed Lutheran Parsonage in Cape Town [12] [Fig A].

The double-pile arrangement of the basic house was facilitated by the use of the flat roof, which eliminated the problem of valley gutters in abutting pitched roofs [13]. Flat roofs were adopted to combat the fire hazards inherent in the use of thatch within a densely built-up urban environment. However, although they were first recommended in 1717, it was not until the end of the 1770s that the majority of houses had been rebuilt in this form [14].

The town house faced the street directly, separated only by the stoep, a low terrace in front which protected the entrance from the dust of the street, raised the facade to a level of prominence above the ground, and provided an outdoor platform for surveying the activities below through the provision of built-in seats at its ends.

It usually had a symmetrical facade, with one or two windows on either side of an elaborated doorway, but the decorative emphasis of the centre gable which characterized the farmhouses was precluded by the use of a flat roof. This disadvantage was overcome in Cape Town first by the use of a curvilinear parapet from the 1760s, as in the house at 71 Wale Street [15]. In the 1780s the "dakkamer" provided a gable-like extension of the wall surface above the cornice (with a room behind for stability), as in the Lutheran Parsonage [16]. In the 1790s a pediment, often containing relief sculpture, was used over the centre bay of the facade, as in the now demolished house at 131 Bree Street [17].

In contrast with the town house, the farmhouse was single-storeyed and had a pitched roof of thatch with gabled ends, and a centre gable which emphasized the entrance [18]. These characteristics had developed by the 1750s, and the earliest surviving examples of decorative gables date from this decade.

A variety of plan types were used, the U-plan, the T-plan and the H-plan being the most noteworthy. Examples are Stellenberg on the Cape Peninsula [19], Saxenburg in the Stellenbosch district [20], and La Provence at Fransch Hoek [21], respectively.

All were entered from the centre of the facade, and were similar to the town houses in that the entrance hall ("voorhuis") was flanked by symmetrical rooms with central doorways on either side. In the farmhouses, however, the "voorhuis" was usually square in proportion, because of the absence of siting constraints, and the structural advantages of supporting the valley rafters at the corners. Moreover, the inner hall behind (the "galdery" or "agterhuis") was usually the same width as the "voorhuis" and deeper than it was wide. Most farmhouses were equipped with a screen which linked these two rooms. In some cases this was merely a glazed double door, as in the town houses, but in others it was an elaborate folding and louvred mechanism which extended across the full width of the "voorhuis" and the "galdery" beyond, thus permitting the two rooms to be used as one when necessary.

In the U-plan house, the interleading "voorhuis" and "galdery" extended as far as the courtyard between the two rearward wings, establishing an axis through the entire depth of the house. This, however, was not possible in the T-plan house, where the kitchen was placed at the end of the tail. The solution usually adopted to overcome this disadvantage was to terminate the central axis with a decorative built-in display cabinet or "wall-cupboard", flanked by a door on either side leading to the kitchen behind.

The H-plan took two forms, both identical in volumetric form, but differing internally. This centred on whether or not the two halls ("voorhuis" and "galdery") extended for the full depth of the house. An example of the first type, where this was not the case, is Nederburg in the Paarl district [22]. Here the "galdery" was terminated by an internal wall with a "wall-cupboard" in its centre, as in the T-plan house, again flanked by two doors leading to the room behind. This wall was set back from the line of the rear wing

to give access to the rooms on either side. The two lateral doors shared a common frame with those on the back wall, giving the impression that the corner has been dissolved. However, the spatial potential of the H-plan was not fully exploited here.

In the second type, exemplified by La Provence [23] [Fig B], the "galdery" extends from the "voorhuis" to the rear facade, thus creating a visual axis that penetrates the entire house. This arrangement, which recalls Van der Stel's Vergelegen [24] and the "dubbelhuisen" [25] of the proto-Cape Dutch period, represents the full realization of the potential of the transverse plan.

The transverse plan is characterized in Cape Dutch architecture by the interleading combination of the "voorhuis" and "galdery", entered axially from the front door, and perpendicular to the plane of the facade of the building. To reconcile this planning arrangement with the limitations of contemporary technology, which meant that a roof-span of about six metres was the practical limit to the width of a single room, the chosen solution was to compose the building of a number of wings extending from the central hall. The result was a complex three-dimensional form, comprising intersecting pitched roofs of thatch with gable ends, and centre gables which accentuated the facade.

The entrance sequence to the different plan types was also remarkably consistent. Almost all the houses were equipped with a full-width stoep which, apart from its practical considerations, had the effect of visually raising the dwelling above its surroundings. The facade was usually symmetrical, consisting of three or five bays, the central one comprising a door flanked by half-windows leading to the "voorhuis". This was wider than its town house equivalent, which had to do without the flanking windows, and recalls the arrangement at Vergelegen as depicted in the "Korte Deductie" and the "Contra-Deductie" [26].

Despite their use of similar architectural principles with regard to the adherence to the transverse plan and its concomitant symmetrical facade, the three plan types differ markedly in three-dimensional volumetric form.

The U-plan was the only one of the three that appeared to be a single volume from the frontal three-quarter view [Fig C]. Only from the rear was the secret of its construction revealed, and even here the composition created by two gable ends flanking a courtyard

was not lacking in the formality that characterized the facade of the building.

This compactness was particularly lacking in the T-plan house, which spread itself across the terrain and presented a formal facade only from the entrance approach [Fig D]. Viewed from the side or the rear, its volumetric configuration precluded the approximation to the square Renaissance villa achieved with a considerable degree of success by the U-plan.

The volumetric composition of the H-plan is the most complex of the three types under discussion, with two lateral wings extending from the longitudinal spine [Fig E]. Each of these wings forms a facade in its own right, in many cases with centre gables on both facades, the rear one usually being subtly less elaborate than the front. The side elevations resemble the rear end of the U-plan, with end gables flanking an open court and thus providing a symmetrical lateral view of the building. The formality of the H-plan was often complemented by a stoep which surrounded the entire house to create a platform on which it was raised.

Moreover, if the side courts were filled in with flat-roofed rooms (as sometimes occurred when extra accommodation was required), the entire house became a continuous rectangular volume articulated by the gables projecting above eaves level [Fig F]. This created the closest approximation to the single volume "dubbelhuisen" of the proto-Cape Dutch period, derived from Renaissance models.

The stylistic development of the Cape Dutch gable is covered at length in readily available publications [27]. However, the relationship between the farmhouse and its out-buildings does require mention, as the use of similar siting principles can be identified in the proto-Cape Dutch period. The house itself was distinguished from its out-buildings by its plan form, its degree of elaboration, its vertical scale and its position within the farm complex, of which it usually formed the visual focus. Amongst a large number of variations, three siting layouts emerge as the most notable types [28].

The first of these, accounting for a third of the surviving arrangements, consists of an alignment of buildings, the most structured examples of which involve the flanking of the farmhouse by an out-building on either side. In some cases the long sides of all three buildings are aligned, while in others the end gables of the out-buildings are

aligned with the facade of the farmhouse.

The second, accounting for only a seventh of the total number, consists of a farmyard enclosed by an arrangement of buildings. Many variations on this layout are found, but none of them appear to have been designed with defensibility in mind, in contrast with the 19th century fortified farmyards of the English settlers in the Eastern Cape [29].

The only other siting layout that is immediately distinguishable is that in which an axial approach to the farmhouse is framed by symmetrically placed out-buildings. Although the most impressive of the arrangements, recalling that of Van Riebeeck's Fort de Goede Hoop [30], it is the least common and accounts for less than two percent of the surviving farm complexes.

All three layouts reveal a predilection for orthogonality and, in the more formal examples, for farmhouses positioned centrally on an axis of symmetry. The architectural principles employed in the transverse plan of the house are thus extended to encompass the design of the farm complex as a whole.

The differences in planning and exterior form between the town houses and the farmhouses are even more pronounced when siting is taken into account. When seen in context, the farm buildings are perceived as three-dimensional volumetric structures, whereas the town houses appear as two-dimensional planar facades.

Town houses were conceived as part of a continuous street front, only the facade being elaborated. Although they were separated from each other by a narrow alley, and although each house had its own distinct facade, they were linked by high walls on the street edge which stressed continuity over individuality [Fig G].

The farm complex, on the other hand, was conceived as a composition of independent volumes, as illustrated by the relationship between the farmhouse and its out-buildings (usually rectangular in plan and almost always less elaborate). The three-dimensional qualities of the farmhouse were exploited in that all four sides were considered worthy of architectural elaboration. Even when these buildings are linked by walls, the latter are considerably lower than the eaves and do not obscure the three-dimensional form of the buildings themselves [Fig H].

The aspects of Cape Dutch architecture outlined above are those that will be referred to in both parts of the thesis, wherever the influence of the proto-Cape Dutch period is argued. Other aspects, including the continued existence of a vernacular tradition and the stylistic developments of the second half of the 18th century, which are not relevant to the argument presented in this thesis, have not been addressed here.

Having established the primary characteristics of the Cape Dutch architecture of the later 18th century, its origins in the architecture of the proto-Cape Dutch period can now be addressed. The characteristics and influence of the architecture of this period will be outlined in the following chapter.

4. A REVISED ACCOUNT OF ARCHITECTURAL DEVELOPMENTS AT THE CAPE OF GOOD HOPE, 1652-1710

The central argument of this thesis is that the buildings of the proto-Cape Dutch period were of crucial importance to the development of colonial architecture at the Cape during the period of VOC control (1652-1795). These buildings, which have received little attention in existing publications, were more sophisticated than their Cape Dutch successors, which attempted to emulate the precedent already established in the proto-Cape Dutch period.

The fallacies of the suggested evolutionary development of Cape Dutch architecture, the earliest surviving examples of which appear to date only from the mid-18th century, have already been addressed in the introduction [1]. The inappropriateness of the application of the American vernacular model has also been addressed [2], and both will be discussed further in the conclusion.

The argument presented below concentrates entirely upon those buildings of the proto-Cape Dutch period which constituted the exemplars for the Cape Dutch period which followed. These buildings introduced symmetrical planning based on Renaissance models and followed Renaissance proportioning systems. The larger houses also introduced the transverse plan, creating an impression of spatial depth through the use of a central hall or passage extending from the front of the house to the rear. The larger examples were sometimes double-storeyed under hipped roofs of complex configuration, with centre gables flanked by visually supportive dwarf-gables to accentuate the symmetry of the plan.

It was buildings of this type that provided the stimulus for the development of the single-gabled T-plan and H-plan Cape Dutch houses of the inland districts, and the U-plan houses of the Peninsula. Although simpler than their proto-Cape Dutch predecessors, the Cape Dutch buildings of the later 18th century continued to respect the order and geometry of the architectural principles that had been established prior to 1710, but dispensed with the subtleties of Renaissance proportioning.

The derivation of the evidence presented here will be found in Part 2 of the thesis, as cross-referenced in the notes.

4.1 AN OUTLINE OF BUILDING TYPES

C R Boxer wrote in 1965 of the social hierarchy at the Cape under the VOC: "Once the pioneering days of Van Riebeeck and his immediate successors were over, white (sic) society at the Cape could be divided into three main groups: the bureaucrats, or the Company's officials; the urban free-burghers of Cape Town; and the country free-burghers or the Boers..." [1].

These three groups can be equated with a similar architectural hierarchy pertaining during the period prior to 1710, although a distinction must be made between the public and the private buildings erected by the Company and its officials.

This is an important distinction, because of the edict forbidding Company's officials to engage in large-scale agriculture or to erect pretentious houses after the dismissal of Wilhem Adriaen van der Stel in 1707 and the demolition of Vergelegen in 1709 [2]. The result was that the architectural development of such structures was curtailed, and no further examples could serve as precedent for the burghers after the first decade of the 18th century.

Four architectural groups can thus be identified by the end of the period of this thesis:-

The first comprises the official buildings erected by the VOC. These were the military structures and Company's outposts, the churches and the hospitals, the drostdy at Stellenbosch, the slave lodge in Cape Town, utilitarian buildings such as warehouses, abbatoirs, barns, stables and mills, and civil engineering works such as bridges and harbour facilities.

The second group is formed by the private farmhouses of the Company's officials, the three Company's garden houses, and the two largest town houses. These buildings are central to the argument for the establishment of precedent.

The third group consists of the houses of the town burghers lining the streets of Cape Town. Some of these were imposing structures from an early date, and could have provided a visual stimulus and suggested planning solutions to the farmers visiting from the country districts [3].

The fourth group is that of the country farmhouses and the town houses of Stellenbosch which, with few exceptions, appear to have been far simpler buildings than those in Cape Town.

While all of these buildings, even the simplest of farmhouses, had some influence on later developments, it was only a small number of them that appear to have established the precedent from which the characteristic forms of the Cape Dutch town house and farmhouse were derived. It is only these buildings that will be thoroughly addressed here: descriptions of the others will be presented in Part 2.

The buildings in question are the Fort and the Castle, the slave lodge and the stables, the hospital and the church, representing the official buildings erected by the Company in Cape Town; the inn of Van Harwaerden and the houses of Blesius and Hüsing in Cape Town, the Company's garden houses at Cape Town, Rondebosch and Newlands, and the so-called "Posthuijs" at Muizenberg, representing the residential buildings of the Company, its senior officials and the wealthier freeburghers; the church and the drostdy at Stellenbosch, representing smaller versions of the official architecture of the VOC adapted to a village setting; and the Van der Stels' estates at Constantia and Vergelegen, representing enlarged versions of the private houses erected by the Company's officials in Cape Town and Table Valley.

These buildings will be used to demonstrate the architectural development that occurred over the period 1652-1710, and to reveal the architectural types which provided the precedent for the Cape Dutch architecture of the later 18th century.

In order to address the architectural form of these examples as broadly as possible, they will be described and analysed (where possible and appropriate) in terms of all the following aspects:-

1) Siting and context.
2) Planning.
3) Structure and interior spatial quality.
4) Exterior form and detailed resolution [4].

This method of architectural analysis was developed by the author through the teaching

of architectural history from the Neolithic to the Baroque periods over the past fifteen years. The architectural evidence and its realization in all aspects, together with the methods and intentions of its designers, is of central importance. Secondary issues, such as iconography and the social, economic and political context, are addressed, but not as the central focus.

The "categories" of analysis were developed to address aspects common to all architecture, from the smallest to the largest buildings, and from the simplest to the most complex, irrespective of their location in time and place. This method of analysis attempts to overcome the problems associated with the conventional presentation of architectural history within the parameters of a pre-established theoretical stance.

Tafuri reveals the disadvantages of a circumscribed theoretical approach particularly succinctly: "One cannot evaluate Laon Cathedral, the Pazzi Chapel and Berlin's 'Siemensstadt' within the same linguistic parameters: if one chose purely formal criteria, the symbolic dimension of the first two works would escape completely, while one would miss the intimate contradiction of the third; if one chose the traditional iconological method, one would have to remain mute before Berlin's 'Siedlungen'; and if one were to trust the analysis of space, one would find no terms of comparison between the spatial narrative of the first, the anti-narrative rigour of the second and the leaving behind of the concept of 'space' itself on the part of the third" [5].

4.2 SITING AND CONTEXT

The Fort de Goede Hoop, the first permanent structure to be erected by the VOC at the Cape in 1652, had no siting or contextual constraints other than those of a strategic nature [1]. As a complex of buildings within the quadrangle of defensive walls, however, it created its own internal siting arrangements, which were formal in nature [Figs 4-10].

The raised stone "cat" with its flanking wings, which formed the focus of the Fort visually, functionally and symbolically, was directly on axis with the centrally placed entrance gate, with symmetrically placed buildings along the side walls. The plan of the

Fort had been designed in Holland, but it is significant that when Van Riebeeck added the hornwork in front and the kraal behind he continued the axial arrangement, although only one of the side walls of the kraal was demarcated by a building.

An orthogonal and axially symmetrical siting arrangement was thus established in the first VOC building erected at the Cape. While it is absurd to suppose that this building, demolished within twenty years, created a direct precedent for the predominantly orthogonal site plans of 18th century farm complexes, it did nevertheless establish an orthogonal mind-set at the Cape from the earliest days of the settlement [2].

This is also seen in the layout of the irrigation channels in the Company's garden laid out at the same time, and in the orthogonal intersections of the first streets of the town, established later in the decade [Figs 38-45]. It should be pointed out here that Cape Town was not planned from the outset, as were the Latin American towns designed in accordance with the "Laws of the Indies", but was an "afterthought" which grew incrementally, with reference to the garden which had already been established [3].

The first houses in the town were built by tradesmen and innkeepers for the convenience of the fleets in harbour, and the largest of these was the inn of Jan van Harwaerden [Figs 56-57]. This was an L-shaped building, taking advantage of a double frontage on a corner site at the intersection of the Heerengracht and Heere Straet [4].

The orthogonal system introduced by the Fort and repeated in the gardens and the town was contradicted by the pentagonal shape of the Castle begun in 1666. Again the plan had been sent from Holland, and the original intention had been to build it around the old Fort. However, this was considered to be strategically disadvantageous and, moreover, would have necessitated the demolition of most of the buildings already erected in the town and gardens [5].

Once the final site had been selected, to the east of the Fort across the present Parade [Figs 43 & 45], an attempt was made to relate this awkward pentagonal shape to the rest of the town by setting out the two closest bastions (Buuren and Leerdam) parallel to the Heerengracht. Since the town was a considerable distance from the Castle and would remain so for many years on account of the field of fire that needed to be kept clear, it was not necessary for the conflict between the town grid and the angled sides

of the other three bastions to be resolved.

By 1679, when the Castle had been substantially completed, and all that remained of the Fort were the walls of the hornwork and the old Governor's residence, the town had expanded considerably [Fig 45]. The plots facing the Heerengracht had now been joined by another row behind the present St George's Street, creating a double row and indicating the beginnings of a grid plan. More blocks had also been laid out at right angles to the upper end of the Heerengracht along the Parade and facing the reservoir. These extended as far as the corner of the now demolished Fort, where they continued at right angles along the eastern side of the gardens.

This 1679 plan also indicates the first encroachments on the gardens in the form of the slave lodge and the church, the foundations of both of which had been already been laid, although work on the church would not continue until the first years of the 18th century [6].

The relationship between these two buildings is striking as shown on the 1679 plan. The church and the slave lodge are both in the positions which they still occupy today, but the former was approached axially from a street through the new blocks of houses fronting the Parade. An open space is also shown in front of the church, instead of the makeshift Church Square to the east which survives to this day. The slave lodge would therefore have formed a symmetrically placed backdrop to the taller church in the foreground, as viewed across the original church square.

However, this street was subsequently closed off by a new plot along the Keizersgracht facing the Parade, and the entrances were located east and west, rather than to the north, with the public square expropriated from the residential blocks to the east [Fig 52]. The reason for this closure cannot be established, but it might have resulted from Simon van der Stel's halting of all construction work on the church for the duration of his twenty years in office [7].

The elder Van der Stel did, however, site the centre of his new hospital in the late 1690s directly across the Heerengracht from the foundations of the as yet unbuilt church [8]. When his son Wilhem Adriaen finally recommenced erection of the building [9], it was thus possible to create an urban relationship between the two structures

across the street, with the tower of the church at the northern end of the site, where the original entrance was suggested in the town plan of 1679 [Figs 45 & 52].

The gabled ends of the earlier hospital and later church thus faced each other directly across the street [Fig 58], but this relationship was lost to Cape Town in the 1770s, when Simon van der Stel's hospital was demolished and replaced by the New Hospital (or "Great Barracks") facing Caledon Square. However, this urban relationship, which was the most formal in the history of Cape Town's urban planning, was far less striking than the schema depicted on the plan of 1679. The public space on the other side (the present Church Square), moreover, is particularly unresolved in terms of its interruption of the city blocks and the absence of a central entrance to the square, which could have focused on the church. The history of the siting of the church and slave lodge is thus one of opportunities lost, and only partly and temporarily ameliorated by the siting of the hospital.

The two largest houses in the town, as described by Valentyn, were those of the Fiscal Joan Blesius and the leaseholder of the meat contract, Henning Hüsing. The house of Blesius appears to have been located across Greenmarket Square from the present Burgher watch-house, while that of Hüsing faced on to the Parade [Figs 58 & 59]. Neither had a formal setting, but both were prominent in the townscape [10].

The Company's stables [11] were located pragmatically rather than with any vision of urban design. Situated diagonally to the north of the Company's guest house, they allowed the creation of Stalplein through their later demolition rather than their original siting. They were, however, built in such a position as not to obscure the rear facade of the guest house [Fig 52].

This structure [12], like its equivalents at Rondebosch and Newlands, had a formal relationship with the gardens in front of it, recalling the formality of the original Fort de Goede Hoop [Figs 45 & 52]. Sited half-way up the Company's garden on its eastern side, it faced the central tree-lined avenue on a cross-axis which, even as early as 1679, had subdivisions of equal size symmetrically located on either side. These would later develop into the geometrically designed "parterres" depicted by Josephus Jones in his plan of the 1790s [Fig 105].

The Company's farm Rustenburg, at Rondebosch [13], is depicted during this period as traversed towards its lower end by the road to Boscheuvel and Constantia Nek. The house thus faced only a short centrally-placed avenue leading down to the Liesbeeck River, but the axis was continued up the hillside behind the house, later to be terminated by the surviving half-octagonal pavilion shown in Josephus Jones' plan of 1791 [Fig 126].

The house at Nieuwland [14], on the other hand, was sited towards the upper end of a long avenue leading down to the river [Fig 127]. It was thus the focus of a symmetrically ordered orthogonal layout from its inception, again providing a precedent for the freeburghers to follow.

The so-called "Posthuijs" at Muizenberg [15], however, responded only to topographical constraints, sited as it was in the narrow strip of level ground between the Steenbergen and the shore of False Bay. Whether the structure adjoining it, which is shown on Josephus Jones' plan of 1790 [Fig 158] and which was apparently destroyed in the Battle of Muizenberg (1795), was contemporary with it has not yet been established. Nevertheless, it is interesting to note that the two structures are approximately aligned, as were the largest percentage of later 18th century Cape Dutch farm buildings.

If these structures had indeed been erected by Simon van der Stel as his private fishing station [16], they could well have served as precedent for the "alignment" siting arrangements to follow in the later 18th century [17].

In contrast with Cape Town, which grew incrementally from the datum established by the Fort and the extent of its field of fire, the nucleus of Stellenbosch was planned from the outset. This was done on the instructions of Commissioner van Rheede given in 1685, which were implemented by Simon van der Stel in 1686 [18].

The original plan was again orthogonal in nature, introducing this system to the inland districts [Figs 188 & 198]. It comprised four village blocks arranged around the rectangular intersection of two streets. The two blocks in the foreground were slightly longer than square, and those behind slightly longer than a half-square. To the right of these four blocks was the wagon road to Cape Town (the present Dorp Street) [19].

Beyond the rearward blocks was a grove of trees corresponding with the eventual approach to the drostdy erected on the Stellenbosch island. Given their height as shown by Stade [Fig 188], it is probable that these were natural growth, and not planted in the orderly rows shown in Stander's reconstructed plan [Fig 190]. The approach to the drostdy in 1710 was probably still from Dorp Street, as it is unlikely that Drostdy Street had been laid out yet, given that it had not yet been defined by any buildings.

Nevertheless, it is possible that such a street was envisaged by Van Rheede in his initial plan, but likely that it was only laid out when the first permanent church was erected in 1717-1723. Both buildings would thus have been linked by Drostdy Street, with the drostdy forming its axial focus. This, together with the axial siting of the new church at the end of Church Street, would have been the first example of such an urban relationship at the Cape, after the abandonment of a similar approach to the church in Cape Town [20].

The first Stellenbosch church was sited in the block diagonally across the village from the drostdy, as a freestanding building within its churchyard [21]. This siting arrangement became characteristic of Dutch Reformed churches during the 18th century, as exemplified by the Cape Town church completed in 1704.

The extent of the original plan of Stellenbosch was therefore established by the church to the north-west and the drostdy to the south-east, both buildings of an official nature. However, it is likely that the siting of the church was only a temporary expedient until a permanent church was built on the present site. This site, on axis with the present Church Street and facing Drostdy Street which led axially to the drostdy itself, could well have been selected by Van Rheede from the outset, as it would have accorded more convincingly with his instructions for an orderly plan [22].

It is interesting to note that Van Rheede also recommended improvements to the layout of the Company's outposts. Having visited the post at Hottentots-Holland, the state and disorder of which he found unsatisfactory, he gave orders that future outposts should be built around a rectangular court, in order to ensure their defensibility.

He also stated categorically that the Company's buildings should serve as exemplars for those of the freeburghers [23]. Although the siting layouts proposed by Van Rheede

constitute only a small proportion of the farm complexes surviving from the 18th century, the Commissioner's instructions are a further indication that the argument of this thesis is based on contemporary 17th century opinion.

The siting arrangement of Simon van der Stel's Constantia [24] does not reveal any geometrical relationship between the house and its out-buildings, other than that they are orthogonally related to each other [Fig 157]. The very existence of the out-buildings is suppressed by the triple avenue of trees, which focuses the visitor's attention entirely on the Governor's residence.

This is a point of significance, as Van der Stel's reason for planting the trees was misunderstood by the freeburghers in the 18th century, who ironically obscured the architectural relationships they had established in their farm complexes. Their specific use of foliage was thus a case of precedent misapplied.

Wilhem Adriaen van der Stel's Vergelegen [Figs 227-231], on the other hand, was a far more geometrically ordered complex of buildings than his father's Constantia, although not quite as consistently ordered as some writers have claimed [25]. With its central core arranged on an octagonal plan, and the four closest out-buildings aligned orthogonally with the Governor's residence and the farm manager's house, it introduced an ordering system previously unknown at the Cape. It should be noted, however, that the main approach was not on the principal axis, but on the minor and insignificantly treated asymmetrical cross-axis. This is important, as the principal facade was given privacy through not being approached by the main entrance route to the complex.

The siting arrangements of Vergelegen nevertheless reveal the sophistication that had been achieved at the Cape by the first decade of the 18th century. However, they were never repeated during the VOC period, suggesting that the demolition of the house and the subdivision of the property was a significant event in the hiatus that appears to have occurred in the development of Cape Dutch architecture until mid-century.

The siting layout at Vergelegen was too complex to be repeated in the Cape Dutch architecture of the later 18th century. However, the principles of symmetry as introduced by Van Riebeeck's Fort de Goede Hoop, with its hornwork and inner court

flanked by buildings on either side, and of axial focus as exemplified by the three Company's garden houses and Constantia, which were placed at the end of a central avenue, provided the precedent for the more formal of the siting layouts encountered in the Cape Dutch period.

4.3 PLANNING

The period 1652-1710 was characterized by a number of planning types, only some of which would be adopted by the freeburghers in the later 18th century.

The buildings along the rear wall of the Fort de Goede Hoop, as depicted in the plan of 1656 [Fig 8], comprised a central hall (the "cat"), reached by a double staircase, and flanked by less substantially constructed wings on either side. Although these were of equal length, the plan revealed only a partial symmetry. While the four rooms on either side of the "cat" were roughly equal in width, thus accounting for the symmetry of the facade treatment, the rooms to the east of the "cat" were deeper than those to the west of it. The "cat" itself was also internally asymmetrical, as the doors leading to the stair lobby to the east and the court to the west were not aligned, owing to the discrepancy between the depths of the rooms on either side [1].

These inconsistencies, which were common in Dutch houses of the period, did not detract from the overall impression of the Fort. As discussed with regard to its siting, it is extremely unlikely that its planning was a direct precedent for the Cape Dutch architecture of the later 18th century. Nevertheless, three features in common can be identified, which suggest again that this structure might have implanted an exemplar in the minds of the freeburghers.

These are the central "cat", extending through the whole depth of the building, as in the later houses built on the transverse plan; the setting forward of this central element, flanked by symmetrical wings; and the use of open passages or narrow courts between the front and rear ranges of these flanking wings. This could be seen as an embryonic form of the H-plan house, later to be derived from the "dubbelhuis" type as described by Valentyn in 1705 (see below). While this mind-set was reinforced by these houses, it

could be that the memory of the formality of the old Fort was the initial stimulus for the adoption of similarly symmetrical plans [2].

The formality of the Fort was emulated in the Castle, as depicted on Wittebol's plan of c1679 [Fig 23]. Rooms were symmetrically placed on either side of central entrances on the inner sides of the four curtain walls that had been built upon by that time, the fifth and eastern one of which was still devoid of buildings.

Of these, the most formal arrangement was seen diagonally to the left as one entered from the seaward gateway. This comprised a wide hall in the centre, reached by a double stairway as at the Fort, flanked on either side by three rooms of diminishing width. The central hall was used for church services and meetings of the Council of Policy. It was from this use, rather than any military significance, that it received the name of "de cat" (later to become "de oude cat"), since it was used for similar purposes to the "cat" in the old Fort, which had been named in accordance with its military configuration [3].

This arrangement, however, was destroyed by the erection of the subdividing wall in 1682 [Figs 25 & 26]. Not only was the original official wing bisected, and therefore no longer visible from the new entrance facing the town rather than the sea, but the new official wing was not of comparable formality [4].

Given that the entrance to the Castle had been moved because of the inconvenience of its original location on the shore, it is surprising that the instigator of this change, Simon van der Stel, did not take advantage of it when erecting the official buildings along the new subdividing wall. He did not, however, and the entrance to the asymmetrically designed Governor's residence, alongside which was the new church and council chamber (hence the appellation "nieuwe cat"), was well off-centre from the new entrance to the Castle [5].

The Castle in its present form is therefore a retrogression from its original state, and is unlikely to have had any influence on the planning of the houses of the freeburghers. Moreover, Wilhem Adriaen van der Stel's addition of the Dolphin Courtyard behind the subdividing wall [Fig 26] rendered the rear court less usable and architecturally compromised by its arbitrarily asymmetrical subdivision [6].

Given the architectural awareness displayed by both Van der Stels on their own estates, Constantia and Vergelegen, it is surprising that they should have been so architecturally unaware with regard to the Castle, the seat of government. Perhaps, though, this is architectural evidence that both were more concerned with their own interests than furthering those of their paymasters, the VOC.

To continue with the official buildings erected by the VOC, the slave lodge [7] and the Company's stable [8] were both organized around a courtyard, but with no central focus. This planning type was not adopted by the freeburghers for their farms, but continued to be used by the Company itself, as in the stable at Muizenberg (c1743) and in the stable and hospital at Simonstown (c1760).

Simon van der Stel's hospital in Cape Town (1699) [Figs 98 & 101-102] was in many ways a more sophisticated structure than the Simonstown building with which it was unfavourably compared by Stavorinus in the 1770s [9]. Its extended cruciform plan (one arm of which was twice the length of the other) maximized the availability of light and ventilation. Moreover, in contrast with most of its contemporary buildings and, indeed, with those dating from the later 18th century, all of the wings were triple-aisled structures with internal piers supporting arcades above. In addition, the dimensions of the major spaces and minor rooms followed Renaissance proportioning systems, as will also be seen in the residence and the farmhouse at Vergelegen [10].

The use of internal piers is known only in two subsequent buildings or building complexes during the VOC period. The first are the recently excavated out-buildings at Vergelegen, built very shortly after the hospital [11]. The second, perhaps more significantly, is the new hospital begun in Cape Town in the 1770s. This suggests that the triple-aisled plan was considered to be the most appropriate for a hospital building, although the overall configuration of the later structure differed markedly from Van der Stel's hospital, being organized as a large H-shaped building defining courts in front and behind.

It is notable, though, that there is no evidence of deep plans with internal supports in the Cape Dutch architecture of the later 18th century. Evidently these were beyond the resources of the ordinary freeburghers, who simplified the types of structures erected

by the Company and its officials into rooms of limited depth.

Another building with internal supports was the church in Cape Town [Fig 83], although these were timber columns supporting horizontal lintols rather than brick piers supporting arches. The plan of this church was a Greek cross with splayed re-entrant angles. This plan resulted from alterations following its recommencement by Wilhem Adriaen van der Stel [12], but was also not repeated in the architecture of the later 18th century at the Cape [13].

The octagonal plan of the enlarged Cape Town church, brought about through additions to the original foundations on a Greek cross, appears to have been derived from Hendrick de Keyser's Noorderkerk in Amsterdam [Fig 88]. A De Keyser precedent is not unlikely as a copy of the "Architectura of Hendrick de Keyser" had been found in an unmarked chest at the Cape as early as 1662. Significantly, the Noorderkerk is illustrated in "Architectura Moderna", which was almost certainly the volume of Hendrick de Keyser's work referred to here [14].

The planning of this church, which had no 18th century successors at the Cape in terms of its octagonal form, suggests that Wilhem Adriaen had access to this volume or had memories of the Amsterdam Noorderkerk. If the former were the case, this treatise would also have been available to his father and his predecessors, which could explain the extremely sophisticated proportioning systems employed in the guest house in the Company's garden, at Constantia, in the Company's hospital and at Vergelegen [15].

The church, with its balance between centralized and longitudinal emphasis, was also too complex to emulate after the departure of the Van der Stels, succeeded as it was by buildings of a simpler cruciform plan. This is another example of the simplification of buildings originally derived from the more sophisticated architecture of the VOC, which characterized the change in buildings at the Cape between 1710 and c1750.

A different planning type was introduced by the inn of Jan van Harwaerden [16], begun in 1658 and depicted on the 1660 cavalier perspective of the town [Fig 56]. This L-shaped building, on two street frontages, was a very early example of extensions to the simple rectangles that characterized the other buildings depicted on the drawing.

Its internal planning was also more complex than later buildings, as a contemporary description makes reference to a passage between the large room (presumably the tavern) and the courtyard [17]. In terms of planning, then (apart from its gabled fronts which will be described later), Van Harwaerden's inn could have established the precedent for the rearward extensions to the houses of Cape Town which were to follow.

Some of these rectangular buildings of 1660, moreover, were of the hall-house type, sited at right angles to the street. However, by 1679 they had been mostly supplanted by houses whose longer sides faced the street, as revealed in the plan of that date [Fig 48]. This also shows that a large number of L-shaped extensions had been built, not all of them on street intersections but some of them in the middle of the block. There is even a single asymmetrical T-shaped house in the block to the east of the site of the church.

The 1679 date of this plan suggests, therefore, that the incidence of plans with rearward wings in Cape Town at least, stimulated perhaps by the precedent established by the inn of Van Harwaerden depicted in 1660, was a common occurrence far earlier than has previously been acknowledged [18].

Houses such as these could also have created the precedent for the L-shaped houses in Stellenbosch depicted by Stade in 1710. Significantly, there is no firm evidence of a T-shaped house outside Cape Town by this date, whereas the forerunner of the H-shaped house had already been established in Cape Town by 1705 [19].

This was the "dubbelhuis" described by Valentyn as the plan of the double-storeyed houses of Blesius and Hüsing in the town [20]. This description does not refer to the existence of an upper storey, as he had described double-storeyed houses without this appellation a decade earlier, in 1695. The term applies rather to the plan configuration, which refers to a house with a central passageway flanked by rooms on either side [21].

Both of these houses were at least two rooms deep, with rooms to the back as well as to the front, but the means with which to build equivalent structures appear to have been unavailable to subsequent freeburghers until the 1790s. It was therefore necessary for them to simplify this arrangement into one which separated the front rooms from those

at the back, each wing of which was only of single-room depth.

This constraint was probably a primary reason for the development of the H-planned farmhouse, or a T-plan if the farmer could only afford the first stage of the ultimate intention. The precedent for the transverse plan, however, had been established by these two houses as early as 1705.

In contrast with the "dubbelhuisen" of Blesius and Hüsing, which had narrower entrance halls than the rooms on either side (as suggested by Valentyn by his reference to this Amsterdam type), the Company's houses in its three gardens appear to have been of a different configuration.

The Company's guest house in the garden above Cape Town was a double-storeyed structure with a wider entrance hall than the rooms on either side, as described by Kolbe [22]. Rustenburg was also double-storeyed and could have had a similar plan, as this would correspond largely with the inventory provided by Woodward [23]. The third of these houses, Nieuwland [Figs 128 & 129], also had a wider "voorhuis" than the rooms on either side, but here it was octagonal instead of square [24].

These three houses all provide a precedent for the symmetrical three-roomed dwelling which was the supposed progenitor of the transverse houses of the later 18th century. Their symmetrical nature might well have been compelling, but it is noteworthy that the proportional relationship between the "voorhuis" and the rooms on either side was seldom repeated.

A similar relationship is also seen in the front wing of the original double-storeyed Constantia as described by Valentyn [Fig 151], where the central hall was 30 feet wide in comparison with the 25 feet of the flanking rooms [25]. It is interesting to note that the U-plan of Constantia became the most common type on the Peninsula, but the proportions of its wider plan were altered in the narrower houses of the freeburghers.

The Stellenbosch drostdy [Fig 206], begun only a year after the probable commencement of Constantia, was initially double-storeyed over its front wing, but the upper storey was removed in 1708. It also had a U-plan, but differed from Constantia with regard to the proportions of the "voorhuis". This was narrower than the rooms on

either side, as revealed by its description in 1708 as a passage [26].

Similar entrance halls narrower than their flanking rooms are also to be seen in the so-called "Posthuijs" and at Vergelegen.

The "Posthuijs" [Fig 159], which could well have been Simon van der Stel's fishermen's house rather than a VOC outpost, was a three-roomed rectangular building with a square room in the centre flanked by wider rooms on either side. Whether built by the Company in 1673 or, as appears to be more likely, by Van der Stel in c1700 [27], it is the earliest known example of the so-called "core" described by Hall, or the "three-roomed cell" of Walton. This element, which is supposedly the initial stage of the "evolutionary" development of more complex plans, was thus introduced either by the Company or by one of its retired officials.

However, the existence of such a planning arrangement would not inevitably have suggested its rearward extension into the T-plan or H-plan. This development required a catalyst, which could well have been provided by Vergelegen, although this building could itself have been influenced by the "dubbelhuisen" of Blesius and Hüsing in the town [28].

Vergelegen, Wilhem Adriaen van der Stel's residence at Hottentots-Holland [Figs 229 & 239], also had a narrower hall than the rooms on either side, in contrast with his father's house at Constantia. Here, however, it extended for the full 80-foot depth of the house, and was flanked by three rooms on either side along its entire length. The concept of the transverse plan was thus firmly established in the most imposing and notorious house of the pre-1710 period [29].

The Cape Dutch houses erected later in the century simplified the type by omitting the middle rooms flanking the central hall, thereby avoiding the structural and water-proofing problems inherent in the earlier plan form. It was buildings such as Vergelegen and the houses of Blesius and Hüsing, however, which provided the stimulus for the H-plan and its incomplete T-plan variant, and Constantia which inspired the U-plan on the Peninsula.

The symmetrical formality which is the major characteristic of the larger Cape Dutch

farmhouses was not an inevitable evolutionary development. It was the result of the conscious selection of the proto-Cape Dutch model most suited to the preferred image within the constraints of contemporary technology. The image of the northern European courtyard type, as promoted by Commissioner Van Rheede and exemplified by the slave lodge and the stables, was rejected as insufficiently formal. The plan type characterized by an entrance hall wider than its flanking rooms was rejected as functionally wasteful in a farmhouse serving practical needs, and technologically unsatisfactory with regard to the support of the valley rafters at the intersections of the front and rear wings in a T-plan or H-plan arrangement. The selection of the square "voorhuis" narrower than the rooms on either side, as exemplified by the "Posthuijs" at Muizenberg, permitted a reconciliation of both the functional and structural objectives. This selection of type, however, could not have been possible without the establishment of precedent during the proto-Cape Dutch period. Without such a catalyst, and the status attached to formal solutions, it is unlikely that Cape Dutch architecture would have developed such consistent and coherent plan forms, which constitute a major characteristic of the style.

4.4 STRUCTURE AND INTERIOR SPATIAL QUALITY

The relationship between the structural envelope and the resultant interior space is a particularly close one in the Cape Dutch architecture developed in the mid-18th century. This also appears to have been the case in the earlier buildings from which it was derived, and for this reason these two aspects will be considered together.

The earliest buildings lining the inside of the defensive walls of the Fort were timber-framed and walled with clapboard, like the earliest surviving buildings in Amsterdam [1]. These set an early precedent for vertically "extruded" interiors without any three-dimensional articulation, which were repeated when these were rebuilt in brickwork [2]. The precedent was also followed in the early wattle-and-daub houses of the first freeburghers [3].

Even the stone "cat" of the Fort was designed as a purely utilitarian structure internally, with doors which did not align [Fig 8]. It is notable, though, that this large central

structure formed a focus off which smaller spaces opened.

This concept was repeated in the initial plan of the Castle, prior to the intersection of the official wing by the subdividing wall. Wittebol's plan [Fig 23] unfortunately does not show the positions of doorways, but it is possible that the rooms of diminishing size on either side of the central hall of the official wing were linked by centrally-placed openings.

The idea of spatial continuity was taken further in the new official apartments along the subdividing wall of the Castle [Fig 26]. Two of these were interleading and separated by folding doors which could be opened for large functions, according to Mentzel [4]. This was probably the precedent for the "screen" subdividing the "voorhuis" from the "agterhuis" in the later Cape Dutch houses built on the transverse plan.

Whether the central halls of the Company's houses in the gardens above Cape Town, at Rustenburg and at Nieuwland all had central openings into the smaller rooms on either side cannot be established without new archaeological or documentary evidence [5]. However, this must have been the case in the octagonal "voorhuis" of Nieuwland, as otherwise this space would have been severely compromised. It is unfortunate that there is no evidence of its roof configuration, as the octagonal shape suggests a ceiling with more three-dimensional articulation than those characteristic of the Cape Dutch architecture of the later 18th century.

It could be, therefore, that these three houses (together with the drostdy at Stellenbosch and the "Posthuijs" at Muizenberg [6], with their comparatively smaller central halls) established the idea of the symmetrical cross-axis in the "voorhuis" of the typical Cape Dutch houses of the later 18th century, whether town houses or farmhouses.

On the other hand, a cross-axis in the entrance hall of Simon van der Stel's Constantia cannot be symmetrically reconciled with the dimensions of its flanking rooms, as described by Valentyn [7]. This suggests that the interleading doors were placed towards the corners of the hall rather than in the middle [Fig 151], but it must be remembered that this was an exceptional building for its time and was probably influenced by older Dutch practices than those followed at Vergelegen and the "dubbel-huisen" in the town.

There is unfortunately no visual evidence of the interiors of the houses of Blesius and Hüsing, but Valentyn's description of them as "dubbelhuisen" built similarly to those in Amsterdam [8] reveals a major change in spatial form as well as in planning. These were the buildings which introduced the transverse plan with its long and comparatively narrow hall, as opposed to the square examples encountered previously.

The impression of depth encountered on entering such a space would have been far more imposing than the static proportions of the earlier square "voorhuis". This is demonstrated by the fact that the only dimensions that Valentyn gives for Vergelegen, which was an elaboration of this transverse type, were of the "galdery", 80 feet long and 16 feet wide [9].

Significantly, however, Valentyn makes no mention of any subdivision in this gallery. The introduction of the "screen", and the distinction between "voorhuis" and "agterhuis", appears to have been a later adaptation of this type by farmers who could not afford to use the central gallery solely for the purposes of circulation.

As far as structure is concerned, the hipped roofs of the "dubbelhuisen" in Cape Town appear to have extended over the full depth of their plans, in contrast with the single-room spans of their Cape Dutch successors. Even more complex roofing arrangements were necessary at Vergelegen, where the rooms along the front were deeper than those along the rear facade. The owners of these proto-Cape Dutch buildings, however, had access to skilled craftsmen and to imported timbers, unlike the freeburghers of the later 18th century.

Structurally and spatially, the most interesting buildings from the proto-Cape Dutch period are the hospital and church in Cape Town and the out-buildings at Vergelegen.

The hospital [10] and the Vergelegen out-buildings [11], with their triple-aisled plans subdivided by piers [Figs 101-102 & 232-235], provided a tripartite spatial arrangement that was not to be seen again in the 18th century except in the new hospital begun in the 1770s.

This type was basilican in plan, though not in section, thereby also suggesting a derivation from written sources, perhaps in this case the edition of Vitruvius which had

been left at the Cape in the early 1660s [12]. Significantly, the new hospital was Company's building, which suggests that its designers had access to more sophisticated architectural theoretical sources than the freeburghers did.

The church, with its four internal columns supporting the re-entrant angles of the Greek cross of its original design, now extended by its octagonally angled walls, was a building of particular spatial sophistication [Figs 83 & 84]. The ambiguity between the external Greek cross and the internal octagon was consummately resolved in the interior by the use of arches on the four sides of the cross, with marbled paintwork on the lobbies of the two sides which intruded on the overall symmetry [13].

Sophistication of this kind, however, was not to be seen again in the structural and spatial relationships of any buildings during the remainder of the 18th century. The freeburghers built simplified versions of these earlier buildings, while the Company itself also followed the same simplification process, as seen in the churches built at Stellenbosch, Swartland, Roodezand and Graaff-Reinet.

This process could have been caused by the absence of timbers large enough for the 30-foot spans employed in the church and Constantia. Even the Company's buildings would have been affected by the edict against extravagance issued at the time of the dismissal of Wilhem Adriaen van der Stel [14]. This appears to have been a contributory factor to the hiatus in architectural development that followed for the next three or four decades.

In terms of structure and space, the more adventurous designs of the proto-Cape Dutch period appear to have been abandoned in the Cape Dutch architecture of the later 18th century. The spatial complexities of buildings such as the church were not repeated, and the use of wide-span roofs as in the triple-aisled hospital and Vergelegen out-buildings was precluded by technological and material constraints. It is significant, however, that the public zone of the "dubbelhuisen" formed the spatial focus of the later Cape Dutch houses. While the more private accommodation reached from the central hall was adapted for pragmatic reasons, the principal element of the transverse plan was retained intact, albeit subdivided into a "voorhuis" with a "galdery" behind.

4.5 EXTERIOR FORM AND DETAILED RESOLUTION

Little about exterior form and detailed resolution can be derived from the writings of contemporary visitors to the Cape, despite their often comprehensive accounts of the interiors of buildings. They do make a distinction between pitched and flat roofs, the latter often being described as "built in the Italian style", but there is no mention of the presence or absence of features such as gables, dormers, pilasters and cornices.

However, there is a considerable amount of contemporary visual material available from the period, all of which is of exteriors and none of which depicts interiors. This suggests that the convention of the time was to draw the exterior features but to write about those of the interior, and could have been due to a reluctance on the part of travellers to intrude upon the privacy of their hosts.

The symmetrical facade with central emphasis which characterizes the Cape Dutch farmhouses of the 18th century was introduced to the Cape in the Fort de Goede Hoop, the first permanent building to be erected by Van Riebeeck [1].

By 1656 the formality of the plan was already depicted as being accentuated in the facade treatment [Fig 9]. The view between the two batteries of the hornwork towards the bridge across the moat was terminated by a pedimented archway flanked by pilasters. Beyond this gateway was the square open court, terminated by the "cat" and its symmetrical flanking wings. The flat roofed "cat" was elevated above the pitched roofs of the wings on either side, and given extra prominence by two flanking dormers. Its central doorway, moreover, flanked by a window on either side, was raised above the level of the court and reached by a double staircase.

The formality which was already evident in 1656 had been considerably increased by 1660, as revealed in the cavalier perspective of that date [Fig 10]. The entrance archway was now surmounted by a tall gatehouse, and the "cat" had been given a parallel-pitched tiled roof with two forward facing gables [2]. The idea of an elevated and elaborated central focus, flanked by simpler wings on either side, was thus introduced to the Cape in the first decade of Dutch occupation.

As mentioned before when dealing with planning, the official wing of the Castle [3]

was also symmetrical, with a central hall raised above the level of the court and reached by a double staircase. Here, though, there was no further central emphasis, not even a pediment existing above the entrance bay. However, the entire wing was set slightly forward from the rooms on either side, thus creating a three-dimensional presence when viewed obliquely from the original sea-front entrance [Fig 23].

This formality was destroyed by the moving of the entrance and the erection of the subdividing wall [4]. The first alteration resulted in the official wing no longer being in a prominent position, and the second in its bisection by this defensive wall. Moreover, the symmetrical form of the earlier wing was not repeated in the official apartments erected along the new wall [Fig 25].

Although less visually focused than the Fort originally, and further disordered by its later alterations, the Castle did nevertheless introduce the "Italian style" to the Cape. The buildings lining the defensive walls were all flat-roofed, and provided the earliest example of this type which was to become the main characteristic of the town houses of the second half of the 18th century [5].

The slave lodge was a large but probably unelaborated rectangular structure which was described by almost all contemporary writers as having a flat roof. Kolbe, though, revealed that it actually had an internal monopitch surrounding its central court, which was invisible behind the outside parapet walls [6]. The slave lodge, however, certainly gave the impression of the flat-roofed aesthetic [Fig 80] as seen in the Castle. This could have been to give it a neutral appearance for its role as backdrop to the church, which was originally to have been approached from the Parade, as recorded in the town plan of 1679 [Figs 46-48].

The other courtyard building of the time, the Company's stable, appears by contrast to have had a double-pitched roof, as its roof was described as being visible from the outside [7]. Neither of these buildings are depicted in any detail in the visual sources, however, so their facade treatment cannot be described.

This is unfortunately also the case with the Company's houses in the gardens above Cape Town, at Rustenburg and at Nieuwland. These buildings were certainly influential in terms of their planning, and could well have had single or multiple gables, but there

is no visual or written evidence of their exterior form. Nor is there any contemporary evidence whatever with regard to the exterior of the "Posthuijs" at Muizenberg.

The other Company's buildings in the town were the church and the hospital, whose apparently similar gabled ends faced each other across the Heerengracht. Both were essentially cross-shaped, but the arms of the equal-sided cross of the church were linked by octagonal splays, whereas the re-entrant angles of the unequally armed cross of the hospital were occupied by rectangular annexes, as mentioned above under planning (Chapter 4.3).

Both of these buildings were depicted by Stade [Figs 79-80 & 99-100] and, although the flat-roofed annexes of the hospital known from written sources [8] are not shown, the roofs above the octagonal splays of the church are clearly illustrated as pitched and continuing upwards to the crossing of the main roof [9]. Both buildings were also gabled at the four ends of their cross-shaped plans, although the northern gable of the church was partially obscured by the belltower which was attached on this side.

These two buildings also differed in one major respect as far as exterior form is concerned: whereas the church was a compact structure which stressed the vertical dimension, the hospital spread itself across its site, thus emphasizing the horizontal. Both, however, were eventually surrounded by boundary walls, which contained them and accentuated their freestanding three-dimensionality.

There is less to be said about the two Company's buildings in Stellenbosch. The church is notable only for its belltower shown by Stade [Fig 202] and commissioned by Simon van der Stel [10]. Apart from this feature it appears to have been no more than a simple hipped rectangle with an unelaborated entrance, as would be expected of the temporary church built on the instructions of Visiting Commissioner van Rheede [11].

The drostdy appears only in the distance of Stade's drawing [Fig 203], and therefore no inferences can be made about its facade treatment. Two features, however, are clearly visible: the U-shaped form of the building and the hipped roof, with chimneys at the ridge intersections, but without a central gable.

The U-shaped plan was probably derived from the precedent of Simon van der Stel's

residence at Constantia. The absence of a centre gable following the same precedent is unlikely to have been an omission on Stade's part from the drawing in question, as speculated in a number of sources. It is more likely to have been because of the evident instability of the walls of the front wing, which were reduced in height from a double storey after the partial collapse of the building in 1708 [12].

The presence or absence of a gable aside, the drostdy could well have been the symmetrically designed, U-shaped building which introduced this type to the village of Stellenbosch after the fire of 1710. While the U-plan was rarely found in the farming districts surrounding Stellenbosch, it was not uncommon in the village itself, as revealed by Hertzog's survey of 1817 [Fig 189].

As far as the exterior form of the 18th century Cape Dutch farmhouse is concerned, the greatest influence appears to have been from the private houses erected by the Company's officials and the wealthiest freeburghers. It is also possible that the Company's own three garden houses were central to this development but, as stated earlier, documentary evidence is lacking.

The earliest documented house with a central gable was Jan van Harwaerden's inn [13], depicted in the cavalier perspective of 1660, and already mentioned as having introduced the L-shaped plan [Figs 56 & 57]. This house, moreover, had a central gable on each of its two street frontages, although the formality of the placement of the gables was contradicted by the asymmetry of the facade treatment below eaves level. In this respect it was similar to Leeuwenhof [14], the garden house of the Fiscal Joan Blesius built in the late 1690s, which had a symmetrical triple dwarf-gabled treatment above eaves level, but an asymmetrical arrangement of doors and windows beneath [Fig 108].

Van Harwaerden's inn has hitherto been ignored by all writers in the field, perhaps because its early use of gables and L-shaped plan cannot be reconciled with the evolutionary theory regarding plan form and three-dimensional development. It is, however, a central example of the architectural elaboration that occurred during the earliest years of the proto-Cape Dutch period.

By 1685 the single gable format had been elaborated by the addition of two flanking

dwarf-gables, as seen in Stade's 1710 view of Constantia [Fig 139], recalling the flanking dormers depicted in the original Fort. The central emphasis was thus given visual support on either side, which further articulated the length of the facade.

Constantia, moreover, was a double-storeyed house built on a U-plan, with the three-dimensional consequence that when viewed from the front or the side it resembled the square or rectangular "heerenhuisen" of the Netherlands, such as the Mauritshuis in 's-Gravenhage. No other Cape Dutch plan achieved this resemblance so succesfully, and it is argued here that this was the reason for the choice of the U-shaped plan, which was particularly influential on the Peninsula. The impression of a contained form was also enhanced by the use of hipped ends rather than the more directional gabled ends which were employed in the architecture of the later 18th century [15].

Other double-storeyed houses of this period were the "dubbelhuisen" of Blesius and Hüsing in Cape Town [16]. The former is not visible on either of Stade's views of the town in 1710, obscured as it is by other buildings. This, however, is not the case with Hüsing's house, which is shown from the front and from the rear [Figs 58 & 59]. The house was raised above street level and reached by a double stair, corresponding with Valentyn's description of "opgaande trappen" [17]. Both the front and back have a triple-gabled arrangement as in the facade of Constantia, with a central main gable flanked by dwarf-gables. There is, however, no evidence of upper windows, suggesting that the upper floor of this house was located in the loft. If built with a central hall and rooms on either side to the front and the rear, these could all have received light from the larger and smaller gables, explaining the need for these elements on both facades. The roof was also hipped, as at Constantia and at the contemporary Vergelegen.

Before addressing Vergelegen, it should be noted that it was this town house of Hüsing's and the apparently similar town house of Blesius that Wilhem Adriaen van der Stel claimed were "higher and grander" than his own residence [18]. Higher they were, grander they were not, but the point is that it was not Henning Hüsing's relatively insignificant farmhouse at Meerlust nor Blesius' Leeuwenhof to which Van der Stel was referring. This misconception has been repeated by most writers in the field, and must be corrected. Valentyn is quite clear about the impressiveness of Hüsing's town house, and his description of its location correlates with the most imposing house depicted in

Stade's drawing.

Vergelegen, however, was clearly the most elaborate house erected prior to 1710, as revealed by the available evidence. There are differences between the drawings in the "Korte Deductie" of Van der Stel [Fig 227] and in the "Contra-Deductie" of his detractors, Tas and Van der Heiden [Fig 230], as outlined in detail later [19]. However, there are also a number of common factors.

The main volume of the house was covered by a continuously hipped roof, in contrast with the U-shaped compromise of his father's Constantia. Both facades were triple gabled with a central main gable flanked by visually supportive dwarf-gables, and the facades on both sides were elaborated by pilasters supporting a cornice under the eaves. This type of articulation was not introduced again until 1763 with the erection of the fourth drostdy at Stellenbosch [20].

The appearance of the residence at Vergelegen must therefore have made a significant impression on all who were privileged enough to see it, but these were few in number. Nevertheless, word must have spread, and Vergelegen could well have provided a memory of an image which the freeburghers of the later 18th century attempted to emulate in their H-shaped houses.

In terms of three-dimensional form and detailed resolution, the architecture of the Cape prior to 1710 was clearly more sophisticated than the vernacular adaptation that developed later in the 18th century. The contained form of these double-storeyed proto-Cape Dutch houses, with their hipped roofs and triple gables, was a close approximation to their Dutch Renaissance progenitors. Their Cape Dutch successors, on the other hand, stressed the three-dimensional articulation of the exterior through the separation of the front and rear wings of the H-plan house, and through the accentuation of this articulation by the use of end gables rather than hips.

Although more complex as volumetric forms, the Cape Dutch farmhouses dispensed with elaborations such as the triple-gabled facade and the use of the classical orders seen in the proto-Cape Dutch period. However, they did retain the symmetrical facade with a central decorative gable and its further emphasis of an entrance door flanked by half-width windows. Both of these features had already appeared prior to 1710.

The findings revealed in all four categories of architectural analysis presented in the whole of this chapter do not correspond with the conventional view, supported by the interpretations of recent archaeological excavations, that Cape Dutch architecture developed as an evolutionary process from vernacular beginnings. The conflict between the evidence presented here and the argument in favour of evolution will be discussed further in the conclusion (Chapter 5).

5. CONCLUSION

The alternative theory for the origin of the Cape Dutch architecture of the later 18th century presented in this thesis contradicts the generally accepted theory of an evolution from vernacular roots.

Despite their difference in focus and approach, architectural historians and historical archaeologists agree in principle on the vernacular evolutionary theory, although they differ on the date of the emergence of the symmetrical house and its rearward extension into the transverse plan.

This acceptance of the evolutionary theory has led architectural historians to ignore most of the early buildings, and to dismiss houses such as Constantia and Vergelegen as exceptions which, moreover, could not have been as impressive as described in contemporary written accounts and graphic depictions. A similar "a priori" approach has characterized the work of historical archaeologists, who have interpreted the data revealed by their excavations and inventorial research within the parameters of an evolutionary approach.

The research method adopted in this thesis was to consult a broader range of sources and to analyse a wider range of architectural types. The "Evidence" (Part 2) presents all the buildings of this period known from the Resolutions and the other sources consulted, as these have previously been addressed only selectively. These sources, whether documentary records, contemporary drawings and descriptions, or extant buildings and archaeological remains, have all been permitted to contribute empirically to the development of the argument. While some of the evidence they reveal is clearly inaccurate, it has been possible to reconcile a number of apparent contradictions on closer analysis. The "Argument" (Part 1) correlates the evidence of the buildings analysed in Part 2, treating the architecture of the period as a whole, instead of as discreet and individual building types.

It is instructive that no recent researchers in the field have made more than passing reference to the visual material in archival sources, let alone undertaken a systematic study of this material. However, the contemporary plans and depictions of the Cape cannot be ignored, and have to be the basis on which any research into its early

architecture commences. When this visual evidence correlates so closely as it does with the records of the VOC, with travellers' accounts and with the probate inventories, it has to be taken seriously.

It is on the basis of the correspondence of these differing kinds of documentary evidence that this thesis has been constructed. Only a handful of buildings still exist from the period, and none of them in their original form. The documentary evidence, however, provides a sufficiently large number of examples for an understanding of the architecture of the proto-Cape Dutch period to be obtained, and for a clue to be given as to its influence on the Cape Dutch architecture of the later 18th century.

This evidence suggests that while an evolutionary theory might often correlate with the expansion of an individual house, it should not be extrapolated to explain the development of Cape Dutch architecture as a whole. The decision to extend a house rearwards rather than laterally required a catalyst.

The early vernacular houses in colonial North America described by Deetz and Glassie are instructive in this regard. It was only after the Georgian type had been introduced in the mid-18th century that symmetrical houses began to replace the two-roomed cottages of the English vernacular.

Vernacular architecture is characterized by its continuation of older traditions with only minor improvements and modifications. The early houses depicted on the plans of Cape Town in 1660 and 1679, and in Stellenbosch on the land grants of the last two decades of the 17th century, would therefore not have developed into the transverse plan without an outside stimulus.

None of the recent researchers in the field have suggested any reason for the development of a symmetrical plan with a centrally placed rearward wing, other than the increasing wealth of the farmers, despite Glassie's firm refutation of such evolutionary developments in New England.

However, the precedent for the "three-roomed symmetrical cell" already existed prior to 1710 in the Company's houses in the gardens above Cape Town, at Rustenburg, at Nieuwland, and in the "Posthuijs" at Muizenberg. The drostdy at Stellenbosch was also

symmetrical, with a U-shaped plan probably stimulated by Simon van der Stel's Constantia. Vergelegen, the estate of his son and successor Wilhem Adriaen, elaborated upon the "dubbelhuis" plan already developed in Cape Town by the Fiscal Blesius, which was shortly to be followed by the house of the wealthiest freeburgher, Hüsing.

The legendary nature of the short-lived Vergelegen could well have given extra status to this symmetrical plan with its central "galdery", although the two town houses of Blesius and Hüsing could also have been responsible for the adoption of the transverse plan at the Cape. It is immaterial, though, which particular Cape example provided the precedent. The central issue is that there was precedent at the Cape prior to 1710 for such a development. It is therefore unnecessary to posit an outside stimulus (as in the case of the Georgian house in New England) for the creation of the Cape Dutch architecture of the later 18th century.

This was created, rather, by the freeburghers' simplification of an architecture which they could not fully emulate, constrained economically as they were in comparison with the officials of the Van der Stel regime, and intellectually by the curtailment of the continued development of the high architecture of these VOC officials.

The intellectual nature of the buildings referred to above, as revealed also in the Fort, the Castle, the church and the hospital, is central to the argument presented in this thesis. These buildings were products of the Renaissance, not of the Medieval vernacular as was the case in North America. The very establishment of the settlement at the Cape was a Renaissance phenomenon, as a purely commercial outpost at the southernmost point of Africa would have been inconceivable in Medieval times.

The existence at the Cape of architectural treatises, as opposed to mere pattern books and craftsmen's manuals, is known from documentary sources. The likelihood of these having been consulted is strongly suggested by the evident derivation of the Cape Town church from the Noorderkerk in Amsterdam, illustrated in "Architectura Moderna". Moreover, the articulation of the facade of Vergelegen as depicted in the "Contra-Deductie" is remarkably similar to that of Jacob van Campen's Coymanshuis, depicted in the same treatise.

The proportioning systems employed in Simon van der Stel's new hospital and Wilhem

Adriaen's Vergelegen reveal an understanding of Renaissance theory which could only have been derived from written sources. The Renaissance treatises allowed literate people to have a theoretical albeit amateur architectural understanding which was beyond the reach of craftsmen. It is possible, therefore that Simon van der Stel designed Constantia and the new hospital himself, and that Wilhem Adriaen was responsible for the design of the church and Vergelegen.

Once this Renaissance context is understood, and the presence of the architectural treatises has been acknowledged, a development of Cape Dutch architecture from vernacular origins becomes increasingly improbable. This thesis therefore rejects the evolutionary theory proposed first by Walton and supported since the 1950s, on the premise that it is not necessarily from the vernacular that a more sophisticated architecture is derived. The contention here, on the contrary, is that it was the academic architecture at the Cape that gave direction to the vernacular.

The roots of Cape Dutch architecture are therefore to be found not in the European vernacular, but in the architectural theory of the Renaissance which was spread through the treatises, applied at the Cape in the architecture of the VOC and its senior officials, and then emulated partially in the buildings of the freeburghers.

PART 2: THE EVIDENCE

6. THE FORT, THE CASTLE AND THE HARBOUR DEFENCES

6.1 HISTORICAL REASONS FOR THE ESTABLISHMENT OF THE SETTLEMENT

While many people today consider Cape Town to be one of the most attractively situated cities in the world, contemporary sources differed in their assessment of its charms, as exemplified by Valentyn, who visited the Cape in 1685, 1695, 1705 and 1714:-

"If there is any land in the world which looks barren, desolate, stony and rocky from afar off, or even when one is in the Bay, it is that of the Cape of Good Hope, since nothing is seen but a heavy line or chain of mountains, for the most part linked together and unusually high, which begins to the north and ends with the Lion's Tail in the sea to the south [1]."

Nevertheless, the decision was made to occupy this apparently inhospitable location for a number of historical reasons.

On the 18th August 1608 the Dutch abandoned their third siege of the Portuguese fortress on Mocambique Island, compelling them to look elsewhere for a refreshment station for the VOC fleets [2]. As early as 1616 it had been resolved by the Council of Seventeen that all ships bound for India must stop for refreshment at Table Bay. There was also talk in 1619 of establishing a station jointly with the English East India Company, as an accord had been reached between the two trading rivals [3]. This suggestion, however, was disapproved by the Governor-General of Netherlands India, Jan Pieterszoon Coon [4]. Following the breakdown of talks on the joint project, two English skippers raised the British flag in Table Bay on their own authority in 1620. This action, however, was not sanctioned by their King, James the First, and the claim to ownership was not pursued [5].

The island of St Helena had also been used for refreshment purposes, but by the middle of the 17th century it was beginning to outgrow its usefulness as a port of call for the return ships. The pigs and goats on the island were fast becoming depleted by the

marauding hunting dogs left there by careless sailors, and the fruit and vegetables had often been consumed by the English before the Dutch fleet arrived [6].

Despite the orders of 1616 and the discussions of 1619 referred to above, the Cape of Good Hope was generally considered to be unsuitable as a refreshment station because of the dangerous seas and reports of the infertility of the soil and the savageness of the Khoi. In March 1647, however, one of the Company's vessels, the Nieuw-Haerlem, was wrecked at Blaauwberg and the survivors spent a year at the Cape until they were rescued by the return fleet in 1648. During this time they erected a temporary fort, cultivated vegetables and established good relations with the Khoi [7].

This fort, which was 450 feet square and was armed with a single cannon at each corner, was called the Vastichijt Zandenburgh. It was also provided with a hornwork on the north-western side, armed with three cannon [8].

This information was conveyed to the VOC in "A Short Exposition of the Advantages to be derived by the Company from a Fort and Garden at the Cape of Good Hope", written by Leendert Janssen and N Proot, officers of the wrecked ship Haerlem. They suggested that a fort should be erected, garrisoned by sixty or seventy men, and enumerated the advantages of the Cape as a refreshment station. The soil was fertile and capable of irrigation, all kinds of vegetables could be grown and fruit trees could be planted. Cattle and sheep could be bartered from the Khoi for fresh meat and dairy products, and pigs could be reared. Animal skins and train-oil could be obtained, and there was the possibility of trade with the local inhabitants, who could be converted to Christianity. Firewood for the ships was also available, and a jetty should be erected for taking fresh water aboard, with two sloops stationed in Table Bay to guide the fleet into harbour. Finally, they stressed the importance of securing the Cape before it could be used by the Spanish or Portuguese to ambush the Company's ships [9].

The above "Exposition" or "Remonstrance" was referred for comment to Jan van Riebeeck, who had spent three weeks at the Cape with the return fleet which rescued the Haerlem survivors. This was while he was being sent back to Holland to face trial for illegal private trading in the East, as a result of which he was temporarily dismissed from the Company [10].

Van Riebeeck agreed with most of the points of Janssen and Proot's report, but believed that the Khoi were not to be trusted. He suggested that hawthorn hedges should be planted for the protection of the settlement, and gave advice on the siting of the fort: "The projected fort, whatever its size, could be erected at the Fresh River in order that its water might be led into or around it, but as in that case its situation would be rather low and in course of time become damp, and its prospect interfered with by the growth of the trees to be planted, and as the ascent on the back of the Lion's Hill (which, if any memory serves me well, is very near the said river) would entirely command the fort, it would be more prudent to build the fort on the said ascent, where there is, as far as I remember, a convenient eminence and a hard foundation, and whence the command over the river and the whole neighbourhood would be secured, for the fort would not be further than a pistol shot from the river, and if properly managed, one of its points might abut on the stream, at the same time retaining a good view of the sea, and over all the plantations and trees which may be made to grow there in time, however high they might become, and which would also add to the strength and appearance of the fort, with very little cost indeed. The proper spot for the fort, however, can only be determined by local inspection, for which purpose I beg to offer my services to the Company" [11].

The Fort de Goede Hoop was eventually sited not on a rise, but on the level ground next to the shore at the mouth of the Fresh River. Van Riebeeck's offer of his services was accepted, however, even though the Directors had been considering Proot for the post. Van Riebeeck's memorandum of June 1651 had made such a favourable impression on the Directors of the VOC that he was appointed to command the proposed refreshment station at a salary of 75 guilders a month [12].

Van Riebeeck was given detailed instructions by the Council of Seventeen in Amsterdam, dated the 25th March 1651 (and therefore written prior to his appointment). His first task was to erect a temporary wooden building for the accommodation of the people and the tools. Once this had been completed and made defensible, he was to select a suitable site for the fort. A plan of it would be provided, and it was to be named the Goede Hoop. In order to have a regular supply of drinking water, the Fresh River was to be led around or through the fort, and accommodation

for seventy or eighty men was to be provided within the walls. Once the fort was sufficiently defensible, he was to select land for the gardens, which were to be enclosed. Grazing lands were also to be selected, and accommodation for the animals provided within the fort. The prefabricated sloops sent out as pilot boats were then to be assembled, and a wooden lighthouse erected. Finally, each bastion of the fort was to be armed with four cannon [13].

In a further instruction, Van Riebeeck was ordered to erect beacons to indicate the land taken possession of by the Company, and to keep the ships Drommedaris and Reijger at the Cape until the fort had been brought into a proper state of defence [14].

It is clear from these instructions, and from subsequent letters to the Commanders and Governors at the Cape, that the Company had no intention of establishing a colony. All it required was a small refreshment station comprising a vegetable garden, an orchard, grazing lands, and a fort to protect them, these to be contained in as small an area as possible. While Van Riebeeck followed his instructions as closely as was practicable, the expansionist tendencies of later Governors, the Van der Stels in particular, proved that the Company's fears of the expense of a larger establishment were well founded.

By mid-December 1651 the fleet, comprising the Drommedaris, the Reijger and the Goede Hoope, was ready to set sail. On the 20th December the ships left Amsterdam for Texel, the mustering point of the eastward-bound fleets. On the 23rd the final orders of the Company were taken on board, and on Sunday the 24th the fleet set out for the Cape. Three and a half months later, on the 5th April 1652, Table Mountain was sighted. On the 6th the ships came to anchor in Table Bay, and on Sunday the 7th April Van Riebeeck went ashore to inspect the terrain [15]. This date marks the beginning of the architectural developments outlined in the evidence to follow.

6.2 THE MILITARY CONTEXT

Before investigating the early defences at the Cape, it is necessary to place them within the context of the development of Renaissance fortifications in the Netherlands.

Both the Fort and the Castle were examples of the "Oudnederlands stelsel" (Old-

Netherlands system of fortification), codified by Simon Stevin. This was characterized by a bastioned arrangement, with the bastion flanks at right angles to the curtain wall, and by the use of a "fausse-braye" (a breastwork, for the protection of musketeers, at the foot of the walls on the inner edge of the moat). Ravelins and other elaborations, such as demi-lunes, hornworks, crownworks and tenaillons were also used in this system [Fig 1]. The "Oudnederlands stelsel" was utilized from the late 16th century until the end of the 17th century [1].

This system was gradually developed from influences of Italian derivation in the 1530s. The introduction of gunpowder, and the replacement of stone missiles with projectiles of iron, led to the demise of the high walls and even higher towers of the Middle Ages. The new walls were lower and thicker, and the towers were replaced by bastions, at first rectangular or rounded, but later of polygonal form. The last had the advantages of eliminating blind-spots and of being able to deflect missiles. Bastions were first employed in c1515, and an early example of their use in city walls was Michele Sanmichele's fortifications of Verona, dating from 1527 [2].

The first Dutch application of the Italian system of fortifications was in the new city walls of Breda (1531-1547). Soon afterwards a number of Italian military engineers were brought to the Netherlands. The first of these was Donato de Boni Pellezuoli of Bergamo, who arrived in 1540 and was responsible for the citadel at Ghent and the city walls of Antwerp [3].

Various improvements were made to the Italian system of fortification after 1579, but it was only towards the end of the century that they were codified into the "Oudnederlands stelsel" by Simon Stevin of Brugge. His first two treatises were "Stercktebouwing" (1594) and "Stercktebouw door Spilsluysen" (1607). The first proposed a scientific system for the erection of fortifications, and the second dealt with the use of inundation in a defensive context [4]. His third treatise, "Castramentatio. Dat is Legermeting" (1617), covered all aspects of military operations scientifically [5].

The greatest developments in the "Oudnederlands stelsel" took place after the Twelve Years Armistice (1609-1621). The heavy earth walls of the Italian system were replaced with smaller walls of earth and correspondingly smaller foundations, providing a

financial saving and solving the problems caused by clay soil. The bastions were also enlarged, thereby affording more space for artillery, and their flanks were placed at right angles to the bastions. This had the advantage that all the external faces of the curtain walls and bastions could be covered from the adjoining bastions [6].

The "Oudnederlands stelsel" was still in use in 1650 and, moreover, was still being taught at the renowned engineers' school at Leiden. The old system was used for the completion of the walls of Amsterdam (1658-1665), by far the largest fortification project of the time, and it was only in 1670 that a significant improvement was introduced. This involved the placing of the flanks of the bastions at an obtuse angle to the curtain walls, thus allowing them to deflect missiles fired from adjacent bastions. Examples of this new design are seen in the fortifications of Breda (1674) and the first two bastions of Naarden (1677), both designed by Maximiliaan d'Yvoy [7]. The old and new systems of fortification are illustrated in Figure 2.

Further developments were influenced by innovations brought about by the French, particularly by Louis XIV's Royal Engineer, Sebastien le Prestre de Vauban (1633-1707). He was responsible for the erection of 160 fortifications, mostly between 1678 and 1688. This period also saw large-scale fortification works in the Netherlands, comprising the rebuilding of old works and the erection of new ones. These Dutch fortifications followed the French method [8], the most noticeable characteristic of which was the use of bastions with inward curving flanks and "oreillons" (curved towers) at the salient angles [9].

It is not clear how the French method reached the Netherlands, but it could have been brought by Paul Storff de Belville. He was a mercenary who had worked with Vauban for three years prior to 1677, when he became Engineer-General of the Netherlands. The first use of the new bastion type was at Naarden, where the first two bastions followed the improved old system, but the other four, begun in 1679, followed the French method [10].

The final developments leading to the "Nieuwnederlands stelsel" (New-Netherlands system of fortification) were brought about by Menno van Coehoorn (1641-1704). His treatise "Nieuwe Vestingbouw op een natte of lage Horisont" appeared in 1685, while

the fortification programme of 1678 was still underway. It described the weak points not only of the old Dutch system but also of the French method. Van Coehoorn's system was adapted to the level terrain typical of the Netherlands, and its most noticeable characteristic was that none of the defensive works should be visible on approach [11].

Van Coehoorn had to wait until 1695, when he was appointed Director-General of fortifications, before he could put his ideas into practice. Very little remains of his work today, and only one ravelin survives of the fortified town of Bergen op Zoom, considered to be his most important work. Nevertheless, by the time of his death in 1704 the new system had entirely supplanted the old [12].

The "Nieuwnederlands stelsel" made use of larger bastions as well as ravelins. The flanks of the bastions were no longer at right angles to the curtain wall but precisely on the defensive line, and the "fausse-braye" was now omitted [13]. Van Coehoorn's system of fortification is exemplified by the city walls of Coevorden, depicted in Schuller's plan dating from the 1790s [Fig 3].

Many sources have linked Vauban's and Van Coehoorn's systems with the design of the Castle de Goede Hoop, but their assertions have been disputed by Ploeger [14]. The more recent work of Van Wieringen [15] confirms Ploeger's arguments by dating these systems with greater accuracy. The Vauban method only reached the Netherlands in 1677 and was first put into practice in 1679, fourteen years after the design of the Castle. Van Coehoorn's system was only published in 1685, twenty years after the Castle was designed, and was first used in 1695. Moreover, both the Fort and the Castle are similar in adhering strictly to the "Oudnederlands stelsel". It was only in the later coastal defences of the 18th century that the "Nieuwnederlands stelsel" was introduced to the Cape.

6.3 THE FORT DE GOEDE HOOP

The first permanent building to be erected at the Cape was the Fort de Goede Hoop. It served not only as a defensive citadel, but also as the centre of government and the

residence of the Company's employees, as well as providing the storage space necessary for provisioning the passing fleets.

The Fort was sited at the water's edge, not far above the high-tide mark, its location along the sea-front being determined by the mouth of the Fresh River. This provided an adequate supply of drinking water, and was also diverted to create a moat around the defensive walls.

Van Riebeeck had been provided with plans of the Fort, which took the form of a square enclosure of curtain walls with bastions at the four corners. Beyond this was the moat, about eight metres wide. The walls and bastions were constructed of earth but, due to the sandy and uncohesive nature of the soil, they were unable to withstand the effects of the winter rains, and portions of the fortification collapsed with monotonous regularity during the wet season. Despite attempts at reinforcement the problem was insurmountable, and as early as 1654 Van Riebeeck wrote to the Directors of the VOC about the advisability of building a fortress of stone, though it was another twelve years before such a project was commenced.

The earliest buildings within the Fort were erected with the sole purpose of providing immediate shelter. They were built entirely of timber brought from Holland, even the roofs being constructed of planks. These, however, were soon replaced with more permanent structures, the gatehouse and the "cat" (the hall or council-chamber which doubled as a keep) being constructed of stone. Both had flat roofs originally, but the "cat" was later provided with two parallel pitched roofs of tiles. The subsidiary buildings had walls of locally made bricks and roofs of thatch, but the latter were also replaced by tiles owing to the risk of fire.

In 1653 the area of the Fort was enlarged by the hornwork added in front of the entrance, enclosing the hospital and various workshops and magazines, and by the addition of a palisaded animal enclosure to the rear. The hornwork was enlarged after the departure of Van Riebeeck, and work on the buildings inside the Fort continued until the commencement of the Castle.

Although a utilitarian building, the Fort was not lacking in architectural presence. Entering the hornwork between the two sea-front batteries, the view towards the

entrance portal across the drawbridge was contained and directed by the two flanking buildings. Once within the citadel proper, the axial view of the stone keep was contained by the flanking subsidiary buildings which lined the inside of the earthen enclosure [Figs 6-10].

Such a formal arrangement of elements was rarely found at the Cape in the later 18th century, either at the architectural or the urban scale. The Fort is therefore the first of a number of early buildings at the Cape which illustrate a greater sophistication than that of the Cape Dutch architecture which developed from the precedent established in the proto-Cape Dutch period.

6.3.1 THE DEFENSIVE STRUCTURE OF THE FORT

Van Riebeeck's first priority upon arrival at the Cape was to secure the defensibility of the settlement. Since he had already been provided with a plan and profile of the projected Fort, it remained only for a site to be selected before work could begin. This was done provisionally on the 7th April 1652, the day after coming to anchor in Table Bay. The next day the site was surveyed and inspected more thoroughly, and it was agreed that the Fort would be erected in the selected position [1].

The site chosen was not on the higher ground suggested by Van Riebeeck in his memorandum of 1651 to the VOC, but close to the shore next to the mouth of the Fresh River [Figs 4 & 5]. Although this had the advantages that the river could be diverted to create a moat around the fortification, and would provide a convenient source of drinking water for the garrison and the ships in harbour, it did have a strategic disadvantage. The slopes of Signal Hill (the higher ground mentioned in the Memorandum) were close enough for the site to be commanded by cannon-fire, a point to be raised in later years when the site for the Castle was being selected [2].

The siting of the Fort was elaborated upon in Van Riebeeck's first progress report to Amsterdam, dated the 18th April. It was on "a somewhat elevated level plain of good soil, excepting at the one sea point tending towards the Salt River, where the ground is soft and uneven." The river would be led into the moat at the other sea bastion, facing the Lion Mountain. However, since the ground level of the projected Fort was "about

two fathoms" higher than the river, the moat would have to be unusually deep. For this reason its breadth would be no more than two roods, in order to minimize the excavations required [3].

The plan for the Fort provided by the VOC was of a typical small fortification following the principles of the "Oudnederlands stelsel". A square court was surrounded by curtain walls with bastions at the four corners, the gateway being in the middle of the wall facing the sea. The surviving drawings all suggest that the entrance had a dog-leg passage which prevented a direct approach [as in Fig 6] [4].

The profile, or cross-section, had the usual features of this system of fortification [see Fig 1]: a "courtine" (curtain wall) comprising a "binnentalud" (interior slope), "walgang" (wallwalk) [5], "banket" (firing-step), "binnenkruin" (interior crest or firing-crest), "plongee" (superior slope), "buitenkruin" (exterior crest) and "buitentalud" (exterior slope); a "berm" (berm) [6]; and a "gracht" (ditch or moat) comprising an "escarp" (scarp) and a "contrescarp" (counterscarp) [Fig 6].

Once the site of the Fort had been agreed upon, it was resolved that work should be commenced at once, in order that the ships might be delayed as little as possible before sailing on to Batavia. On the evening of the 8th April 1652, therefore, 100 men were sent ashore, 81 remaining aboard the three ships for guard duties and to off-load materials [7].

The setting out of the Fort was supervised by Van Riebeeck on the 9th April [8], and the following day the men began construction. The defensive structure was to be built of earth, as a stone building would have been too time consuming, but difficulties were apparent from the outset. The earth in the vicinity of the site was too loose for the erection of walls with sufficient stability, so it was necessary to search for ground more suitable for sods. This was soon found, but because of the hardness of the soil the cutting of sods would have to be postponed until the rainy season. Further delays were encountered due to the strong winds and the shortage of labourers, many of whom were already being affected by illness. These problems were to be a continual handicap throughout the construction of the Fort [9].

Despite these delays, there had been sufficient progress by the 20th April 1652 for the

first five cannon to be placed on the ramparts. Two were positioned outside the two sea-front bastions, two flanked the approach along the beach, and one was placed in the middle across the curtain. Two days later another three cannon were installed. As the defences were now adequate, Van Riebeeck and his family moved into a temporary timber shed within the fortification on the 24th, in order to supervise the work more effectively [10].

On the 26th April 1652 Van Riebeeck gave instructions that the two bastions under construction should not be raised higher than four feet for the time being, and that a temporary breastwork six feet wide should be constructed on top of them. Instructions were also given for the two bastions to be connected with another breastwork, six feet high and wide [11].

The temporary breastwork on the southern point was marked out on the 29th April. Work was also started on another breastwork six feet high and wide on the line of the unbuilt curtain, in order to provide a temporary line of defence [12].

These developments were outlined in a letter to Batavia dated the 13th May, when a request was made for more cannon. Although Van Riebeeck had been instructed to place four pieces on each bastion, he had only been provided with a total of twelve. These, moreover, were of too small a calibre, and were incapable of commanding the roadstead [13].

The Fort and its bastions were named on the 16th May. The Fort was given the name "Goede Hoope", following instructions from Holland, while the bastions were named after the ships in harbour. The southern bastion was called "Drommedaris", the eastern "Walvis", the western "Oliphant" and the northern "Reijger" [14].

Work on the fortifications progressed slowly due to the shortage of labourers (about sixty), and on the 11th May it was resolved that fifty convalescents would be brought ashore to augment the work-force once they had recovered. Illness continued to reduce the number of workmen, and by the 10th June only fifty of the 116 men were fit for work. Progress was also affected by rainy weather, and for the next two weeks work was continually interrupted. By contrast, a week of dry weather in the beginning of July made the ground unworkably hard, further delaying the digging of the moat and the

building up of the bastions [15].

By the 3rd August 1652, however, the Fort was sufficiently defensible for the whole company to move in. The northern bastion, Reijger, had been raised to a height of sixteen feet, and work was continuing on the diagonally opposite southern bastion. In order to complete the rest of the Fort without further delay it was resolved on the 13th to request the assistance of as many men as possible from the next fleet due at the Cape [16].

The sentry-boxes were erected on the 18th September, and the gate of the half-completed Fort was first mentioned on the 19th October, but further delays had been caused by bad weather and by the illness of the men, who were also beginning to complain about the heaviness of the work and the shortage of food [17].

On the 21st October the threat of an attack on the Fort, due to the uncertainty of relations with the Khoi, led Van Riebeeck to offer the men incentives to complete the fortifications as soon as possible. The walls were still only seven feet high, so the men were requested to move another twenty barrow loads of earth a day for the next two weeks, over and above their usual quota of 130 barrow loads. The hardness of the earth, however, was causing damage to the spades and wheelbarrows, and further delays were caused by strong winds and the illness of the workmen, 24 of whom were laid up in the hospital on the 11th November [18].

The first additional fortifications were planned on the 25th December, as a result of wild animals having plundered the cattle kraal outside the Fort. Since the square inside was too small to contain all the livestock, it was decided to build a new kraal adjoining the rear of the Fort, between the Drommedaris and Oliphant bastions. The kraal would be surrounded by a breastwork of sods eight feet high, with a ditch which could also be used as a drinking trough for the cattle. The erection of the kraal, however, would have to be postponed until men could be seconded from the next fleet [19].

The urgency of completing the Fort was highlighted on the 18th January 1653, when word was received that war had been declared with the Republic of England. Orders were therefore given for all the men to continue with work on the fortifications, which were still vulnerable to attack from a major power. On the 23rd, Van Riebeeck noted

that they were so well entrenched that they could only be dislodged with cannon-balls or by a force twenty times their number. He acknowledged that the Fort could be overwhelmed if cannon were landed at the Salt River, but a decision had already been taken to erect a redoubt there to prevent this possibility [20]. There was still a shortage of cannon-carriages and ammunition, and these were requested from Batavia in a letter of the 21st January 1653 [21].

Progress on the fortifications continued to be interrupted, to such an extent that it was decided on the 21st February to release convicts to assist with the work. Nevertheless, when the Admiral of the return fleet, the Hon Demmer, inspected the works on the 7th March, he was "greatly pleased" with what he saw. He would not, however, comply with a request for the assistance of 200 men from the fleet, which would have allowed the defences to be completed within fourteen days [22].

Another progress report concerning the Fort was sent to Holland on the 14th April. The walls had now been faced with sods on their inner and outer sides, but the facing of the "Walvis" and "Oliphant" bastions was still proceeding.

A decision had been made to create more space inside the Fort by reducing the width of the walls to twenty feet at their base. Their upper surface would now be sixteen feet wide, comprising six for the base of the six-foot high parapet, and ten for the platform and footway. This width was necessary for moving the cannon between the bastions, and wheeled cannon-carriages were requested to alleviate the arduousness of this task. A request was also made for long-range guns of brass, as the iron cannon could not reach the ships in harbour. It had also been discovered that the Fort was one rood longer and wider than intended, owing to its having been set out with a line instead of a more accurate copper chain [23].

By the 24th May, the eastern bastion Walvis had been built almost to its full height. Van Riebeeck hoped to resume work the next week (when the ground would be sufficiently softened for sods to be cut) on the western bastion, then about four feet high, and to complete it by the end of the next month. To date, two bastions of the Fort, at diagonally opposite corners, were enclosed and adequately protected [24].

By the 4th July the last load of soil had been brought to the Oliphant bastion, the whole

Fort and all four bastions now having been raised to their full height. All that remained to be done was to strengthen the outsides of the Oliphant and Walvis bastions with sods, in order to prevent erosion. It was hoped to complete this work within a few days, and then to begin levelling the square inside and the berm outside.

Work was also begun on the new cattle kraal behind the Fort on the 5th July 1653 [Fig 8]. This would have a solid breastwork of sods in the form of a hornwork, with splayed side walls and a ravelin in the middle of the rear wall [25].

On the 9th July the Oliphant bastion was being reinforced with sods, and it was noted on the 24th that the fortifications were almost complete. Progress, however, continued to be delayed by the wet weather and the illness of the men, barely forty of whom were still fit for work [26].

The second additional fortification was the hornwork in front of the Fort [Figs 8 & 9]. This had already been commenced by the 13th October, when it was first mentioned in a letter to Amsterdam [27], and was still in progress on the 11th December, when stormy weather prevented work from continuing. It comprised a defensive extension to the Fort, with splayed walls similar to those of the cattle kraal, beyond the moat. Two gun batteries would flank the entrance, which would be on axis with the gateway to the Fort and the "cat" beyond [28].

Timber for the gate of the Fort was being prepared in the forest on the 22nd October, and it was mentioned on the 9th December that the carpenters were also cutting palisades. These would be planted on top of the ramparts to provide an additional obstacle for attackers [29]. As a result of the bad weather which had halted the construction of the hornwork, the men were sent out on the 11th December to collect the palisades that had already been prepared. This task continued into the new year, fifty men being sent daily to drag them almost three (Dutch) miles from the forest [30].

These improvements were outlined in a letter to Batavia dated the 31st December. The embankments had been raised to a height of sixteen Rhineland feet, and would be reinforced with palisades on their outer edges [31]. The erection of the palisades had already been commenced by the 13th January 1654, when strong winds prevented the work from proceeding [32].

This happened again on the 28th January 1654, so the men were sent to the forest to collect the small beams which had been prepared for the gun-platforms. Until now the cannon had been temporarily mounted on loose planks [33]. Two additional iron cannon with wheeled carriages were sent from Batavia on the 8th March [34], but there was still an absence of long-range guns. Another request was therefore made to Holland on the 22nd April for six brass cannon, two of which would be placed in the hornwork, two on the Duijnhoop Redoubt, and two on a proposed water-front battery [35].

On the 2nd August the first of many instances was recorded of the collapse of the defensive structure of the Fort. As a result of the heavy rains that had been experienced for some days, the Walvis bastion partially collapsed, as did the embankments at other places. Van Riebeeck attributed the failure to the speed with which the structure had been erected owing to the danger of war with the English. Large clods of earth, as hard as rock, had been used for the walls, and there had been no time to break them into smaller pieces. These had now become softened by the rain, so it was decided to reinforce the damaged portions, a task which he estimated should be completed within six weeks [36].

The rebuilding of the Fort was supervised by Jan van Harwaerden, who had been appointed overseer of fortifications and building works, as mentioned on the 8th August 1654. By the 9th October the work was completed. The damaged ramparts had been rebuilt from the ground up and had been reinforced with twigs, branches and sods. They had also been made broader than before, with palisades around them. It was hoped that these precautions would prevent a further collapse [37].

These repairs were outlined to the Council of Seventeen in a letter of the 27th January 1655, where it was also mentioned that although the embankments were less steep than previously, they were protected with palisades to ward off an attack [38].

Relations with the Khoi continued to deteriorate, and on the 10th February they insisted on erecting their huts close to the banks of the moat, stating that "this was not our land but theirs and they would place their huts wherever they chose". They threatened that if they were not permitted to do so they would attack the Fort with the help of large numbers of people from the interior. They also stated that they could easily climb the

ramparts and knew how to break down the palisades [39].

Despite the precautions taken the previous year, five roods of the embankment of the rear curtain of the Fort collapsed on the 12th June 1655, following heavy rain. As this would clearly be an annual occurrence, Van Riebeeck suggested that a stone fort would have to be built as a permanent solution. However, such a project was impracticable at present, owing to the lack of horses and oxen needed for transporting the necessary materials [40].

One week later, on the 19th June, exceptionally heavy downpours resulted in the rear curtain of the Fort collapsing entirely from the one bastion to the other. This necessitated more extensive reinforcement than had previously been envisaged. The curtain would be rebuilt with laths interwoven with rushes, involving a great deal of labour. Seven or eight hundred poles would have to be brought from the forest and, as the other three curtains were also likely to collapse in future, they would also have to be reinforced in the same way [41].

Continuing distrust of the Khoi led to the cattle kraal behind the Fort being secured with a heavy barrier, a pole fence and a heavy lock. This had been done by the 26th February 1656, when it was also mentioned that two small guns had been placed in the half-moon (or ravelin) of the kraal [42].

On the 11th June the kraal was described as being enclosed by an embankment planted with thorns, instead of a palisade. This mound and stockade were sufficiently strong to keep out a number of lions, as was the hornwork in front. It was also mentioned that the gate of the Fort was being rebuilt in stone [43]. This could be a reference to the tall structure depicted in the 1660 cavalier perspective of the town [Fig 10]. A whipping-post was erected in the hornwork on the 15th June, and work was continued with the erection of the new gate on the 24th [44].

For the third successive year parts of the Fort collapsed again, on the 8th July, as a result of the continuous heavy rain. The old embankments failed in three places, and it was estimated that it would take two months to repair the damage. This would involve a reinforcement of stakes and fencing, interwoven with grass, as had been done on the rear curtain the previous year. The latter was now overgrown with grass and

consequently stable. The wall of the cattle kraal also caved in on the 29th July 1656, enabling a lion to enter the enclosure and kill one animal and injure another before it was shot [45].

On the 9th September all the men were sent to the forest to bring back the new palisades which had been prepared there. These would be planted on the ramparts of the Fort and would replace the old ones which had lasted only three years before decaying. It was hoped that the new palisades, of a "hard and mostly green ebony wood", would prove to be more durable [46].

By the 4th November the gate, the "cat" and the powder-magazine, all built of brick (sic, not stone as stated previously), had been largely completed [47].

The effectiveness of the palisades in repelling wild animals was described on the 23rd November. A hyena ("wolf" in the Journal) managed to climb up the ramparts but was halted by the palisades at the top, and fell back into the moat. Their effectiveness against human assault, however, had not yet been put to the test [48].

The environs of the Fort were first addressed in the report of the Visiting Commissioner Rijckloff van Goens, dated the 16th April 1657. Mindful of the fact that a town would soon develop, he had an area of fifty roods surveyed around the moat, which was to be kept clear of any buildings or other obstructions. He also suggested that the proposed battery for the protection of the roadstead should be built of poles with an infill of stones, similar to the jetty which had already been erected [49].

Van Goens again raised the possibility of the Fort being rebuilt in stone, as first suggested by Van Riebeeck, but also mentioned its topographical disadvantages, as it was open to attack from the heights of the Lion Mountain. He did note, however, that it was now armed with 24 guns. Four of these were on the "Walvis" bastion, three on "Reijger", four on "Oliphant" and four on "Drommedaris", two in the cattle kraal behind the Fort, three on the flat roof of the Commander's residence or "cat", and four in the hornwork [50].

It was noted on the 31st August, in a letter to the Seventeen, that the walls of the Fort had suffered a further collapse, and that repairs and reinforcements were again required

[51]. These had been commenced by the 11th September, and also involved the replacement of the palisades [52].

These works were still being undertaken on the 17th October 1657, but once they had been completed all other building operations would be suspended in order to re-direct the river. This would involve leading it behind the kraal and around the south-east side of the Fort. The scheme had two advantages: the jetty would no longer be damaged by inundations in the wet season, and the new course of the river would provide a double moat for the Fort. To prevent its edges from being eroded, they would be lined with brushwood and branches, while the excavated earth would be used to form a defensive mound outside to provide greater space and protection for the cattle [53].

By the 23rd October the replacing of the palisades, and the raising of the walls of the Fort two feet above their previous level, had been completed. Work was therefore begun with the cutting of the new canal which would lead the river around the back of the Fort [54].

The walls of the cattle kraal behind the Fort collapsed again on the 27th May 1658, encouraging the Khoi to make an attack on the kraal [55]. It was therefore resolved on the 30th November that the kraal would have to be rebuilt. The earthen walls continually crumbled because the cattle pushed against them with their horns, necessitating constant repairs. A palisade would thus have to be constructed around the kraal, the timber for which had already been prepared [56].

On the 16th August 1659 it was noted that the palisade of the Fort was again in a state of disrepair. Since the defensive walls had a gentle slope which could be easily climbed by the Khoi it was essential to have a strong barrier at the top, but many of the stakes of the palisade were rotting and could be broken down if stormed. It was therefore decided to erect a stockade around the Fort on the berm, between the moat and the walls. The stockade would be made of spars with sharpened tops, eight feet in length, four inches wide and two inches thick. The contract to prepare the spars was awarded to the free sawyer Leendert Cornelissen of Zevenhuijsen at the rate of three stivers each. Once prepared, they would be brought to the Fort on the freeburghers' wagons at the Company's expense [57].

Further repairs were made to the ramparts of the Fort, as was mentioned on the 20th August 1660. The men were also widening and deepening the moat as well as building a dam wall in the river below the Reijger bastion, in order to lead the water around the Fort. This was evidently a continuation of the project to divert the river begun in 1657, which Van Riebeeck had been instructed to undertake when he left Holland in 1651, and which had been raised again by the Visiting Commissioner Sterthemius the previous March. The intention was to use taps and chutes to fill the water casks from the dam, which was conveniently close to the jetty [58]. The diversion of the river is clearly shown on the 1660 cavalier perspective of the Fort and town [Fig 42].

In order to expedite the completion of the repairs to the Fort, the widening and deepening of the moat and the damming of the river, it was resolved on the 26th August to offer incentives to the workmen. A series of deadlines were set and all those who met them would be rewarded with extra rations, and an extra month's wage would be credited to their accounts on completion. These measures were necessitated by the heaviest rains ever experienced since the establishment of the settlement at the Cape. As a result the original earthworks of the Fort had "mostly collapsed". Van Riebeeck's explanation for this was that "they were not made with wood and plaited osiers, in the way that we build now". The damming of the river was also described in greater detail, two "strong and thick weirs" being required below the Reijger bastion, as well as the sluices with which to lead the water into the casks [59].

The Fort collapsed further on the following day, the 27th August, when the southern end of the Walvis bastion caved in. This was also part of the earliest construction, erected without reinforcement because of the lack of oxen and horses with which to transport the timber and branches. These were now available, as were the wagons of the Company and the freeburghers, but the only work being undertaken on the Fort was to repair the places where the walls had been damaged. In addition to the rebuilding and reinforcement of the structure, heavy burned palisades "of hard, durable ironwood" were planted on top of the walls, in addition to the stockade planted around the berm. These precautions, Van Riebeeck believed, would give the Fort "exceptional strength", and prevent it from being taken by European powers [60].

On the 3rd December Van Riebeeck set sail for Saldanha Bay, having left instructions

for the work to be done on the Fort. Once the sluice on the Fresh River had been completed, the men were to begin building the dam wall. The wood-cutters were to continue sawing planks in the forest for the gun-platforms, and the carpenters were to close the gaps in the stockade and level the berm [61].

The improvements to the Fort were described by the Visiting Commissioner Andries Frisius in his report of the 4th July 1661. The walls and bastions had been re-faced with sods and enclosed by a new palisade. In addition, a strong fence of timber posts ("houte staketsel"), five feet high, had been erected above the berm. The moat, which had been deepened and widened in places, was evidently still dry, as Frisius mentioned that one of the rivulets of the Fresh River was to be let into it. This could not be done, however, until the causeway giving access to the gate had been replaced by a drawbridge. The latter had already been constructed and was ready for installation [62].

Approval of the repairs was received from Amsterdam in a letter of the 23rd August, where instructions were also given for the base of the walls to be protected from collapse by a footing of stone, a few feet in height [63].

The cattle kraal behind the Fort was plundered again by lions on the 31st October, the animals having broken down part of the old palisade in the moat, which was dry because repairs were being undertaken [64].

The timber drawbridge over the moat had been completed by the 9th April 1662, as mentioned in a letter to the Seventeen, and was raised every night for greater security. The walls had also been strengthened with layers of branches, which were beaten down into the sods to serve as reinforcement [65]. Despite these precautions, the wall between the gate and the Walvis bastion collapsed on the 26th May, shortly after the inauguration of Zacharias Wagenaer as the new Commander [66].

Wagenaer was more outspoken about the defects of the Fort than his predecessor had been, as outlined in his letter to the Seventeen of the 10th August. The repairs necessitated by the continual collapse of the walls were not only wasteful of the soldiers' time, but were also expensive because wagons for conveying materials had to be hired from the freeburghers. He therefore repeated Van Riebeeck's earlier suggestion to rebuild the Fort in stone, of which there was no shortage in Table Valley,

while sufficient shells for the burning of lime were available on Robben Island [67].

Wagenaer's request had a positive response, and provisional authorization to rebuild the Fort in stone was received in a letter from Amsterdam dated the 22nd December 1662. The necessary materials were to be brought on site, but an accurate estimate of costs was to be made before the commencement of any building work. He was also instructed to procure slaves from Madagascar to increase the work-force, as only a few men could be spared from the ships in harbour [68].

The rebuilding of the Fort in stone was postponed for another year, however, owing to the necessity of undertaking other more urgent works, as explained in a letter to the Seventeen dated the 16th May 1663 [69]. One of these works involved the enlargement of the hornwork, which would be extended towards the sea by three roods, as resolved on the 23rd May. This was in accordance with the instructions of Jan van Riebeeck, of Commissioner Lairesse who had visited the Cape the previous year [70], and of Commissioner Harmen Klencke van Odessen who had recently departed. This was partly in order to accommodate the new buildings to be erected there, and partly to allow more space for the moat, which was to be widened from two roods to three roods and three feet. The Fiscal Hendrick Lacus, who also acted as surveyor, was therefore instructed to peg out the works so that construction could commence as soon as possible [71]. This was done on the 28th June [72], and the new hornwork is shown on a plan dating from 1663 [Fig 11].

A further collapse to the walls of the Fort occurred on the 17th August, this time on the western side of the gate towards the Oliphant bastion. The gap was temporarily closed with a stockade, but the walls collapsed in three other places on the 20th [73]. Repairs to the walls were begun on the 25th September [74], but strong winds delayed the work, which was still in progress on the 19th October [75]. However, the first stones of the foundation of the new hornwork were laid on the 7th November, extending three roods and four feet further towards the shore [76].

The rebuilding of the Fort was raised again on the 21st November 1663 in a letter to the Seventeen, when it was mentioned that 25 or 30 men would be seconded from the next ship to commence with the necessary stone-breaking. This project had become

even more urgent after the extensive damage caused to the earthen walls by the winter rains. Moreover, the problem had been exacerbated by a shortage of labourers, as a result of which thirty men had been landed from the fleet in harbour. Despite their assistance, the repairs had not yet been completed, although the cannon had by now been remounted [77].

Wagenaer therefore requested again that orders be given for the project to be undertaken, and that the necessary workmen be sent out. He in turn would send over two models of wood or cardboard, one of the existing Fort and the other of its proposed successor, for comment and criticism [78]. His intentions were to adhere to a quadrangular plan, but the square inside would be larger, the walls would be higher, and the moat would be deeper and wider. He also intended to build a redoubt on a hill nearby to prevent an attack from above [79].

A further letter of the 15th April 1664, however, stated that the models could not be sent over. This was because Wagenaer, who was to have built them himself, had been too ill to do so [80]. This is an interesting entry, as it reveals that the Commander was acting as architect, just as Van Riebeeck had done in the case of the Company's granary [81]. It was also mentioned that the new hornwork was progressing well, the batteries on either side of the entrance already having been raised to seven or eight feet with walls of stone. However, eight long-range cannon were still required for effective command of the roadstead [82].

The gate of the kraal behind the Fort was blown down in a storm on the 17th August. All the carpenters were therefore set to work on repairing it, in order to ensure that the livestock would be enclosed before nightfall [83].

On the 29th September news was received that war had again been declared with England. Instructions were therefore given for the masons and labourers to complete the wall around the new hornwork within the next three months. It was also mentioned that the Fort was now equipped with 32 pieces of ordnance [84], and on the 14th October two 18-pounders for the hornwork batteries were landed from a ship in harbour [85].

The work-force was temporarily increased on the 13th November, when 54 soldiers

were seconded from a ship in harbour to assist with the removal of earth from the moat behind the hornwork [86]. However, it was mentioned on the 24th November that there was a shortage of slaves for work on the fortifications [87].

Progress on the fortifications was related to the Seventeen in a letter dated the 19th April 1665. The walls of the hornwork had been completed, the one facing the sea being terminated on the eastern side by the gabled end of the hospital, and on the western side by the end gable of a row of houses. Both these structures extended rearwards as far as the moat, where it had been intended to build banks of stone ("steene beeren") on either side of the entrance to the drawbridge. These had not yet been erected, however, owing to the threat of an English attack, and timber palisades had been put up instead as a temporary measure [88].

A timber model of the walls of the hornwork, made by one of the carpenters, would be sent over in the Admiral's ship, together with a drawing of the internal arrangements prepared by the Commander. Work still to be done included the heightening of the western wall and the completion of the roofs of its houses, the heightening of the two batteries, the erection of a roof in the form of a tower ("de cap toorense wys") over the gate, and the completion of the staircase on the western wall. It was estimated that these works would be completed in three or at most four months. The costs of the hornwork to date were f8939:22:-5 [89].

As far as the Fort itself was concerned, the intention was to commence rebuilding it in stone the following year. This would either take the form of a stone wall surrounding the existing earth fortification, as outlined in Wagenaer's project, or could be larger if the Directors so determined. Clarification and permission to proceed were therefore urgently requested. If permission were not forthcoming, the palisade on the wall and the stockade on the berm beneath would both have to be replaced at considerable expense, as their timbers were becoming rotten. On the other hand, Wagenaer believed that the Fort could be converted into a permanent stone fortress within three years, provided that an extra 200 soldiers were landed from the ships. This would allow four teams to work on the four faces of the fortification simultaneously [90].

Four days later, on the 23rd April 1665, orders were received from the Seventeen for

work to be commenced at once on a "Roijale Steene-Fortresse", in accordance with a plan which had been sent from Holland. Preparations for the new Castle were postponed, however, and the instructions received in April were not even mentioned in the Resolutions until the 3rd August, when reasons for the delay were outlined [91].

Further damage to the Fort occurred on the 30th May 1665, when the breastwork of the Oliphant bastion collapsed, followed by that of the Walvis bastion the next day [92]. The new hornwork was also threatened on the 30th July, when the sea washed into the gate during a storm [93]. On the 8th August [94] and 15th September part of the eastern curtain collapsed, together with its palisade [95], and more rain damage was reported on the 17th October [96].

The continual failure of the earthen embankments necessitated extensive repairs, which prevented the workmen from undertaking any other building operations and delayed the collection and preparation of materials for the new Castle. Moreover, the repairs made during the winter had been defective, owing to the weakness of the damp sods which had been used, and a third of the western curtain had to be taken down on the 27th January 1666 in order to be rebuilt with stronger materials [97].

Wagenaer's last letter to the Seventeen, dated the 22nd May, outlined the improvements to the Fort that had been made and were still to be undertaken. The structure had already been surrounded with a new palisade, and the bastions had been provided with new cannon platforms [98]. The moat, however, had become partially filled with windblown sand, which was now overgrown with grass. It was therefore necessary for it to be widened by six feet and deepened by three, for which sixty men would have to be taken off the work on the new Castle [99].

By the time of Wagenaer's departure from the Cape on the 29th September 1666, work had begun in earnest on the Castle. Once this had been completed, the Fort and its hornwork would have to be removed for strategic reasons. However, it would be eight years before demolition was commenced, and although no new building work was undertaken, the Fort had to be kept in a constant state of defensibility.

This was to be a time consuming operation, owing to the continued collapse of the increasingly unstable earthen walls, and repeated reference was made to repairs over

this period. The western curtain collapsed on the 21st May 1667, and part of the eastern bastion on the 5th June [100]. Despite having been recently repaired, the western curtain fell down again on the 23rd December 1668 [101], followed by the northern bastion on the 18th June 1669 [102].

From the 12th to the 14th July 1671 the walls of the Fort and hornwork suffered extensive collapse, and the buildings in the latter were inundated up to knee-height. The brick sentry-boxes on two of the bastions also fell in, and the inner gate would have done so as well if it had not been propped up in time. The south-eastern corner of the parapet also collapsed on the 18th [103].

It took until the 16th January 1672 for repairs to be completed [104], but although the construction of a stone watercourse allowed the earthen walls to survive the winter rains [105], they collapsed again on the 27th October [106]. Repairs to the walls were begun on the 2nd November [107] and completed on the 23rd February 1673, but the moat had silted up again and needed to be cleaned, and work was still required on repairing the stockades protecting the berm and on improvements to the cannon platforms on the bastions [108].

These repairs had been sufficiently completed by the 23rd March for the workmen to be given a celebratory feast in the kraal behind the Fort [109]. Nevertheless, the walls collapsed again on the 4th June [110], and repairs and improvements were again being undertaken on the 8th August [111].

This, however, was the last reference to the interminable repairs which had been required to maintain the old Fort in a state of defensibility until the new Castle had been completed. The Castle was finally ready for occupation on the 2nd May 1674, and orders were given for the Fort to be demolished [112].

Demolition of the Fort had already been commenced on the 7th May [113], and its walls had been razed almost to the ground by the 19th, with the assistance of men from the fleet en route to Batavia [114]. The last heaps of rubble were levelled on the 25th July by soldiers from the garrison [115].

It appears, though, that only the quadrangular walls of the old Fort had been taken

down. The hornwork and the cattle kraal were still in existence in 1676, the former mentioned in a Resolution of the 10th July [116], and the latter in a census of cattle returns submitted on the 18th December [117]. Moreover, parts of the hornwork are shown on a map of the town dating from c1679 [Fig 24], where they are described as awaiting demolition [118]. Indeed, Valentyn mentions that the remains of the old Fort, on the site of the later cable and equipage store [119], were still visible in 1685 when he first visited the Cape, although the earth was already being removed in order to level the ground [120]. This task had presumably been completed by 1695, when Valentyn next stopped at the Cape.

The architectural configuration of the Fort and the buildings within it will be considered in the next chapter. Its defensive structure, however, is extremely important in illustrating the difficulties of its initial construction and the vicissitudes accompanying its continual repairs. Without access to instant communications, the Fort had to be kept in a constant state of defensibility until the more permanent Castle had been completed.

6.3.2 BUILDINGS WITHIN THE FORT

Van Riebeeck's first priority on arrival at the Cape was to provide accommodation on land for the men and materials. Thus the first building to be erected by the Company was a temporary dwelling and storehouse. All the ships' carpenters were sent ashore on the 8th April 1652 to commence work [1], and by the 24th it had been sufficiently completed for Van Riebeeck to move in with his family [2].

This "make-shift wooden hut" was built within the site of the projected Fort and was "made from rough boards erected against slanting rafters", the timber having been brought from Holland [3]. The description suggests a rectangular structure with no walls, the rafters springing directly from the ground. An early example of such a building appears in a drawing of Dassen Island dating from 1656 [Fig 247], a building similar to the later vernacular "kapsteilhuis" [4]. If the shed at the Fort was similar to the one at Dassen Island, it would thus constitute the first example of the influence of the Company's buildings on the later architecture of the freeburghers.

This building, however, was never intended to serve as more than a temporary shelter,

as can be deduced from its roofing of timber boards. As soon as it had been completed work was started on a more permanent dwelling and storehouse, with a cellar beneath.

By the 26th April 1652 the carpenters were preparing the woodwork for the new building, and on the 29th work was progressing on the excavation of its cellar. This had been completed by the 30th, when the first stone of the supports for the pillars was laid by Van Riebeeck and the skipper Hooghsaet. The erection of the timber superstructure was begun on the 3rd May, and on the 12th the first church service was held in "the still uncovered part of the house inside the square of the unfinished fort" [5].

This structure was described on the 13th May, in a letter to Batavia, as being 18 feet deep and 36 feet long and built against the curtain wall which had already been erected [6]. The roof was covered with planks as a temporary measure, but these were later to be protected by a tarpaulin [7]. It was acknowledged, however, that this would not provide a permanent water-proofing solution, and roofing tiles were therefore requested from Batavia [8].

On the 14th May the provisions from the ships were off-loaded and stored in the part of the building which had already been roofed with planks. On the 17th, however, structural problems were encountered when the bread barrels were moved upstairs into the loft. These were too heavy for the floor due to the lightness of the timbers brought from Holland. Moreover, the anticipated water-proofing problems materialized on the 23rd May, following heavy rains. The covering of planks was incapable of keeping the provisions dry, and it had thus been necessary to spread an old sail over the roof [9].

From the descriptions outlined above it appears that, apart from the cellar and the stone bases for the pillars, this building was erected entirely of timber, even the roof being covered with planks. This, however, was only a temporary expedient, and the timber boards were soon replaced with thatch, which was to become the standard roofing material at the Cape. The cellar was probably constructed of clay and stone, although there is no mention of stone-breaking operations. There is also no indication as to where this building was located within the Fort.

On the 6th June the sick-comforter's wife gave birth, and for this reason his family were given accommodation in the new building. The rest of the company, including

Van Riebeeck [10], were still living in tents outside the Fort, and many of them were already falling ill owing to the inadequate protection from the winter weather [11].

The 7th June 1652 was spent cutting thatching reeds or rushes to replace the leaking roofs of planks and old tarred canvas. A large number of these had been found behind the rump of the Lion Mountain, and enough had been collected by the 10th. However, there did not appear to be anyone capable of laying them, and the work completed to date was of such a poor quality that it would have to be redone [12].

On the 22nd July some of the tents were inundated by high tides, as were the kitchens, mentioned for the first time. These were described as being "in the green veld quite high up from the beach". The following day an extremely heavy downpour flooded the storehouse and damaged a new kitchen under construction. This had "a strong wall of clay and heavy stone about 2 feet 6 inches thick and 8 feet high" which collapsed as a result of the inundation. The severity of the climate in Table Valley was already having its effect, and would later be responsible for a number of changes in building technique [13].

By the 24th September the structure of the guard-house had been completed. Men were therefore sent to the thickets to collect laths for the roof covering, as most of the timber from Holland had been used up on the storehouse. Again, however, there was no mention of the location of this building within the Fort [14].

Further damage was caused by the weather towards the end of the year. Heavy winds on the 4th and 5th October tore apart the tarred tents, and the new dwellings had to be propped with supports to prevent them from being blown over [15]. Again on the evening of the 3rd November the wind blew so violently that it was feared that the dwelling-house would be blown over, despite being supported by eight or nine strong poles [16].

The next day it was discovered that the new guard-house had also been damaged by strong winds. Despite being only twelve feet high, including the roof, and thus two feet lower than the wall and breastwork of the Fort, two or three of its posts and beams were blown down. These were repaired the same day [17].

The fire risk inherent in the use of timber buildings roofed with reeds had been acknowledged on the 9th October 1652, when an edict was published forbidding the lighting of fires or smoking of pipes inside the barracks. This was permitted only under the gate of the Fort [18].

The hospital was first mentioned on the 11th November, when it was stated that there were 24 patients, but nothing was said about its location or configuration, or whether it was indeed a separate structure [19].

The decision to replace the timber buildings had been made by the 9th April 1653, when lime and bricks for new "fire proof" warehouses and magazines were requested from Batavia [20]. Other projected works within the Fort were outlined in a letter to the Seventeen, dated the 14th April. The intention had been to build a double-storeyed structure against one of the curtains, 18 feet wide and 70 feet long, with a storage cellar beneath and dwellings above. However, the upper floor would have to be temporarily omitted, as the timber brought from Holland was too fragile to withstand the south-east winds. The building would thus be only eight feet high, with a roof of the same height thatched with reeds. This would project two feet above the parapet, but the building would be set back four feet from the wall for protection against the wind.

In the middle of this building a square structure would be built of stone and clay, with a flat roof similar to that of a redoubt. This was the "cat" [21], which would comprise a cellar beneath and two stories above. The cellar would be partially sunken, five feet being below ground and only one foot above, while the square rooms which comprised the upper stories would each be eight feet high. Its total height, including the stone parapet to be constructed above, would thus be seven feet higher than the walls of the Fort. This structure would serve as a keep, or a last line of defence against any of the Khoi who managed to climb the sloping walls and bastions. For this reason its stone walls were to be four feet thick, and heavy timbers from the forest would be used for its fire-proof roof.

The next project was to build timber-framed barracks ("Corps du Guarden") on either side of the gate in the front curtain. The roofs of these, and of the magazines and warehouses also under construction, would be lower than the defensive walls in order

to protect them from the wind. Once all these buildings had been completed, the open space left within the Fort would be eight roods square [22].

This letter of the 14th April 1653 was accompanied by drawings of the Fort, two of which have survived. One is a plan [Fig 6] showing its internal organization, and the other is a three-dimensional view [Fig 7] depicting the exterior form of its buildings [23]. The key to the plan, which would have explained the uses of all the internal rooms, is unfortunately missing. Nevertheless, the drawing is useful in that it appears to be making a distinction between timber walling (single lines) and masonry walling (double lines). The plan shows buildings around two and a half sides of the square within the Fort. Dotted lines around the remaining one and a half sides presumably indicate future buildings, as yet unplanned.

Facing the entrance is the masonry "cat", flanked by the timber dwellings and store-houses described above. The rooms to the left of the gateway are also of timber, and could have been one of the pair of projected barracks, although it is curious that the one to the right of the gate should have been omitted. It is therefore possible that this was the dwelling and storehouse erected in 1652. The masonry structure along the left-hand curtain was in all likelihood the projected fire-proof magazine, which was to be built of stone.

The three-dimensional drawing is in exact agreement with the plan as regards the extent of the buildings and the positions of their openings, but it differs in that the distinction between masonry and timber construction has not been made. All buildings are depicted with a similar wall treatment which appears to be of rectangular masonry. This, however, was probably an idealized representation of what was intended, as it is clear from verbal descriptions that neither the "cat" nor the fire-proof magazine were built of dressed stonework. The "cat", moreover, is given a crenellated parapet with a dome rising from a drum in the centre, but these features do not appear in the perspective drawing of 1656 [Fig 9] [24].

On the other hand, the buildings flanking the double-storeyed "cat" are accurately depicted as single-storeyed, agreeing with the initial design proposal, but the cellars are not shown. The roofs are also of interest, as they appear at first sight to be hipped.

However, a closer examination reveals that this is an illusion, as each of the elevations was depicted in perspective. This can be seen from the angular variation in the hatching of the roof surfaces, suggesting instead that they had gabled ends. This supposition is strengthened by the lean-to structure on the left-hand curtain, which reveals its configuration by departing from the convention of elevational perspective. This allows its end wall to be shown, and its roof is significantly depicted with parallel hatching, in contrast to the other buildings.

The gabled roofs depicted on this drawing [Fig 7] differ from the hipped roofs shown on the 1656 perspective of the Fort [Fig 9]. However, the 1653 drawing was of initial design intentions, and the roof configuration was probably based on that of the existing timber-framed dwelling and storehouse. It is possible, therefore, that the introduction of hipped roofs was a response to the decision on the 24th March 1654 to construct these buildings in brickwork instead of timber (see below). This would have been facilitated by the greater resistance to the diagonal thrust of the hip-rafters provided by corners of bonded masonry.

Returning to the letter of the 14th April 1653, the roofing tiles requested from Batavia had evidently arrived and been put to use, but were continually blown off by the strong winds. Van Riebeeck therefore suggested that the roofing planks should be covered with a layer of clay, sealed with a topping of lime mixed with imported plaster. This would provide fire-proof roofs for the buildings within the Fort, but there is no evidence that this solution was adopted [25].

The roof of the projected stable and hospital "outside the fort" did not constitute such a fire risk, and would therefore be covered with thatch. There was as yet no indication of where this building would be located [26].

Work on the fire-proof magazine had been commenced by the 26th May 1653. The carpenters were cutting the necessary beams and poles in the forest, a task which had almost been completed by the 12th June. They were therefore instructed to return to the Fort in two days' time in order to prepare the timber for erection [27]. The preparation of the beams was under way by the 5th July, and it was hoped that the masonry for the storehouse would be commenced the next week. It would be constructed of stone,

sufficient quantities of which were available at a distance of sixty roods. This would be transported on a locally-made wagon drawn by oxen [28]. After the storehouse had been completed, which it was estimated would take another five weeks, the masons would be given a holiday before commencing work on the projected "cat" [29].

On the 23rd July 1653 the crew of a ship in harbour were seconded to assist with the breaking of stones for the walls of the fire-proof storehouse, and beams for its roof were still being brought from the forest on the 5th August [30].

The fire-proof magazine was the first building at the Cape which dispensed with a timber framework for its walls and used masonry instead. The roof structure was still of timber, but its covering was almost certainly of tiles, as thatch would have been incompatible with a fire-proof building. Indeed, the Journal records on the 9th February 1659 that the "old magazine" was roofed with tiles brought to the Cape in 1653 [31].

The precedent established by the fire-proof magazine led to a major change in construction techniques. It was resolved on the 24th March 1654 that all the buildings within the Fort would be reconstructed with walls of brickwork. The first locally-made bricks had been fired that day, and it was believed that these would ensure that the new buildings would be fire-proof and maintenance-free. The existing walls by contrast, constructed of timber brought from Holland, were unlikely to stand for more than another three years [32].

On the 11th June work was begun on a brick dwelling to the right of the "battery" (presumably meaning the "cat"). This dwelling, which had a cellar beneath, and thus corresponds with the description of the intentions for the rear curtain, was the first building at the Cape to be erected with locally-made bricks [33]. This is an important entry, as the use of brickwork facilitated the erection of the upper storey above the cellars, which would not have been possible with timber construction, as had been noted on the 14th April 1653.

Work was continued on the 3rd August 1654, with bricks from a second kiln [34], and had nearly been completed by the 14th [35]. The stone "cat" must have been completed by this time, as a hall in the Fort was already being used for church services on the 11th July. This was almost certainly the square apartment above the cellar [36].

Another kiln of 250 000 bricks was fired on the 2nd April 1655. With these it was hoped to have rebuilt all the buildings within the Fort by the next year, the original timber buildings having by now become very dilapidated [37].

Independent confirmation of this transformation was provided by Gijsbert Heeck in 1655: "...these (the "good clay sods" with which the walls of the Fort had been built) are very suitable for brick-making, with which also the Commander's house and the little chapel have been built, they being actually busy in burning an oven-full, so that in time the whole Fort can be built of bricks..." [38].

The first useful information about the hospital was given on the 1st June 1655, when it was stated that the sick-comforter together with his patients were living under the same roof as the groom and the horses, separated from each other only by partitions of rushes [39]. This corresponds with the reference to the projected stable and hospital "outside the fort" made in 1653. The building was in fact located along the right-hand wall of the cattle kraal behind the Fort, as revealed by the "stallingen" shown in this position in a plan of the Fort and gardens dating from 1654 [Fig 38].

The dual use of this building is worthy of note, as accommodation for men and animals was usually separated in the Cape Dutch architecture of the later 18th century, although at least one of the early freeburghers' houses was similar in this respect [40]. What is surprising is that the sick should have been subjected to such an unhygienic atmosphere. Their numbers, moreover, were not insubstantial, as it was noted on the 24th November 1655 that about fifty convalescents remained in hospital when the fleet sailed for Batavia [41].

It was mentioned on the 29th December that the original "Corps de Guarde" was to be demolished [42], and bricks for the new guard-house and a fire-proof gateway were already being prepared on the 11th January 1656. By this time the "cat", the cellars, the storehouses and the officers' dwellings had all been completed [43].

By the 29th January a new brick hospital had also been erected, along one side of the hornwork in front of the Fort. This was thought to be large enough to accommodate the sixty, seventy or eighty men often left behind by the ships [44], but it had already become so overcrowded by the 18th October that a tent had to be erected for the

surplus patients [45]. The configuration of the new hospital will be analysed later, together with the other buildings within the Fort.

The blacksmith's shop in the hornwork was first mentioned on the 6th June 1656, although it had already been annotated on the plan of 1654 [Fig 38] [46]. An apothecary's shop had also been established in one of the buildings within the Fort by the 10th June [47], and the armoury was referred to when it was broken into on the 25th July [48]. A kitchen in the hornwork was also mentioned on the 16th August [49], as was the equipage magazine on the 28th October [50].

By the 31st October most of the masonry work within the Fort had been completed, and it was noted that "only a few houses and stables have still to be built outside". These were presumably located in the hornwork and the kraal [51]. A more detailed account was given on the 4th November, when it was stated that the gate, the "cat", the powder-magazine, the cellars, the magazines and the storehouses, all built of brick, had been largely completed. The intention of rebuilding all the accommodation within the Fort by the end of 1656 had therefore almost been realized. On the 28th December, however, further work was undertaken on the "cat". This was "being raised a square higher in order to provide the greatest measure of security" [52].

The 1656 plan and perspective of the Fort [Figs 8 and 9] give a more accurate indication of its form than the earlier drawings [53], and must have been prepared in conjunction as they agree in all respects. Both depict the buildings along the rear curtain in detail, but the other structures are shown only in outline.

The latter comprise two buildings along the splayed sides of the hornwork, another along the inner edge of the entrance curtain, and two other independent buildings along the side curtains to the left and right. Since the right-hand building is not shown on the cavalier perspective of 1660 [Fig 10], it is likely that this was a design drawing and not a representation of what had already been built. A seventh building is also shown along the right-hand wall of the cattle kraal behind, constituting the only deviation from an otherwise completely symmetrical plan.

The plan of the "cat" and its flanking buildings is more detailed than the 1653 drawing [Fig 6], and reveals a greater complexity in the lateral structures, which had now been

built in masonry. Whereas the earlier plan shows a single row of rooms, with passages in places along the back wall, the 1656 plan [Fig 8] depicts two rows of rooms with an open space between them.

The "cat" had much thicker walls than its flanking buildings and extended the full depth of the structure, with a spiral staircase in one corner. Although the internal planning of the buildings on either side was dissimilar, their facades were identical, thus creating a symmetrical composition as seen from the entrance to the Fort.

The perspective [Fig 9] shows the "cat" as entered centrally from a landing approached by two lateral flights of steps, its door flanked by elaborate windows with arched mullions [54]. It was taller than the adjacent buildings and, as mentioned earlier, had a flat roof with an unelaborated parapet. The thatched roofs of the flanking buildings were lower, and are clearly shown as hipped, in contrast to the gabled roofs of the 1653 drawing [Fig 7]. The inner edges of these lower roofs abutted the lateral parapets of the "cat", with dormers or dwarf-gables on either side of the latter.

The lower level of these buildings, giving access to the cellars, consisted of a symmetrical arrangement with rectangular doorways under the dormers and arched openings of varying sizes beyond. The upper level had four rectangular casements spaced equally, which did not align with the five openings below. The lateral wings were therefore less formally treated than the "cat", the importance of which was further emphasized by its slight forward projection.

While the organization of the elements of the facade is probably correct, it must be noted that the door and windows of the "cat" have been vertically exaggerated, resulting in miniscule openings above. However, even if this distortion is taken into account, there is insufficient height for an upper storey, as confirmed by the 1660 cavalier perspective [Fig 10], which depicts the three (rather than five) upper level windows of the "cat" as equal in height to the flanking dormers. The five small openings depicted beneath the parapet were thus probably loop-holes, instead of the crenellations shown on the 1653 drawing [Fig 7]. It is almost certain, therefore, that the "cat" as drawn was only single-storeyed, explaining the decision to raise it "a square higher" made on the 28th December 1656. Since the perspective was received in

Holland in 1656 [see Figure reference 9], this decision was clearly made after the completion of the drawing.

The formality of this range of buildings, with its hall extending the full depth of the building, and its symmetrical facade with a raised central focus, could suggest that it anticipated the transverse plan and three-dimensional form of the Cape Dutch farm-houses of the later 18th century. While it is unlikely that the Fort itself established such a precedent, since it had already been demolished by 1674, it is instructive that the architectural principles underlying the developments of the next century had already been applied in the earliest days of the settlement.

The Fort was still not complete, however, and it was resolved on the 17th July 1657 that work should be commenced on a structure along the right-hand curtain, which had not yet been built upon. This project had been approved by the Visiting Commissioner Rijckloff Van Goens, and comprised accommodation for the slaves on ground level with a loft above to be used as a granary [55]. This building, however, does not appear on the 1660 drawing of the Fort [Fig 10], nor is there any further reference to it until 1663.

A further setback was experienced on the 26th October, when the new hospital in the hornwork was blown down by strong winds. It was described here as having been built with timber from the original houses in the Fort, "three beams being simply snapped, and if a strong stone wall had not been built at the back, it would have gone altogether". This description contradicts the entry of the 29th October 1656, which stated that the hospital was built of brick [56].

The absence of the slave lodge and granary was explained by the instructions of the Visiting Commissioner Joan Cuneus given on the 18th March 1658. He believed that such a structure would create a fire risk, and suggested that it should rather be built outside the confines of the Fort [57].

Construction work was continued on the 30th November, when the carpenters were given orders to complete the new stables for the sheep and draught oxen. These would have grain lofts above and were to be built "on both sides of the kraal behind the fort" [58]. Although those on the right-hand side are shown in the 1660 drawing of the Fort

and town [Fig 10], evidently replacing the old hospital and horse-stable, there is no evidence that those on the left-hand side were ever built. Again it seems that the resolution was only carried out in part, although it is clear that the intention had been to create a symmetrical arrangement.

On the 9th February 1659 the kraal and cow shed were damaged by fire, and further losses were only narrowly averted. The fire had started in the kraal and, fanned by a strong wind, soon reached the thatch of the new cow shed. It then crossed the moat and spread up the ramparts of the Fort, the grass of which was very dry. Fortunately the fire was put out, as the loss of the stable alone would have cost two to three thousand guilders, not to mention the cost of replacing the buildings within the Fort itself. These were all thatched, with the exception of the old magazine which was the only building with a tiled roof [59].

By the 5th March workshops had also been built for the smiths, the plough-makers, the wagon-makers and the carpenters. These were in the hornwork, and will be described in greater detail below [60].

A major change in roofing materials was introduced on the 7th January 1660, when it was resolved that all the Company's buildings would have their thatched roofs replaced with tiles in order to reduce the risk of fire. The tiles were locally made and had already been successfully used for the roof of the water-mill built outside the Fort [61].

Fire precautions regarding the "cat" were also introduced on the 13th May: "...no tobacco may be smoked in the front hall, nor may fires be lighted there, as it has a wooden floor which forms the ceiling of a cellar below..." [62]. It is clear from this entry that the cellar was not vaulted, bringing into question the security of this structure, which was intended to form the last line of defence. It suggests, moreover, that the hall was by now subdivided into two rooms, one to the front and one to the rear.

On the 30th September the Khoi chieftain Sousa was received at the Fort, giving rise to the following description of its accommodation: "The king... was given a seat upon a mat in the Commander's room... They were the first to be accorded such an honour and were further entertained to a tune on the harpsichord... We showed Sousa and his

daughter-in-law all the apartments, upstairs and downstairs...". Although brief, this account does reveal a degree of comfort and sophistication in the quarters of the senior officials [63].

Van Riebeeck left for an inspection of Saldanha Bay on the 3rd December 1660, having given instructions that the roof of the "cat" was to be tiled [64]. This apparently minor entry is of particular significance, as it explains the parallel pitched roofs depicted on the 1660 drawing [Fig 10]. These replaced the earlier flat roof over the double-storeyed "cat" [65], which was probably similar to the flat roof over its single-storeyed predecessor shown in the 1656 perspective [Fig 9].

The early tiles at the Cape were laid on pitched rather than flat roofs. The "cat" was covered with two such roofs drained by a valley gutter in-between. These roofs faced forwards and were terminated with two straight-sided gables, constituting the first example of a double gable at the Cape [66]. This could also have been the first time that gables were used to elaborate the centre of a facade, but it is more likely that the Fort was predated in this respect by Jan van Harwaerden's inn, located in the town (see Chapter 7.2.1 and Figs 56 & 57) [67].

It is of course possible that that this work was never carried out, and there is indeed no further reference to the project in the Company's records. Nevertheless, Van Riebeeck's intentions are clearly revealed in the drawing sent to Holland.

The cavalier perspective of 1660 referred to above is the most detailed surviving representation of the Fort and the town [Fig 10]. The hornwork is shown with a palisade linking the batteries at the entrance with the gabled ends of the buildings along the two splayed sides. The structure on the left-hand side contained the hospital, the plough- and wagon-makers' workshops and the smithy, while that on the right-hand was used as a communal kitchen and a bakery.

Beyond was the Fort proper, with the stockade along the outer edge of the berm clearly shown, as was the palisade above the ramparts. The main gate appears at first sight to be flat-roofed, but a closer inspection reveals that it supported a smaller structure, set back from the front wall, with a pitched roof whose ridge was perpendicular to the direction of approach [68]. This had five small windows directly under the eaves [69],

while the lower range of square openings shown on the drawing represent the crenellations protecting the terrace in front [70]. Beneath these were three oval windows, which illuminated the rooms above the actual gateway. This had a central arched opening, through which a dog-leg passage can be seen leading to the square inside, thus corresponding with the plans of the Fort discussed so far. The only contradiction in this drawing is that the gatehouse is set forward from the entrance curtain, whereas all the plans depict it as being flush with the wall.

Flanking the gate were the double-pitched roofs of the buildings facing the "cat". Beyond, on the left-hand side of the court, was the only building to have been erected along the side curtains, confirming that the slave quarters projected in 1657 had not been built by 1660. This building had a lean-to roof, and did not extend the full length of the curtain, thereby being independent of the buildings along the front and rear curtains.

The facade of the structures built against the rear curtain is essentially similar to that depicted in the 1656 perspective [Fig 9], but differs in detail. The flanking buildings now have a row of oval windows beneath the eaves, with large rectangular openings at the outer edges. The windows were probably introduced to admit light to the lofts, while the openings could have been used for the loading of goods. These openings correspond with the positions of the tall arches on ground level, also shown in the earlier perspective. The four rectangular casements, however, are now set in from these end bays, and correspond vertically with the openings to the cellar beneath.

The dormers on either side of the "cat" are still shown, but the roofs of these buildings have been altered. Instead of having a hipped roof over the full depth of the building, as shown in the 1656 perspective [Fig 9], the front and rear rows of rooms are now depicted as being roofed separately. The front row has a double-pitched roof with gable ends, while the more irregular rear row has a lean-to, the space between them being left open to the sky.

The facade of the "cat" is more elaborate than the one depicted in the 1656 perspective. The raised doorway, arched and set within a recessed rectangular surround, was flanked by arched instead of rectangular windows. These were each subdivided into

three arched panes with tracery above, and each had two smaller arched openings beneath to light the cellar. Three rectangular windows had now been introduced above, at the level of the flanking dormers, following the decision in December 1656 to add another storey. The facade was crowned by the double gable mentioned previously, separated by a cornice from the wall below. Between the two simple straight-sided gables a projecting gablet is shown, supported on slender columns rising from a small cantilevered balcony. On either side of this balcony was a round opening, and oriels had been added to all four corners of the "cat".

While it is possible that the drawing exaggerated the elaboration of the "cat", its double-gabled configuration could well have been carried out, given the instructions issued by Van Riebeeck on the 3rd December 1660, although there is no written evidence to confirm this. Moreover, a building of this complexity would not have been inappropriate for the headquarters of the VOC at the Cape.

Behind the Fort, the kraal is shown surrounded by the palisade which replaced the original wall of earth. The cow shed had a half-hipped roof and was positioned along the right-hand side. The matching stable on the other side, commissioned in 1658, appears never to have been built [71].

The Visiting Commissioner Andries Frisius reported on the 4th July 1661 that further storehouses with cellars beneath had been erected on the south-eastern side of the Fort, which was now completely surrounded with masonry buildings. However, it was the north-western curtain which had previously not been built upon, raising doubts as to the accuracy of this account.

Frisius mentioned that the hospital, the smithy and the wagon-maker's workshop on the south-eastern side of the hornwork had all been constructed of planks, and would have to be replaced with masonry buildings. The kitchen, the mess-room and the brewery on the north-western side, however, had already been built in brickwork [72]. He also noted that the hospital could not accommodate more than 25 or 30 patients. The following year the Visiting Commissioner de Lairesse raised the issue of the patients' recovery being compromised by the continual hammering in the smithy adjoining the hospital. He also commented on the construction of its outer walls, which were so

unstable that they were likely to be blown down in a south-easterly gale [73].

The "porch" of the Fort was first mentioned on the 6th May 1662, when Zacharias Wagenaer was inaugurated as the new Commander. This structure, referred to as the "puij" in the Resolutions, and translated variously as "porch" or "balcony", did not have a specific architectural meaning, but was the place from which official announcements were made. In the case of the Fort, this was probably the landing at the entrance to the "cat" [74].

A shortage of accommodation was noted on the 15th May, following the seconding of additional soldiers from the fleet. It was therefore decided to add a second storey to the old brick houses on either side of the gate of the Fort. The rear walls would be raised by eight feet and those facing the square by three feet, and their thatched roofs would be replaced with tiled monopitches similar to those over the other buildings in the Fort [75]. The doors would be located in the rear wall with their lintols at the height of the rampart, allowing the upper storeys to be reached by four or five steps [76]. One of the new lofts would be used as an armoury and the other, extending to the Walvis bastion, would be used as barracks, and as storage for grain after the departure of the reinforcements [77].

Until this time the windows of all the buildings had been covered with "Guinea linen", allowing the penetration of dust in the summer and rain in the winter. Wagenaer therefore requested, in a letter of the 10th August, that glass and lead be sent over, with which to glaze the windows. He also asked for some paintings and charts of the principal towns of Holland to decorate the hall in which evening prayers were held. Van Riebeeck had apparently taken the previous ones to Batavia, claiming them as his own property [78].

It was mentioned on the 1st January 1663 that the buildings in the hornwork and in the kraal behind the Fort were still roofed with thatch [79]. Evidently the decision to replace these with tiles had only been carried out within the square of the Fort.

Another major change in the appearance of the buildings was brought about on the 2nd January, when the masons were instructed to plaster all the houses with lime. This was necessary because of the poor quality of the local bricks, which had to be protected

from the rain. The face-brick aesthetic of the first decade was thus replaced by one of white plastered walls, which would continue to characterize architecture at the Cape until the end of the 18th century [80].

The seriousness of the problem was outlined on the 16th May 1663, in a letter to the Seventeen. The bricks of the building to the left of the "cat" had become so hollowed out by the rain that the whole structure was in danger of imminent collapse. Urgent repairs would therefore be commenced after the departure of the return fleet [81].

It was also resolved on the 23rd May that a number of other works would be undertaken in the Fort, following the recommendations of the recently departed Visiting Commissioner, Harmen Klencke van Odessen. The first concerned the timber floor of the hall in the "cat", located above the cellar which was used as a provisions store. This would be given a covering of tiles to avoid the risk of tobacco ash falling through the gaps between the planks and setting fire to the inflammable goods beneath, a possibility that had already been noted by Van Riebeeck.

The second involved building operations in the hornwork of the Fort. This would be extended to accommodate two new rows of brick buildings, to replace those already in existence. They would comprise dwellings for the workmen, a larger hospital, a larger smithy and a new communal kitchen. The old buildings, erected with flimsy one-brick walls and thatched roofs, were now too dilapidated to accommodate healthy people, let alone the sick. The surveyor (and Fiscal) Hendrick Lacus was therefore given instructions to peg out these works, so that construction could begin without delay [82].

The projected buildings are shown on a detailed plan of the hornwork dating probably from 1663 [Fig 11]. The centrally placed gateway (A) was flanked by batteries on either side (B & C), which projected forwards and were reached by steps from the open court.

To the left was the sick-comforter's house, consisting of a small room communicating with a "voorhuis" (F), followed by a pantry (G) and a kitchen (H). Access to the house was from a door in the corner closest to the battery, and the central room was entered through doors at diagonally opposite corners, an arrangement significantly different from the later symmetrical layouts. The kitchen was inconveniently located at the end

of a long passage, where it shared a chimney with two further cooking areas.

These were the brewery and bakehouse, beyond the sick-comforter's house and reached from the court, and the kitchen for the slaves and hospital patients (E), which was situated in the corner and was also entered from the court.

The hospital (D) was on the left-hand side of the court, and extended from the kitchen towards the moat. It consisted of two rooms, the smaller of which was an isolation ward for patients suffering from dysentery ("bloedige affganck"). These wards communicated with each other and with the kitchen through centrally placed openings, as well as with the court. The beds were placed against the walls on either side of the central access way.

On the other side, beyond the right-hand battery were the blacksmith's shop (I), the locksmith's and coppersmith's workshop (K), and the iron and nail store (L), all entered from the court and extending the full width of the hornwork.

Between the iron store and the moat was the communal kitchen for the soldiers, sailors and artisans (M), the carpenters' shed (N), the chief carpenter's house (O), and a workshop for the wagon-makers, coopers and block-makers (P), all of them entered from the court.

The chief carpenter's house was two rooms deep, the rooms being connected by a centrally placed doorway. The entrance from the court, however, was placed in the corner of the front room, as was the case in the sick-comforter's house.

The buildings on either side of the hornwork were set in six feet from the breastwork, to allow two soldiers to patrol the ramparts side by side (R). Access to the walls was gained by two stairways (Q) at the inner ends of the hornwork.

Whether these new works were brought to completion is open to question. The 1665 plan [Fig 43], showing the siting of the projected Castle in relation to the existing Fort, depicts the hornwork with buildings only along the two sides and none along the front.

In addition to the new projects described above, the houses to the left of the Commander's residence were in need of urgent repairs, as was mentioned on the 23rd

May 1663. Their walls had been built with half-fired bricks and clay mortar, and their upper courses had become so saturated after the recent rain-storms that the roof beams were beginning to subside, not to mention severe water-proofing problems with the tiled roofs. The danger of these falling was critical, as the buildings accommodated the office of the book-keeper Gabbema and the residence of the sick-comforter and his family.

Ideally the whole structure should have been rebuilt, or at least provided with a new roof, but owing to the shortage of time and resources the project had to be held in abeyance. Orders were given, nevertheless, for as much timber as was required to be prepared in the forest and brought on site [83].

Work on the floor of the hall in the "cat" was commenced on the 21st June 1663, when the carpenters began propping the ceiling of the cellar with timber posts to support the weight of the tiles to be laid above [84]. A week later, on the 28th June, the new hornwork was pegged out by the land-surveyor Hendrick Lacus [85].

The slave lodge along the western or right-hand curtain, which had been commissioned in 1657, but was not shown in the 1660 cavalier perspective, was finally referred to on the 18th July 1663 [86]. It also appears on the plan of the Fort and the projected Castle dating from 1665 [Fig 43]. This structure, which completed the interior symmetry of the Fort, was presumably the building referred to by Commissioner Frisius in 1661, who incorrectly described it as having been built on the opposite curtain [87].

The concerns about the structural stability of the buildings in the Fort were justified on the 19th August 1663, when the end gable of the Secretariat collapsed at three o'clock in the morning, following heavy rains driven by a north-westerly gale. This wall contained six windows, and had recently been increased in height to make room for an extra apartment. Given the direction of the wind, it probably formed the end of the range of buildings to the right of the "cat", although it was those to the left which had already been identified as needing urgent attention [88]. Repairs were begun on the 22nd August, the gabled end being rebuilt from its foundations with lime instead of clay mortar [89].

The Fort was inspected on the 30th August by Commissioner Overtwater, who also

selected a site for the new hospital in the hornwork [90]. However, the first building to be commenced was the smithy, as the existing structure was soon to be demolished, together with the old hospital which adjoined it. The new site for the smithy, to the west of the gate, was indicated to the master mason on the 2nd October 1663 [91]. Its stone foundations, 24 feet wide and 16 feet deep, were laid on the 7th November [92].

Progress on the works was outlined to the Seventeen in a letter of the 21st November. By this time the covering of the floor of the "cat" with square baked tiles had been completed [93]. No progress had been made yet on the new hospital, but a project to surround the hornwork with a moat was described. This would allow another water-mill to be erected, its mechanism within the walls and its wheel outside in the moat. However, nothing came of this somewhat ambitious proposal [94].

The glass and lead requested in 1662 for glazing the windows had been received, but the lead was too thick for the purpose, and an appeal was made to Holland for more suitable supplies [95]. Clinker bricks and cement were also required for the gate of the hornwork, as the locally manufactured bricks were insufficiently durable [96].

Further progress on the hornwork was described on the 15th April 1664 in a letter to the Seventeen. The smithy, which was large enough to contain two anvils, had been completed. It was also provided with a loft above, to serve as lodgings for the blacksmith and his assistants [97].

The masonry of the hospital, the rear wall of which was seven feet thick and built of stone for added security, was now sufficiently complete to receive the roof timbers. This was a matter of some urgency, as the patients were being temporarily accommodated in the old gardener's house outside the Fort, which was too small for the purpose. It was therefore hoped that the hospital would be completed before the arrival of the return fleet [98].

Work was delayed by bad weather, however, and on the 1st July the continual rain caused the collapse of the chimney and baking oven of the old communal kitchen in the hornwork [99]. By the 6th September, however, the roof timbers of the hospital had finally been erected, and a celebratory feast was held for all the workmen [100]. A request was also made to Batavia for 3000 square floor tiles for the new building, as the

local tiles were too brittle [101].

The buildings in the hornwork had almost been completed by the 19th April 1665, when a progress report was sent to Holland. The range along the right-hand or western side, however, had not yet been roofed. Extra grain storage had been provided in the form of a loft above the hospital, but there was no room in the hornwork for the Company's slaves who now numbered eighty, including women and children. They would therefore be accommodated in a building in the Company's garden, next to the old gardener's house [102].

Another shortage of accommodation was caused by the strengthening of the garrison with 300 soldiers, brought ashore to counter a threatened attack by the English, as noted on the 4th June 1665. Makeshift lodgings had been provided outside the Fort in the "passer" [103], in the Company's stables and in the houses of the freeburghers, but these were unsatisfactory. It was therefore resolved that the majority of them would be housed in the new hospital, until the two "Corps du guarden" under construction on either side of the hornwork gate had been completed. In the meantime the patients would continue to be accommodated in the old gardener's house [104].

The guard-houses mentioned above do not appear on the 1663 plan of the hornwork [Fig 11], which shows the batteries flanked by the house of the sick-comforter to the left and the smithy to the right. Nor are they shown on the 1665 plan of the Fort and Castle [Fig 43], although they could have been commenced after this drawing had been completed.

It was mentioned on the 27th October that the carpenters were erecting a turret over the gate of the hornwork. The purpose of this structure was not yet divulged, but it was in fact a belltower similar to the one later to be built over the gateway to the Castle [105].

The improvements to the Fort were described by Wouter Schouten when he visited the Cape again in 1665: "...There we now found everything very changed, and exceedingly pleasant, also the Dutch Fort Goede Hope in better conditions than in the year 1658 when we found ourselves here for the first time, having been markedly enlarged and strengthened, and provided with commodious dwellings for the Commandeur and the Company's Servants, as also with a church for the preaching of GOD's Word, all built

in European fashion of lime and brick, which are here burnt and prepared..." [106] [Fig 13].

Water-proofing problems were revealed in the buildings of the Fort on the 11th April 1666, with the onset of the rainy season. The rainwater soaked through their insufficiently baked tiles, even though they had been given a coating of lime. It was therefore decided on the 16th to tar the roof of the rice loft above the hospital in the hornwork, and to cover the roof of the Secunde's house with a large tarpaulin [107].

A further description of the building works was sent to Holland on the 22nd May 1666. The newly arrived minister Joannes van Arkel had been given lodgings in the hornwork, possibly in the house designated for the sick-comforter in the 1663 plan [Fig 11] [108]. All the buildings within the hornwork had been completed by now, including a house for the lieutenant, erected above the gate. In addition, a timber belltower had been built over the outer gable of this structure, facing the sea. The final expenditure on the project amounted to f14 991:07:06 [109].

De Rennefort provided a further description of the internal arrangements of the Fort in 1666: "The Commandant received him as he landed from his shallop, and conducted him between two ranks of soldiers to the apartment of Madame his wife, who received them in the outer hall. She conducted them into another, better ornamented, where they partook of dinner..." [110]. This confirms the suggestion given in the fire regulations of the 13th May 1660 that the hall in the "cat" was subdivided into two rooms.

After the arrival of Cornelis van Quaelbergh, who was installed as Wagenaer's successor on the 27th September 1666, building work on the Fort consisted of little more than repairs. It was noted on the 28th May 1667 that the space available for the storage of gunpowder needed to be doubled, but there is no mention of whether additional powder-magazines were erected [111].

The Secunde's residence was mentioned again on the 31st October 1667, when it was resolved that the suspended Junior Merchant Hendrick Lacus [112] would be locked up in his house in the Fort. Moreover, he was forbidden access to the large central room ("grote middelkamer") which he had continued to use for night-long debauchery since his suspension [113]. This suggests that one of the rooms in the Secunde's suite was

intended for entertainment, but of a more polite nature: it had its own kitchen and a German ("duijtse") cook [114].

A further collapse occurred on the 28th August 1669, involving one of the side walls of the "hall". This cannot have been the hall in the "cat", however, as the wall was described as being "very thin and unstable" and "built up with clay", whereas those of the "cat" were four feet thick and built of stone [115].

It was decided on the 25th February 1670 that a new parsonage would be built outside the Fort, and that the old building next to the "corpsduguarde" would now be used as a store for seeds and gardening implements. The old parsonage was probably the one in the hornwork mentioned in 1666, to the left of the guard-houses flanking the gate [116].

Further damage to the roofs of the buildings within the Fort was caused by a south-easterly gale on the 8th May 1672, but repairs were already in hand by the 11th [117]. The walls of the armoury were also in danger of imminent collapse, as mentioned on the 26th July, owing to the inundation caused by continual heavy rains. It was therefore decided to surround it with a brick water-furrow, similar to the one which had apparently already been built around the "cat" and the Commander's residence [118].

Another south-east gale on the 21st December 1672 blew the tiles off the roofs of a number of buildings, but by the next day the wind had abated sufficiently for repairs to be commenced [119]. More damage was caused by winter rains on the 4th June 1673, when one of the gables of the Governor's residence collapsed, but no further information was provided except that the masons had begun repairing the structure the following day [120].

The evacuation of the Fort was commenced on the 23rd October 1673. As the new "corps de guarde" in the Castle was now complete and ready for occupation, the old guard-house in the Fort was partially demolished [121]. By this time the hospital was in an irreparable condition, and it was resolved on the 19th March 1676, following the advice of the Visiting Commissioner Nicolaes Verburgh, that the old rice warehouse would be used as alternative accommodation for the patients [122].

However, the old Governor's residence was still in use, as related by Abraham van

Riebeeck (son of the first Commander, and later to become Governor-General of Netherlands India) in 1676: "The ramparts of the old fort are now demolished, although for the convenience of a house the Governor still resides there, having had a very long, cool and pleasant dining-room built of wood behind the hall of [read "used as"] the old church (and having in addition the whole living-quarters at his disposal), from which the view of the Table Mountain is very fine: this view was previously spoiled by the then-standing walls, which now having been thrown down into the moat leave an open view. Behind this is the kraal of the animals and the slaughter-house..." [123].

Van Riebeeck's account is further confirmation that the hall of the "cat" was subdivided by a timber partition, as suggested in the fire regulations of May 1660 and described by De Rennefort in 1666. This is a point of significance, given the use of a similar partition in the hall of the "nieuwe cat" along the subdividing wall of the Castle (see Chapter 6.6.3a), and the later use of a timber screen between the "voorhuis" and "galdery" of the Cape Dutch town house and farmhouse.

The buildings in the Fort had not yet been entirely demolished by 1679, as a plan of this date [Fig 24] reveals that those along the front of the hornwork and those in the official wing at the rear of the inner court were still standing in isolation. However, it was decided on the 26th April 1679 that the old Governor's residence would be removed [124], together with the Fiscal's house above the gateway to the hornwork. Both of these buildings could offer a strategic advantage to an enemy force, and they would therefore be replaced by new dwellings in the Castle [125].

Even this resolution was not adhered to, as it was decided on the 17th November 1681 that a baking oven would be temporarily installed in the old Commander's residence in the remains of the old Fort, since no suitable building was presently available within the Castle [126]. It was only on the 29th August 1685 that a final decision was made to demolish the old Commander's residence [127].

This was the last official reference to the original Fort, the formality of which was clearly central to the development of the architecture of the VOC at the Cape, despite its structural shortcomings.

6.4 THE DUIJNHOOP REDOUBT

The second defensive structure to be erected at the Cape was the Duinhoop redoubt, close to the mouth of the Salt River. The decision to build this fortification was made on the 2nd October 1652, and it was intended to serve two purposes. The first was to protect the train-oil boilers which had been erected behind a high sand dune at the mouth of the river. The second was to improve the security of Table Bay by preventing an enemy force from landing cannon between Salt River and the Fort. It would also protect the sloops anchored in the river, and could be used as a look-out post for whales and ships entering the bay.

The redoubt, which was initially called the "Traenenburgh" or "oil citadel", would be sited on the sand dune mentioned above. It was to be three roods square, built of sods like the Fort and armed with two 4-pounders [1].

The necessity for the redoubt became more urgent following the threat of an English attack. However, although the site had already been partly prepared by the 23rd January 1653, work on the structure would only be commenced with the assistance of the men from the next return fleet [2].

In fact, the erection of the Salt River redoubt was only commenced a year later, on the 29th January 1654. The walls were built of sods as specified, but with a reinforcement of faggots or bundles of brushwood. Despite strong winds which raised such dust storms that work was continually interrupted, the redoubt was completed on the 7th February. Two 12-pound guns had been mounted (instead of the 4-pounders originally planned) and it was hoped that these, together with the cannon in the Fort, would protect the anchorage and prevent an enemy landing [3].

The name "Duin Hoop" was first employed on the 31st March 1654, when it was decided that the redoubt would also be used as a signalling post, being more visible from the anchorage than the Fort was [4]. Further unspecified work on the redoubt had been required in 1657, as it was mentioned on the 23rd October that this had been completed. All that still needed to be done was to install the gun-platforms, the timber for which was being prepared in the forest [5].

By 1661 the earthworks of the "old" Duijnhoop redoubt were in need of repairs, and the necessary orders were given on the 5th April, following news of a threatened attack by a fleet of eight French ships [6]. The extent of the damage was revealed on the 4th July, in the report of Commissioner Andries Frisius. "The embankments and breast-works" had been "completely washed away by the rains", but repairs would have to be postponed until the winter, when suitable sods would be obtainable [7].

These repairs are not outlined in the Company's records, and the last mention of the Duijnhoop redoubt was on the 7th September 1672, when it was described as having been demolished [8].

The location of the projected redoubt had already been depicted on a plan of Table Bay dating from 1652 [Fig 4]. The completed structure first appears on a map of 1654 [Fig 16], where it is shown to be some distance towards the Fort from the Salt River. Its position is depicted more clearly on a later map of 1656 [Fig 17], between the mouth of the Salt River and the wagon road to Rondebosch and the forest.

The redoubt itself is shown in a detailed plan dating from 1654 [Fig 18]. It was a quadrangular star-fort, with alternate salient and re-entrant angles, and without the projecting bastions of the Fort. The walls were eight feet thick at ground level and ten feet high. A gateway in one of the re-entrant angles gave access to a narrow open space, about six feet wide. On the seaward side were the batteries, extending the full width of the redoubt. They were reached from a stairway at the far end of the open space, and had a powder-magazine beneath, located inside the re-entrant angle. The guard-houses and barracks were on the other side, set back from the walls. This left space for a "banket" or firing-step to be located along the inner edge of the landward walls, which did not have cannon emplacements.

The only three-dimensional view of the Duijnhoop redoubt appears in the French edition of Dapper [Fig 12]. However, this is probably no more accurately shown than the implausible depiction of the Fort de Goede Hoop.

6.5 THE SANTHOOP REDOUBT

On the 5th April 1661, following news of a threatened attack by the French, it was resolved to erect another redoubt between Duijnhoop and the Fort. The Council of Policy evidently believed that the existing fortifications would not be capable of preventing the landing of cannon, with which the French would be able to overwhelm the Fort "after a short siege".

A site for the new redoubt had already been selected, and it was hoped that it would be built within a week with the assistance of the sailors and carpenters from the Hilversum, a ship in harbour whose skipper had experience of such work. The redoubt was to be twenty feet square and would be constructed of timber, with a roof to protect the defenders against hand-grenades. It was to have double walls, lined with planks, to prevent its being penetrated by the ships' 3-pounders, and each side would have two large loop-holes with traps similar to those found on ships, through which the cannon could be fired.

The timber would be salvaged from the French ship Mareschal, which had run aground in 1660 between the Salt River and the Duijnhoop redoubt. It was therefore conveniently close to the site of the new fortification, and permission had been received from Batavia for the wreck to be broken up [1].

Work began the following day [2], but only one further reference was made to the redoubt before Van Riebeeck's departure from the Cape. This was in his instructions of the 5th May 1662 to his successor Wagenaer, where it was mentioned that the French wreck had been destroyed in a fire, but that the "Sant Hoop" redoubt (named here for the first time) had been "further completed" with timber from the forest [3].

There are no detailed drawings of the Santhoop redoubt, but it is shown together with the French wreck on a map of Table Bay dating from 1663 [Fig 19]. The redoubt is sited on the shore almost exactly half-way between Salt River and the Fort, and is shown with a balcony projecting from a central core, the latter covered by a pyramidal roof. The drawing is too small to constitute an accurate representation, but its general configuration does correspond with the written description.

A further description of the 9th May 1662 reveals that the Santhoop redoubt was equipped with four iron pieces of ordnance, and would be garrisoned with fifteen to twenty men [4]. Storm damage to the redoubt, now also referred to as the "Houte Wambuis" ("wooden jacket"), was reported on the 18th August 1664. The walls had been undermined by heavy seas, and repairs were commenced the next day to prevent it from collapsing [5].

Significant alterations were made to the "Houte Wambaas" in 1672, when it was decided on the 7th September to remove its roof or "hood" in order to relieve the load on the walls. These were to be rebuilt on a firm stone foundation and further strengthened with an infill of soil, as well as being increased in length [6]. These alterations were begun on the 14th, and were probably close to completion by the 27th, when it was resolved that three 10-pounders would be mounted on the rebuilt structure [7]. This, however, was the last mention of the redoubt, apart from an entry of the 22nd April 1673 describing the stranding of a boat near the watch-house "Het Houte Wambuis" [8].

6.6 THE CASTEEL DE GOEDE HOOP

6.6.1 POLYGONAL FORTIFICATIONS

The pentagonal plan employed in the Castle was introduced to the Netherlands by Sebastiaan van Noijen in the 1550s. At first it was used for fortified towns (eg Mariembourg, 1554), but its use soon spread to castles and citadels, an example of which is the citadel at Antwerp, designed in 1567 by Francesco Paciotto [Fig 20] [1].

According to Ploeger, pentagonal castles were common in the Northern Netherlands during the 17th century. There were also colonial examples: Fort Amsterdam at Curacao (1635) was originally planned as a pentagon, but the fifth bastion was omitted during construction [2]. Another example at Samarang was identical to the Castle at the Cape except for the omission of the subdividing wall [3].

The reasons for the adoption of a five-sided rather than a four-sided plan were three-fold. Firstly, it permitted a larger area to be enclosed without necessitating excessively

long curtain walls. Secondly, with a greater number of corners the bastions could be less pointed, thus giving more room for cannon emplacements. Thirdly, polygonal walls were easily combined with radial street patterns as at Coevorden [Fig 3], while in the case of purely military buildings all defensive positions were equally easily reached from the centre. These advantages obviously applied to arrangements with even more corners, and six- and seven-sided plans were not uncommon [4].

6.6.2 THE DEFENSIVE STRUCTURE OF THE CASTLE

Following a number of requests for permission to rebuild the Fort in stone, orders were received from the Council of Seventeen on the 23rd April 1665 to commence at once with the construction of a "Roijale Steene-Fortresse", in accordance with the plan which had been sent out from Holland [1].

This plan was of a pentagonal structure surrounding the existing Fort and hornwork, as described in a letter of the 6th May to Batavia, and work was to be started on the landward side. A copy of the drawing had been made at the Cape, but neither this nor the original has survived. There is thus no indication of the name of the person responsible for the design of the Castle [2].

Preparations for the project were begun on the 4th June 1665, when it was resolved that the recently arrived sergeant, Abraham Schut, would be promoted to the rank of ensign and appointed as overseer of the new fortification works [3].

On the 8th June the site of the Castle was marked out by the land-surveyor (and Fiscal) Hendricq Lacus, two of the bastions being located on either side of the new hornwork facing the sea, and the other three on the landward side. However, it was realized that the new fortress, together with its moat which was to be 82 feet wide, would encroach too closely on the new houses in the town. These would have to be demolished, together with the lime-kilns, the old hospital [4] and a large part of the garden, as they were all located within the extended field of fire [5].

The implication of this realization was that the proposed site for the Castle would have to be reconsidered, but the members of the Council of Policy were unwilling to do so without approval from higher authority. It was therefore resolved on the 3rd August

1665 that a final decision on the siting of the Castle would be postponed until the arrival of Commissioner Isbrand Goske, who was apparently familiar with the details of the project [6].

The masons, moreover, were still working on the new hornwork of the Fort, and the materials and tools that were required had not yet arrived. The commencement of work on the Castle would thus be delayed, but the soldiers were nevertheless to make a start with the breaking of stones and the collection of shells for the lime-kilns [7].

Commissioner Goske had arrived at the Cape by the 26th August 1665, when he presided over a meeting of the Council of Policy convened to make a final decision on the site for the new Castle. He had already inspected the terrain together with Commander Wagenaer, noting in particular the proximity of the Lion's Rump to the old Fort, which was already a matter of concern to the Seventeen.

After lengthy deliberations [8], the original plan to build the Castle around the old Fort was abandoned. This was partly because the site could indeed be commanded from the present Signal Hill, but also because the increased size of the Castle resulted in the field of fire being considerably expanded. This would have necessitated the demolition of all the freeburghers' houses as well as the Company's reservoir, the market ("passer"), the lime-kilns, the cornmill, the pottery kiln, and a large part of the Company's garden, including the new gate and the huts ("pedacken") for the slaves.

It was therefore decided to build the Castle some sixty roods east of the Fort, as shown on the site plan of 1665 [Fig 21]. Work would be started on the western bastion, at the base of which a twenty-foot wide berm would be erected to provide additional protection. All other building works were to be halted at once, and the craftsmen would assist with the necessary lime-burning and stone-cutting [9].

The authorities in Batavia were informed in a letter of the 31st August 1665 that a site for the Castle had been selected and had already been marked out. However, they were warned that it would take at least eight or ten years to complete unless slave labour was provided in large numbers. Wagenaer also expressed his regrets that the new hornwork, which had taken two years to construct at a cost of 20 000 guilders, would have to be demolished [10].

It was also resolved on the 8th September 1665 that the salaries of the masons, carpenters, wood-cutters and blacksmiths would be increased for the duration of the project [11].

The Castle was finally commenced on the 25th September, when a hundred men began clearing the site [12]. The levelling of the ground continued despite delays caused by bad weather [13], insobriety [14] and illness [15].

By the 2nd January 1666, after "five" months' labour by three hundred workmen [16], the excavations of two of the faces of the western bastion had been completed, and the foundation ceremony was held. The first stone was laid by Commander Zacharias Wagenaer, the second by the Minister Joan van Arckel, the third by the Secunde Abraham Gabbema, and the fourth by the Fiscal Hendrick Lacus. After the ceremony a feast was held on the newly levelled site for all the workmen who had been involved in the project to date [17] [Fig 22.b].

It was also resolved on the 5th January that three brick-vaulted powder-magazines would be built in the Castle [18], and progress on the project as a whole was reported to the Seventeen in a letter of the 22nd May [19-26].

The site had been selected in consultation with Isbrand Goske and the engineer Pieter Dombaer, both of whom had arrived from Holland on the 18th August 1665, although the latter had not previously been mentioned in the Company's records. The setting out of the plan had again been entrusted to Lacus (the Fiscal and surveyor) with the assistance of Dombaer [19].

Excavations of the foundations of the western bastion, which were sixteen feet wide, had revealed that beneath the sand which covered the first three feet was a layer of yellow clay soil, followed by a hard white clay to a depth of eleven and a half feet. Beneath this was a layer of pebbles or flintstones ("keij-steentjes"), affording a solid foundation [20]. This supported the wall of the bastion, which was twelve feet wide and had already been raised to a height of eleven feet. The berm mentioned the previous year was now considered to be unnecessary and would not be built [21].

Despite the progress that had been made, Wagenaer extended his estimate of the time

required for the completion of the project to ten or twelve years, unless more slaves were provided [22]. He also appears to have differed with Isbrand Goske with regard to the siting of the Castle, suggesting that it would be as vulnerable from Devil's Peak as the Fort had been from Signal Hill. He was still convinced that the new Castle should have been built around the existing Fort, as originally suggested in the instructions of the Seventeen [23].

Both sites, however, had their strategic disadvantages. Even if a redoubt had been erected to protect the Fort from an attack from Signal Hill, such a structure could have been taken by an enemy and thereby exacerbated the problem, as noted by Abraham Clement [24]. Moreover, the vulnerability of the Castle from the heights of Devil's Peak would be partially addressed by the erection of the subdividing wall in 1695.

The major disadvantage of Wagenaer's solution was that virtually all the buildings in the incipient town needed to be demolished, as they fell within the field of fire. Although the Portuguese built houses directly beneath their fortifications, experience had shown that this had been to their detriment, according to Van Groeningen [25].

The Castle as shown on Pieter Dombaer's plan [26] of 1665 [Fig 21] was a structure which responded only to its own strategic needs, and ignored any relationship with the town. Not only was its pentagonal form incompatible with the orthogonal layout already established, but the side facing the town was not even parallel to the line of the Heerengracht. As built, however, the Leerdam and Buuren bastions facing the town were positioned at right angles to the longer side of the Parade.

Building operations continued until the 10th May 1667, when orders were received from Holland to suspend all work on the Castle and reduce the garrison to 250 men, as the Peace of Breda had been signed with England [27]. On the 23rd May, however, it was resolved in a meeting of the Council of Policy presided over by the Visiting Commissioner Johan van Dam, that the Castle should be garrisoned with not less than three hundred men. It was also mentioned that the first bastion (then called "Robbeneijlant") had already been erected [28]. This was armed with cannon on the 26th January 1668, and four more guns from a ship in harbour were mounted the following day [29].

Work had evidently been resumed by the 1st August 1669, when it was noted that the masonry work on "the new point" had been delayed by bad weather [30]. This appears to have been the first bastion, which had apparently not yet been completed. Indeed, it was mentioned on the 20th September 1670 that although it had already been "built up", it had not yet "been filled up inside" (presumably with earth), although the men had been at work for some days "with wheelbarrows for that purpose" [31].

The relative indefensibility of the single bastion that had been completed was discussed on the 16th February 1671, following news that war was again imminent. Since this was vulnerable to attack from the rear, it was suggested that earthen breastworks should be erected along the shore to prevent an enemy from landing [32]. The inadequacy of the fortifications in the event of a concerted enemy attack was raised again on the 21st. While it was essential to upgrade them at short notice, the Council of Policy had been given specific instructions that no work on the Castle was to be undertaken until further notice.

It was nevertheless decided to proceed with a project for the temporary enclosure of the incomplete Castle, designed by the land-surveyor on the orders of Commissioner Isbrand Goske, who was visiting the Cape again as Admiral of the return fleet. This involved completing the two curtains which had already been commenced on either side of the western bastion. These would be raised to a similar height of six feet, and their extremities would then be linked by an earthen wall and a palisade, thus enclosing the inner line of the other three sides of the pentagon [33] [Fig 22.c].

Orders were given on the 25th February for stone to be collected for the curtain walls [34], and the temporary connecting wall was marked out by the land-surveyor on the 25th March, earth for the purpose having already been brought on site [35]. Work progressed well, despite delays caused by repairs to the walls of the Fort, which collapsed again on the 14th July, although the walls of the Castle were not affected by the winter rains [36].

It was only on the 16th September that permission was received from the Seventeen for work on the Castle to be continued, and even this was conditional on Commissioner Goske's report [37]. He had evidently not yet reached Holland by the 15th May, when

the letter was written, illustrating the communication difficulties of the time. It was also mentioned that an experienced engineer, a master mason and other artisans would be sent out to assist with the works [38].

The interim fortifications suggested by Goske had been completed by the 20th January 1672, when the workmen were rewarded with a celebratory feast [39]. By this time orders to proceed with the Castle had finally been received, and a report was made to the Seventeen on the 27th February outlining the work still to be done.

Building operations would be recommenced on the western bastion and curtain walls [40], and the workmen would be given extra wages as an incentive to work harder. In order to use the work-force more efficiently, the ensign Joannes Coon and the surveyor Joan Wittebol were to negotiate a price with the freeburghers for the transporting of stone and other materials [41]. The burghers, however, were unwilling to undertake the contract for the price offered, so it was resolved on the 5th March that this would be undertaken by the Company's wagons instead [42].

This decision was overturned on the 4th May, however, when it was resolved that the burghers who were well provided with oxen would be compelled to transport stone for the Castle. They were each to convey six wagonloads every day, for which they would be paid three guilders and fifteen stivers, and food would be provided for their workmen [43].

Progress continued to be made on the Castle, despite inevitable delays caused by bad weather, and it was mentioned on the 15th June that a second bastion was already under construction [44] [Fig 22.d].

Following news that war had been declared against Britain and France, a Council meeting was held on the 30th August 1672 to discuss how the incomplete Castle could be made sufficiently defensible to withstand a major attack. Since the second bastion was almost complete, and would reach its full height in a few weeks, it was decided to employ the stone-breakers on the earthen curtain walls instead [45]. Sufficient stone for this bastion had already been collected, so the masons would be able to continue without interruption. Meanwhile all the freeburghers were given orders to collect the timber palisades which had been prepared at Hout Bay, and transport them to the Castle

in their wagons. A proposal was also made by Lieutenant Breitenbach that the Fort and the Castle should be linked with trenches, but it was decided that this would be held in abeyance until the major fortification works had been completed [46].

The transporting of the palisades from Hout Bay was supervised by Ensign Coon and Burgher Councillor Smient on the 5th September 1672. These would be used "for closing the open portion between the curtains". This is evidently referring to Goske's interim fortification measures, and suggests that while the earthen wall had been completed by the 20th January, the palisades were only now being added [47].

Work on the earthen curtain between the completed "sea point" and the "new section" was commenced on the 15th September, in order to "close it at the waterside" [48]. Although earlier in date than the recently completed Catzenellenbogen bastion, the "new section" referred to above must have been the curtain between Leerdam and the as yet unbuilt Buuren bastion, if any sense is to be made of the closure on the water-front.

It is also likely that the curtain leading to the Nassau bastion, still to be built, was commenced at the same time, as had been the case with the curtain walls on either side of the Leerdam bastion. This would have had the strategic advantage that four of the five walls would have been covered by raking fire from the flanks of the two bastions constructed to date. The fifth wall would still have been a temporary structure of earth and palisades [Fig 22.e].

Isbrand Goske returned to the Cape on the 2nd October 1672 as the new Governor, with orders to complete the Castle which he had been instrumental in commencing [49]. He set to work with vigour, giving instructions on the 4th for the carts which had been sent out from Holland to be assembled, and employing thirty of the Khoi on the 7th to assist in transporting the earth required for the fortification works [50].

Work on the Castle and on the quarrying of the required stone continued throughout the year, with the assistance of men from the fleets in harbour. It was mentioned on the 28th November, however, that the transporting of stone was being delayed by a shortage of draught oxen [51]. Extra expense was also involved, because the free-burghers' wagons had to be hired for the purpose, as was mentioned on the 30th [52].

A powder-magazine had already been built in the first bastion, but it was noted on the 3rd January 1673 that this structure was unsuitably constructed. It was covered with a timber loft, which not only constituted a fire risk but also supported the stone floor of the "Corps de Garde" above, and was consequently liable to collapse. A new vaulted powder-magazine was therefore commenced beneath the second bastion [53].

Further delays were caused by a shortage of labourers, as was mentioned on the 11th January. Moreover, some of the sand dunes around the old Fort were higher than its walls and bastions, and could be used as batteries by the enemy. The freeburghers were therefore instructed to erect a palisade of sufficient height to prevent this possibility. The new seaward bastion of the Castle, however, had almost been completed. It had been enclosed on the landward side by a similar palisade, and would be provided with a masonry well to ensure an adequate water supply [54].

This bastion was armed with cannon on the 26th January, taken from the gates of the old hornwork, and work continued on the digging of the well [55]. By the 3rd February the new powder-magazine had almost been completed, after which the old one would be rebuilt in the same manner [56].

Progress was still delayed by a shortage of draught oxen, as noted on the 21st February [57], but work was nevertheless commenced on the 1st March with the rebuilding of the earthen breastwork of the new bastion in stone. It was also intended to provide it with stronger cannon emplacements, consisting of a bedding of compacted earth covered with planks [58]. The filling in of this bastion with earth was begun on the 20th March, with slaves taken from a captured English vessel [59]. By the 10th May the powder-magazine had been completed, 32 feet long and 13 feet wide. Work would now be commenced on rebuilding the old magazine in the first bastion [60].

A new and more efficient use of the work-force was introduced on the 30th May for the erection of the third bastion. Instead of undertaking the work itself, the Company contracted it out to a sergeant and a number of volunteer soldiers. They would receive 4000 guilders, paid in proportion to the progress of the work, but irrespective of the time taken. The bastion was to be built of earth and surrounded with a well-compacted wall of sods ("taip"), which would be faced with stone at a later date. The quarrying of

the stone was also contracted out for a sum of 6000 guilders [61] [Fig 22.f].

The contractors set to work with enthusiasm, but the wet weather was a hindrance to progress, and "a large portion" of the bastion under construction collapsed on the 7th June 1673 [62]. It was therefore decided to protect the earthworks with a timber barricade, which was erected on the 28th July. By this time the eastern sea bastion had been enclosed with palisades on its inner side and faced with sods on the outside [63], and the newly completed rampart was armed with cannon on the 5th August [64].

The stone foundations of the "southern flank" [65] had already been laid by the 9th August [66], and work was commenced on the landward curtain between the south-eastern and southern bastions on the 28th. This would complete the enclosure of the pentagonal court [Fig 22.g]. The burghers in the vicinity were also instructed to remove any tall bushes from their lands and fill in their drainage trenches, as these could offer a strategic advantage to the enemy [67].

The new earthen bastion, which had been under construction for the last three months, collapsed again on the 7th September as a result of wet weather. It was therefore decided on the 11th to raise the stone foundation by a few feet, thereby creating a berm which would prevent further slippage. Work on the stone curtain was progressing well, however, apart from delays caused by a shortage of lime [68]. Implements for continuing the work on the Castle arrived from Holland on the 10th October. These included another 20 carts and 100 pick-axes, but the bricks and lime requested had not been sent, as they were too expensive and in short supply. Timber would be supplied, however, and 24 iron cannon were to be sent with their carriages [69].

By the 12th October the curtain between the two landward points had been sufficiently completed "that it cannot be scaled without ladders", and work was resumed on raising the foundations of the collapsed "opgetaypte" (southern) bastion [70]. It had already been decided on the 17th September that the last two bastions would also be put out to contract [71], and the foundations of the first of these were laid on the 21st December [72]. By the 29th the sergeant had completed the third bastion, and entered a new agreement to erect "the fourth or most easterly point" [73]. This would also be constructed of "taijpaarden" or sods, and work was commenced on the 2nd January

1674 [74] [Fig 22.h]. Further progress had also been made elsewhere, and it was noted on the 20th February that half of the curtain wall between the two western bastions had already been erected [75].

The Castle, although still incomplete, had been made sufficiently defensible by the 2nd May 1674 for the demolition of the old Fort to be commenced [76]. The outer walls would be removed entirely, but the buildings inside would be retained until such time as replacements had been erected within the Castle.

Delays in the quarrying of stone led to a temporary cessation of work on the "south-eastern" bastion, as mentioned on the 25th August [77]. The garrison was also to be reduced, following news that peace had been signed with England. As this would deplete the work-force, it was decided on the 26th September to send a ship to Madagascar for the procurement of slaves [78].

The fifth and last bastion, or "second water-point", was first mentioned on the 8th October, when sixty soldiers were landed from the fleet to assist in excavating the foundations [79] [Fig 22.i]. It was also noted on the 27th October that work had been resumed on the "south-east point". This structure, which was the "third point" to be completed, and was also described as "the second land bastion", was clearly the earthen bastion recently completed by the sergeant and his men (and therefore the southern rather than the south-eastern point). By the 2nd November it had been re-faced with stone and raised to its final height, and sods for its breastwork were collected the next day [80]. Work was also being continued on the "second sea point" on the 30th November, but progress was slow owing to the sandiness of the soil [81].

Progress of any kind is absent from the records of 1675, as the Journal has been lost, and the next reference to the Castle was on the 29th January 1676, when a new powder-magazine and gate [Fig 22.j] were under construction, but no details of their configuration were provided [82].

Apart from a number of references to men having been seconded from ships in harbour to assist with the fortification works, nothing further was recorded during the Governorship of Isbrand Goske until his last letter prior to departure from the Cape. This letter, dated the 15th March 1676, stated that the fifth bastion was already fourteen

feet high, and should be completed within four months. He also mentioned in his instructions to Joan Bax, who succeeded him as Governor, that the foundations of the first bastion had been laid on loose sand, four feet above the firm stratum of stone which existed beneath. These foundations were therefore suspect, and measures should be taken to prevent the collapse of the bastion [83].

Work continued on the Castle with the assistance of men seconded from the ships in harbour, despite delays caused by the lack of draught oxen and a shortage of lime, extra supplies of which were requested from Mauritius [84]. By the 15th August 1676 cannon had been mounted on all of the five bastions of the Castle. These had not yet been named and were still described as the "West Point", the "North Point", the "Sea Point", the "East Point" and the "'getijpte' Point". The last was presumably the southernmost bastion furthest from the sea, which had evidently not yet received its stone facing [85].

Abraham van Riebeeck's description of the Castle in 1676 gives a graphic illustration of the enormous labour involved in its construction: "Before we went aboard we however first went to inspect the new Fort, which stands to the right side of the old fort towards the Salt River. It consists of 5 bastions, all built up very high of hewn stones, which cost great toil, both in obtaining them and in making use of them. These stones are for the most part got from or near the Lion Hill, about 1 or 1½ feet below the surface, where rocks like churches and castles are found. In order to tear away the stones for use long holes are bored in them, filled with powder and stopped up, and then this is fired so that many rifts are made, after which work must be done with crowbars and other tools to tear them apart. Thus already very many deep and large pits are to be found in the Lion Hill, from which the stones have been extracted. When these stones have thus been obtained, they must then be transported on carts drawn by 6 oxen to the new Fort, which also is very costly, since each cart can transport 3 or 4 stones only because of their weight. These stones, irregular as they are, are set together as best is possible and practicable and mortared with lime, and filled in with smaller fragments between stone and stone..." [86].

The final bastion was completed on the 3rd September 1676 [87], but the first instance of structural failure had already been reported on the 27th October. The "N. landpunt" (evidently the western bastion which Goske had been concerned about) [88] was

severely cracked from the top to the bottom, raising fears that this might cause the collapse of the whole structure. According to the chief mason and the engineer [89], the cracking had occurred as a result of weak foundations, and also because Goske himself had ordered the wall to be widened without providing any extra foundations other than earth-filled trenches. The inner part of the wall ("achterwerck") had consequently subsided, a problem which was exacerbated by the water which penetrated every cavity.

It was therefore decided that the strongest and most economical solution would be to reinforce the bastion with a "faulse braij" [90]. This would be done at the northern sea bastion as well, which was also considered to be structurally unsound. The erection of such a reinforcement would avoid the necessity of demolishing and reconstructing a bastion 32 feet high, a task that would have taken a year to complete [91].

The reinforcement of the cracked bastion with a "faulse braij" proved to be successful, and by the 4th March 1677 the cracks had not opened any further. The problem of excessive rainfall had been countered by excavating a cistern on the inner side. It was therefore resolved to proceed with the mounting of the cannon, in order to ensure that the firing of these would not have any further adverse effect on the structure. It was also decided that the two seaward bastions, the foundation walls of which were unprotected from the salt water, should be similarly provided with a small stone wall ("op de manier van een faulse braij") at a distance of five roods. This had already been suggested by Goske in his instructions to Governor Bax [92].

By March 1677 the powder-magazine begun by Isbrand Goske had been completed, but work was still continuing on the gate [93]. News was also received on the 24th September that war had again been declared with France, emphasizing the urgency of completing the Castle [94]. A description of the work still to be done was given on the 2nd October. The most urgent task was to complete the curtain walls and their wall-walks, in order to provide proper access to the bastions. Ribs and planks for the cannon emplacements were also to be prepared in the forest and brought on site. Lastly, the temporary access gate used for building operations was to be closed with masonry and replaced with a permanent gateway facing the sea [95].

It was reiterated on the 16th October 1677 that work on the Castle was to proceed with all speed. Sods needed to be transported for the breastwork, together with firewood for the brick- and lime-kilns, and the moat needed to be widened and deepened. Since there were not enough wagons for these tasks (and for the transferring of provisions from the old Fort to the new Castle), it was decided to use the freeburghers' wagons again, at the same rate as previously. The transporting of sods would be undertaken during the following week, after which work would be commenced on the moat [96].

In order to expedite this as quickly as possible, it was decreed on the 25th October that everyone who went past the Castle would be compelled to assist with the excavations, regardless of rank or status. The men would be obliged to remove twelve baskets of earth and the women six, and the Governor himself set an example by removing the first loads together with his wife and son [97].

Problems of a different nature had also been raised on the 16th October by the constable Jacob Jansen of Biervliedt, who was spreading rumours that the Castle was vulnerable to attack from above, thereby undermining the morale of the whole garrison. Lieutenant Cruse was therefore sent with him to a certain hill from which he claimed the Castle could be reached by enemy fire. The lieutenant's opinion was that the distance far exceeded the range of any cannon, and the constable was arrested. Nevertheless the Governor resolved to inspect the position in person, and instructed the engineer Joannes Wittebol to measure the distance involved [98].

Although the Company's officials were convinced of the inaccuracy of the constable's allegations, the common soldiers were still ill at ease. It was therefore resolved on the 9th November that they would be given proof of the Castle's defensibility by a practical demonstration. Two of the most powerful cannon would be taken to the hill in question and fired towards the Castle, the cost of the shots to be borne by the constable [99].

This demonstration "proved" that the Castle could not be reached by the cannon, and the constable was fined three months' salary for his seditious words [100]. It is interesting, however, that Wagenaer had already expressed misgivings about the siting of the Castle, and its proximity to Devil's Peak was later acknowledged to be a strategic disadvantage.

The Company's wagons were still transporting sods and timber for the fortifications on the 9th November 1677, while those of the freeburghers were being used for excavating the moat [101]. It was decided on the 23rd, however, that the latter would not be required beyond the end of the month. The work had progressed sufficiently for the disposal of the excavated earth to be undertaken by the Company's wagons alone [102].

News was received on the 6th July 1678 that war had been renewed with France. Work was therefore to resume at once on the Castle, the most pressing tasks being the "closing of the bastions" [103], the heightening of the wallwalks, the deepening of the moat, and the provision of cannon emplacements [104].

The possibility of building a ravelin to protect the gateway of the Castle [105], located between the two sea bastions, was discussed on the 28th July. This would be economical to erect if constructed of earth and surrounded by a palisade, and would prevent a sudden attack from the sea. Moreover, it would provide better cover for the shore and the landing place, which were not fully commanded from the Castle on account of the height of the bastions and the lowness of the curtain walls. The suggestion was accepted in principle, but more urgent tasks prevented its being carried out at once [106].

The proposal to erect a ravelin was raised again on the 15th September, by which time the fortifications of the Castle had been sufficiently completed to be fully defensible. There were no other urgent works apart from the continuing excavation of the moat. Moreover, the ravelin would use up the large mounds of earth removed from the latter during the Governorship of Joan Bax. These had been left at the two seaward bastions, where they were inconvenient and dangerous, as they could cause the subsidence of the latter and also be of advantage to an enemy.

It was therefore resolved to go ahead with the project, and to erect an earthen outwork surrounded by palisades. Following the advice of the engineer and land-surveyor [107], it was to extend outwards from the corresponding shoulder angles [108] of the two bastions for a distance of six Rhineland roods. This would provide sufficient space for the cannon to be used effectively, and would also protect the acute angles of the bastions from the breakers at high tide. The foundations were to be of large stones, well

bonded together, and would extend for two or three roods on either side [109]. The work would be undertaken by the Company's masons, who were unable to work on anything else on account of a shortage of lime [110].

The ravelin is shown on Johannes Wittebol's plan and perspective of the Castle, dating from c1679 [111] [Fig 23]. A relatively small structure, it was linked to the corners of the bastions by palisades, each of which had an entrance-way. The palisades were continued over the ravelin itself at the same height, meeting at its apex.

By the 1st March 1679 the only major work still to be done on the Castle was the completion of the excavation of the moat, a task involving heavy and time consuming labour. The soldiers had been given extra wages and an allowance of arrack to encourage them in their work, but this was costly to the Company and progress was slow. They were also becoming disgruntled by the continuous labour and by the length of their detainment at the Cape. The threat of attack was no longer imminent, and the full-time continuation of the moat was not as critical as it had been. It was therefore decided that all Hollanders would be taken off the excavation of the moat, and as many as possible off the other fortification works, with the obvious exception of the craftsmen. The Company's slaves would be used to complete the works instead, thereby saving a considerable expenditure [112].

It was noted on the 26th April that although the cannon on the ramparts were mounted on carriages, those on the bastions were merely set upon timber emplacements. Further mountings were also required on the ravelin between the two seaward bastions, which presumably had now been completed. Orders were therefore given for another fifty or sixty cannon-carriages to be made, suitable for a variety of calibres. The five bastions of the Castle were finally named on the same day. The southern bastion was to be called "Orange", the south-eastern "Nassouw", the eastern "Catsenellebogen", the northern "Buiren", and the western "Leerdam" [113] [Fig 22.a].

The moat, still under construction, was regularly flooded in the rainy season, as reported on the 27th April. This caused considerable delays to the excavations, as the moat first had to dry out before work could be resumed. It was therefore decided that a trench should be dug around the Castle, two Rhineland roods from the moat, in order to

divert the water. This trench would be two feet deep and lined with sods to prevent it from caving in.

Another problem concerned the western land bastion (Leerdam), which had been cracking on its outer edge for the past two years. The cracks, however, had occurred only in the superstructure and not between the foundation and the water-line. Moreover, they had not opened any further over the past three or four months, and the land-surveyor was of the opinion that the structure had stabilized. Nevertheless, the bastion would be reinforced with an earthen berm one Rhineland rood wide, as a precaution. If the cracks continued to widen, however, the whole bastion would have to be taken down and rebuilt [114].

The cracked bastion was inspected on the 1st May 1679, when four-foot wide trenches were dug along both faces to a depth of three and a half feet. These revealed that the cracking did extend down to the foundations, rendering the whole structure insecure [115]. Two days later, on the 3rd May, the bastion sustained a partial collapse [116].

Instructions were given on the 11th May 1679 for the collapsed portions of the Leerdam bastion to be repaired. The structural failure was partly because the foundations were too narrow to support the load [117], partly because of poor soil conditions, and partly because the foundations had been constructed of round stones which did not bond properly.

All the cracked portions of the bastion were therefore to be dismantled, and the foundations were to be deepened and rebuilt with stones that would bond effectively. In order to avoid further collapse as a result of the water in the moat, it was resolved that a twelve-foot wide earthen berm would be erected around the Castle. This would be provided with sod walls on its outer edge to prevent it from caving in. Lastly, a channel sixty feet wide would be cut in the middle of the moat, in order to ensure that the rest of it would remain dry [118].

Johannes Wittebol's plan and perspective of c1679 [Fig 23] show the Castle in its original form, prior to the erection of the "cat" wall which later subdivided the pentagonal court. The five bastions each had six embrasures on the faces and two on the flanks. Access to each bastion was gained by two staircases at the ends of the

buildings along the curtain walls. Some of these led directly from the court, while others gave access from the cellars beneath. The revetment of the wall, the parapet of the breastwork, the wallwalk ("walgang") and the cannon emplacements are all clearly annotated, as are the "blokken" (logs?) for transporting the cannon from one bastion to another. The accommodation within the defensive structure will be described below (see Chapter 6.6.3).

The relationship between the Castle and the town is shown on Wittebol's plan of the town and gardens, also dating from c1679 [119] [Fig 24]. Two winding roads are shown diverging from the temporary western entrance, which was soon to become the only gateway. One of these led to the old Governor's residence, and the other led in front of the old hornwork and reservoir to pass through the town along Heere Straet and continue in the direction of the stone quarries on the slopes of Signal Hill. This plan must slightly predate Wittebol's drawings of the Castle itself, as the ravelin protecting the seaward entrance does not appear. The internal accommodation, however, is identical.

Work on the Castle continued after the arrival of Simon van der Stel as the new Commander in October 1679. His period in office saw major changes to the defensive structure, which included the relocation of the gate and the erection of the subdividing "cat" wall. However, little detailed information on these changes is provided in the Resolutions of the Council of Policy, the brevity of which was a characteristic of the Van der Stel period [120].

The rebuilding of the Leerdam bastion had been completed by March 1680 [121], and it was resolved on the 9th to commence with the reinforcement of the moat. The berm, however, would now be two roods wide rather than the one rood suggested by Commissioner Blom on the 11th May of the previous year [122].

More serious problems with the moat were noted on the 28th February 1681. It had already been excavated to a depth of two or three feet all around the Castle, and quick-sand ("welsandt") had been reached on the seaward side. On the side facing Table Mountain, however, the water-table was still three feet below ground level, and the moat would have to be excavated a further eight feet below that in order to ensure that

it had sufficient water. Moreover, the projected stone walls [123] to protect the Buuren and "Catsennellenbogen" bastions would not be practicable, as the water would undermine the uncohesive soil on which they were to be built.

The problems caused by the saturated soil were viewed in such a serious light that it was decided that the Castle could only be provided with a wet moat on one side, and that other measures would have to be taken for its protection on the others. It was therefore resolved that work on the deepening of the moat would be halted, but its widening would be continued until a width of 150 feet had been achieved. The excavated earth would be used to build the berm mentioned above [124].

By the 20th March 1681 the bastions had been provided with brick sentry-boxes, to replace the original timber structures which had fallen into disrepair [125]. It was also mentioned on the 8th December 1682 that the water-pump, which was in the middle of the Castle court, had been defective for a considerable time. There was, however, no qualified pump-maker to undertake the necessary repairs, so it was decided that the pump would be discarded and replaced with a well [126].

The location of the original gateway on the sea-front had been a matter of concern to Simon van der Stel since his arrival, and his reasons were presented to Visiting Commissioner Rijckloff van Goens Jr on the 16th March 1682. The most important of these were that the gate could be inundated by the sea in stormy weather and during spring-tides, and thereby rendered unusable; that laden wagons could not enter the Castle owing to the sandy soil; and that the gate was vulnerable to attack from the ships in the roadstead. Moreover, the ravelin "protecting" it was considered to offer more advantage to attackers than to defenders, and no additional entrenchments could be built on account of the soil conditions. Permission to close the old entrance and erect a new one between the Buuren and Leerdam bastions facing the town had already been requested from the Seventeen in March 1681. This was now granted by Van Goens, and orders were given for work to begin at once. The old gateway was to be closed with masonry and converted into a prison [127] [Fig 22.k].

On the 23rd April Van der Stel reported that the old opening had been closed off. The new land-gate had been completed by June 1682, with an officer's dwelling provided

above, and the belltower was added in April 1684 [128]. It had also been resolved on the 12th February 1684 that a new ravelin would be erected to protect the Castle gateway, which would otherwise not be strong enough to withstand a concerted attack. This ravelin would be the height of a breastwork and was to be armed with light cannon [129].

The excavations of the moat were still being undertaken by slave labour on the 4th July 1685, when they were inspected by the Visiting Commissioner Hendrick Adriaen van Rheede [130]. This use of slave labour continued, as was mentioned on the 23rd February 1689, when a number of resolutions were adopted by the Council of Policy, following information received from Holland of a possible attack by the French.

Each freeburgher in the Cape District would be given orders to provide one of his slaves for the levelling of the Castle moat. A demi-lune ("een halve maan") was also to be erected in front of the Castle gateway, suggesting that the ravelin commissioned in 1684 had not yet been built. In addition all the houses, gardens, trees and hedges of the inhabitants would have to be removed from the vicinity of the Castle within three days [131].

The vulnerability of the Castle to attack from the rear had finally been acknowledged in 1680, when it was realized that it could indeed be commanded from the heights of Devil's Peak. Even though the curtains and bastions had been raised higher on this side, they were exposed to bombardment, as was the open space within. The result was that even the most distant seaward bastion ("Buijren") would not be able to be defended, as it was not protected from behind [132].

These observations were brought to the attention of the Visiting Commissioner Hendrick Adriaen van Rheede in 1685, who gave orders on the 16th July for remedial action to be undertaken. This involved the erection of a subdividing wall, extending from the Catzenellenbogen bastion to the middle of the Commander's residence which had by now been built between the Leerdam and Oranje bastions [Fig 22.1]. The wall would thus be built at right angles to the firing-line from Devil's Peak, thereby protecting the new front court which would be created, and also giving cover to the Buuren bastion. It was to be built of stone and lime mortar, with a minimum width of

six feet and a height corresponding with the topmost cornice of the double-storeyed residence [133].

There appears to have been no further mention of this major and costly structure until its completion, when Simon van der Stel described it as being "542 feet long, 39 feet high, 12 feet broad at the base and 10 feet in the centre, and at the top 8 feet". By this time, the foundations of the flanking buildings had already been laid. Unfortunately Pearse, who quoted this despatch, gave neither its date nor its reference [134].

Moreover, the first mention of the structure in the Resolutions was only on the 19th September 1695, when the "nieuwe katt" was used as the venue for the auctioning of damaged materials [135]. This reference, however, referred not to the wall itself but to the "balcony" or landing above the stairway leading to the hall, which must already have been completed [136].

Given the lack of detailed evidence on the progress of the "cat" wall, it is not surprising that three dates have been suggested for its completion. The first is 1691 (De Bosdari [137] and Fransen & Cook [138]), the second 1695 (Ras [139]), and the third 1696 (Pearse [140]). The last two, however, must have been referring to the completion of the entire structure, including its flanking buildings.

The probability of the earliest date is strengthened by the fact that a rough drawing of the Castle showing the subdividing "cat" wall [Fig 25] was received in Holland in 1691. Although crude in comparison with Wittebol's drawings, there is nothing to suggest that it had not yet been implemented. Moreover, it is unlikely that it would have taken more than five years for a mere design proposal to be sent over to Holland, given the strategic importance of the project. This drawing must therefore have been a record of the work completed.

No buildings had yet been erected along the new wall, but the facade of the existing official wing is roughly depicted. This shows the disastrous effect of the subdivision of what had been the most formally planned building in the Castle. The bisecting of the inner pentagon, morever, resulted in two very awkwardly shaped courtyards, neither of which had any visual focus. Although necessary for strategic reasons, the erection of the subdividing wall had extremely unfortunate architectural consequences.

Instructions were received from Holland on the 19th April 1695 to surround the Castle with an eighteen-foot wide breastwork of earth, and to erect a counterscarp on the far side of the moat [141]. There is no mention in the Resolutions, however, that these were undertaken. Moreover, apart from requests in 1697 and 1698 for permission to erect a powder-mill, as the magazines were too damp for the effective storage of gunpowder [142], there were no more references to the defensive structure of the Castle during the period of Simon van der Stel.

His successor and son Wilhem Adriaen van der Stel was hardly more forthcoming about building operations at the Cape. Nevertheless, it was mentioned on the 25th February 1703 that orders had been received from Batavia that the fortifications were to be inspected by Christoffel Wels, an Artillery Major in the Company's service [143]. His recommendations were that the bastions and breastworks should be increased in height, and that a new battery should be erected outside the Castle, as noted in a letter to Amsterdam of the 5th April [144]. Work on these improvements had already been commenced by the 31st July, when a progress report was sent to Batavia [145].

More recommendations were made on the 29th August by the Visiting Commissioner de Wilde, who had also inspected the Castle in the company of the Governor. His opinion was that it should be entirely surrounded with a "fauchebre" (repeating the instructions of the 19th April 1695) and that there should be two ravelins in front of the gate. He also suggested that two "buttresses" should be built at the two sea-front bastions, in order to ensure a constant supply of water in the moat [146]. These recommendations were followed in part on the 19th September, when "the two ravelins and their canals were marked off before the gate" [147].

Further letters to Holland on the 31st March 1704 confirmed that the improvements recommended by Major Wels had been begun [148]. They also clarified the instructions of General Harman De Wilde, who was First Councillor-Extraordinary of India. These involved the excavation of another canal within the moat, which was to be as deep as sea-level and therefore guaranteed to be full of water even through the dry season [149].

The new fortification works had been commenced by the 14th June 1704 [150], and a

ship was sent to Madagascar on the 6th June 1705 to procure more slaves for the purpose [151]. Even convicts were employed on the new fortifications, five of whom were sent over from Robben Island on the 7th October 1705 [152]. Some of the soldiers of the garrison were also persuaded to commence work on the 12th October, with a promise of extra wages [153], and a further 25 soldiers were seconded from a ship in harbour, as noted in a letter to Middelburg dated the 31st March 1706 [154].

A progress report on the outworks of the Castle was sent to the Secret Committee of the VOC on the 21st April 1707. The ravelin protecting the gate had been completed, apart from its connection with the new outer curtain. This wall, in front of the gate and between the Buuren and Leerdam bastions, still needed to be linked with the gate. An earthen embankment had also been built between the Leerdam and Oranje bastions, but had not yet received its facing of sods, work having been delayed by a shortage of wheelbarrows. Maintenance had also been undertaken on the walls and bastions of the Castle itself [155].

Storm damage to the new outworks was reported on the 21st June, when the sods were washed away in three places, thereby causing the collapse of the earthen embankments [156]. Damage was also caused by stray horses and cattle, which trampled over the new ramparts during the night. An edict was therefore published on the 15th December 1707, compelling all the burghers to confine their livestock after nightfall [157].

The construction of the outworks, which had been suspended by the new Governor Louis van Assenburgh [158], was finally halted in 1710 by the Governor-General of Netherlands India, Joan van Hoorn, who was present at the Cape as Visiting Commissioner and Admiral of the return fleet. He considered that the "Fossebray" or breastwork would be a wasted effort as its associated ditch would be continually damaged by the inundation of the sea [159]. Apart from another two references to the powder-magazines [160], this was the last mention of the Castle in the Company's records consulted for the period of this thesis.

However, another visual reference has survived in E V Stade's plan of the Castle, dated the 19th March 1710 [Fig 26]. This shows the ravelin which had been erected to protect the gateway, and also depicts the outer fortification which had been projected between

the main walls and the moat. These outworks are particularly interesting, because the flanks of their bastions are shown as meeting the faces and the curtain walls at an obtuse angle, in comparison with the rectangular arrangement seen in the Castle itself. Had the outworks not been abandoned, they would have been the earliest example at the Cape of the new system of Dutch fortification advocated by Menno van Coehoorn.

Further descriptions of the Castle are found in the accounts of visitors to the Cape, although their chronology is usually inaccurate. Kolbe stated that the Castle was begun by Joan Bax and completed within three years [161], a misconception repeated by Heydt [162] and Mentzel [163], but he does correctly mention the ravelin built by Wilhem Adriaen van der Stel and the covered way ("bedekten weg") which this Governor commenced on the orders of Visiting Commissioner de Wilde [164].

According to Valentyn, the Castle was begun by Isbrand Goske in 1672, and largely completed in three or four years. This account is more historically accurate with regard to the main building campaign, but the initial commencement by Wagenaer seven years earlier is again ignored. He also referred to the covered way begun by Wilhem Adriaen van der Stel, but mentioned that it was far from complete when he visited the Cape in 1714. This is not surprising, given that orders had been given for its construction to be abandoned in 1710 [165].

The visitors' descriptions are nevertheless useful, particularly with regard to defects which the Council of Policy omitted from their records [166]. Kolbe mentions that the bastions had been so hastily built that they threatened to collapse whenever the cannon were fired. The stones had not been properly bonded, and the mortar contained little lime but consisted mainly of clay. This was so soft in places that a stick could be pushed into it to its full length [167]. Mentzel was critical of the staircases which provided the only means of access to the bastions. These prevented the placing of cannon without the use of a heavy crane, whereas the problem would have been avoided if ramps had been used instead [168].

The erection of the Castle, the only official building of this period still in existence, had been an extremely time consuming undertaking. This was due not only to its initial construction, but also to the necessity of keeping abreast with the latest developments in

military technology. Indeed, improvements and additional fortifications were made throughout the VOC occupation of the Cape, and were continued after 1795 under English rule.

Following recent excavations of the moat and the Leerdam bastion, Hall has suggested that the Castle was more a symbol of defence than an effective deterrent [169]. He reveals that "the moat-as-constructed was very different from the moat-as-intended", as is suggested also by conflicting contemporary descriptions [170]. He concludes by stating: "Thus the Castle moat, rather than a key defensive element, was more a gesture to the formal science of fortification" [171].

The moat, however, was more than just a gesture. A dry moat (and these were not uncommon) effectively increased the height of the ramparts to the extent of its depth. It also kept the enemy at a distance from the walls as they could not traverse its terrain without impediment. However badly constructed the moat might have been, it was certainly more than a symbol and, together with the poorly constructed Castle itself, was clearly a successful deterrent against attack from European powers.

The First British Occupation was accomplished by the Battle of Muizenberg, and the Second Occupation by the Battle of Blaauwberg across the Bay from the Castle. However insecure its defences might have been in reality, the Castle appeared impregnable enough for the British not even to attempt an attack on it the second time around, despite having occupied it from 1795 to 1803 and having made no significant changes to its configuration.

Moreover, no other power ever attempted to overthrow it, suggesting that it gave at least the impression of an impregnable fortress, or one that could only be taken with an unacceptable loss of life. Whatever its shortcomings might have been in reality, the Castle clearly succeeded as an effective deterrent.

6.6.3 BUILDINGS WITHIN THE CASTLE

6.6.3a RELIGIOUS BUILDINGS

As had been the case with the Fort, the first structure to be erected on the Castle site was a large shed for the storage of implements, which was commenced on the 16th November 1665 [1].

The building had been completed by the 13th January 1666, when the deceased minister Joannes van Arkel was buried inside it. This was at his own request, since it had been decided a month previously that the shed would be used as a church in future, as the hall in the Fort was not large enough for the increased garrison. For this reason the building had already been provided with a masonry gable and a floor of stone [2].

The shed or church was described in greater detail in a letter to the Seventeen dated the 22nd May. This structure, 96 feet long and 33 feet wide, had been built initially for storage purposes and for sheltering the workmen in bad weather. However, it was realized on completion that only a quarter of its length was required for storage, and that the remainder could be used as a church.

This was partitioned off from the rest of the structure, and a masonry gable had been erected on the seaward end. Part of the underside of the thatched roof had also been lined with rough linen, which had been whitewashed to improve the appearance of the interior. The installation of the pulpit and the benches for the congregation, however, had not yet been completed [3].

The consecration sermon for the new church was preached on the 4th July 1666. The building had been placed in the centre of the pentagonal site and, although constructed like a shed and roofed with reeds, was large enough to hold 1000 people [4].

On the 4th November 1668 the timber church was blown down in a storm [5]. This was not an immediate problem as the hall in the Fort was again being used for services, following a reduction of the garrison [6]. However, a larger space would be needed when the return fleet arrived, and men were set to work on the 23rd December to rebuild its walls. The pulpit, the consistory and the benches had fortunately escaped damage [7].

The church suffered a further collapse on the 27th January 1669, following heavy winds. The walls had now been rebuilt in masonry, and the structure had been completed apart from its timber roof beams [8]. The "new church" also appears to have been roofed with tiles, as it was noted on the 3rd December 1670 that a number of these had been blown off in another storm [9].

This is contradicted, however, by an entry of the 17th July 1672 describing further wind damage. This states that "the thatch of the New Church was considerably damaged and completely soaked through" [10]. Since both descriptions appear to be convincing, the only likely explanation is that the tiles had subsequently been replaced with thatch. This is possible, as unspecified repairs had been made to the roof on the 11th May 1672, following severe damage incurred on the 8th [11].

By the 3rd August 1673 work was under way on partitioning off two chambers within the church, using timber planks. These would serve as a temporary residence for the Governor when the Fort was vacated, but services would continue to be held in the remaining space [12]. The Governor moved into his temporary residence on the 9th July 1674, which was described as containing "some appartments (sic) suitable for offices, and with sufficient writing space". The following day the church was first used for Council meetings as well as for religious services [13].

The foundation stone for the Governor's permanent residence was laid on the 21st August. This would also contain a hall to be used for church services, and was an urgent priority as the old church was needed for other purposes [14]. Work was already in progress by the 2nd November [15], and it was hoped on the 26th December that it would be sufficiently complete for a service to be held on New Year's Day [16]. Whether or not this goal was achieved is not known, as the Journal for 1675 is missing [17].

By 1679 the old church had been converted into workshops for the smiths, the wagon-makers and the coopers. It was mentioned on the 26th April, however, that they would have to be relocated as the church was soon to be demolished. Not only was it unsuitably sited, but it was also in a dilapidated condition [18]. Orders for the demolition and levelling of the site had been given by the 23rd December, as noted in a

letter to the authorities [19].

The new "church" appears on Johannes Wittebol's drawings of the Castle, dating from c1679 [Fig 23]. It formed the central focus of the official wing between the Leerdam and Oranje bastions, and was approached by double stairs leading to an arched entrance. The hall was wider than it was deep, and was therefore entered on the cross-axis.

The Company's records make no further reference to this "church", which was later to be intersected by the "cat" wall, nor is there any mention of whether it continued in use during these building operations. However, the Jesuit astronomer Tachard, who visited the Cape in 1685, described it as follows: "We went first into a great Hall where they preach every Sunday until the Church be finished that was begun to be built without the Fort. On both sides of that Hall there are pretty handsome Apartments; they had us in to that which was on the Left-hand, where we were received by Monsieur Vanderstel" [20]. This description corresponds exactly with Wittebol's plan mentioned above.

By 1695 this hall had been replaced by the third "church" in the Castle. The new structure was also a hall forming part of the Governor's new residence built against the "cat" wall, and the first sermon was preached on the 22nd May [21]. The only official description of this hall was given in a letter to the Seventeen dated the 1st April 1703, when it was mentioned that it "had become too small and narrow for the congregation" [22]. This problem was overcome on the 6th January 1704, with the inauguration of the new church in the Company's garden [23].

A further account was given by Valentyn, who described it as a very large hall entered from the "stair", to the right of which was the Governor's residence [24]. This corresponds with Stade's plan of 1710 [Fig 26] which shows a long hall (No 49) entered at the end of its longer side, with a smaller hall (No 50) to the right. By this time, however, both rooms were incorporated in the residence as the "church" had been replaced by the permanent structure in the Company's garden. Valentyn also mentioned that he himself had preached in the hall of the Castle [25], but had found it to be less amenable than the church which replaced it [26].

Four different spaces had thus been used for religious purposes prior to the erection of

the first permanent church. The first had been the hall in the old Fort, the second was the shed in the centre of the Castle court, the third was the hall in the centre of the first official wing, and the fourth was the hall alongside the subdividing "cat" wall. The permanent church in the Company's garden finally rendered these temporary solutions unnecessary and, although radically altered, is still in use today (see Chapter 7.5.2).

6.6.3b NON-RELIGIOUS BUILDINGS

The evidence of the non-religious buildings within the Castle, as recorded in the Resolutions, is even more incomplete than that of the religious buildings addressed in Chapter 6.6.3a. Moreover, the few entries made were seldom architecturally specific.

The first guard-house ("Corps du Guarde") had evidently been completed by the 27th July 1671, when it was mentioned in connection with the murder of a soldier [1]. A wooden shed for storing the timber received from Holland had also been built by the 2nd May 1672, but there is no mention of its siting or configuration [2]. However, subsequent references to the off-loading of bricks on the 1st and 7th June suggest that this was located "below the new Castle" [3]. This "second shed" was also used for lodging slaves from a captured English vessel, as noted on the 12th March 1673 [4].

On the 22nd August orders were given for a second guard-house to be built, at the seaward bastion (Catzenellenbogen). This was to be be constructed of stock-bricks ("blaauwe moppen") brought from Holland [5]. By the 12th October the masonry work had been finished and all that remained was for the carpenter to erect the roof [6]. The new "corps de guarde" was ready for occupation on the 24th October, and work was commenced on the partial demolition of the old one [7]. This had evidently been built of timber, as temporary sheds for extra accommodation were erected on the 26th October from "the wood work of the old corps de guarde" [8].

By 1674 work had also been commenced on the stores along the curtains, the first of which was completed on the 20th February, when a new smithy was also begun [9]. On the 16th April, however, part of the inner wall of one of the warehouses under construction collapsed, following heavy rains. This was because the mortar had not yet dried sufficiently, and the masons were accordingly advised to proceed with caution

during the wet season [10].

Another guard-house was under construction on the 11th June 1674, at the southern-most bastion (Oranje), and once this had been completed it would accommodate the rest of the soldiers still quartered in the old Fort [11].

The temporary residence for the Governor described in the previous chapter [12] had been completed by the 9th July, and he celebrated the occasion by hosting a dinner for the senior officials. An apartment had also been built for the lieutenant of the garrison above the "corps de guarde" of the Catzenellenbogen bastion, but the other officers were still accommodated in the old Fort [13].

On the 21st August the first stone of the Governor's permanent residence was laid. This building, which was also to contain a hall for church services, was located along the curtain between the southern and south-eastern bastions (Oranje and Nassau) [14]. It was also mentioned on the 25th that stone from the old Fort was being used for its construction [15]. Although it was noted on the 2nd November that work on this structure was proceeding apace [16], subsequent entries refer only to the hall, and omit any mention of the residence [17]. This could suggest that it was only the church that was being built, and that the residence had been held in abeyance [18].

It was also mentioned on the 26th December that a second warehouse was under construction [19]. There is, however, no reference to the progress of this structure or the Governor's residence, owing to the absence of Journal entries for 1675.

No further mention of building work appears to have been made until the 14th March 1677, when a progress report was sent to the authorities. Once the gate had been completed, it would be flanked by guard-houses ("corps de guarde") on either side, and dwellings for an officer, a Merchant and the Secunde would be built above it. By this time the cashier, the storeman, the salary book-keeper and the Secretary had already been provided with accommodation in the Castle, but the minister, the sick-comforter and the Governor were still living outside [20]. A new storehouse was also under construction, and orders were given on the 2nd October for it to be completed as quickly as possible in order to accommodate the provisions already being transferred from the old Fort [21].

Following news that war with France had been renewed, it was resolved on the 6th July 1678 to postpone all projects for new buildings inside the Castle and concentrate on the defensive structure instead. The only exceptions were buildings that had already been commenced and whose completion could not be delayed any longer [22]. The threat of attack was short-lived, however, as peace was made with France on the 10th August 1678 [23].

By the 18th April 1679 the trade warehouse ("negotie-pakhuijs"), the surgeon's shop and dwelling, the carpenters' shop and the warehouse for timber and nails had been completed. Orders were also given for the original temporary storehouses to be demolished, on account of their unsuitable siting and the fire risk incurred by their thatched roofs [24].

A number of Resolutions concerning the buildings within the Castle were made on the 26th April 1679. The workshops of the smiths, wagon-makers and coopers, which were located in the old church, would have to be moved as this structure was about to be demolished [25]. These would be relocated in the warehouse along the seaward curtain wall, and the loft would be used as a dormitory for the craftsmen. However, part of this building was already being used to accommodate slaves, as the new slave lodge in the Company's garden was still under construction.

The old cashier's house in the Castle, which was inappropriately located and in need of major repairs, was also to be demolished. The re-usable materials from this house and the church would be salvaged for other projects.

It was also decided that the old Governor's residence outside the Castle [26], which had been used by the deceased Johan Bax, would be demolished. It was dangerously close to the Castle, and its heavy walls could offer protection to an enemy. Moreover, it set a poor example for the freeburghers, who had been given instructions over the past two years to demolish their own houses in the vicinity of the Castle. The residence, moreover, was dilapidated and in need of considerable repairs. It was therefore resolved that the building would be taken down, but that all the useable materials, such as woodwork, tiles and bricks, would be salvaged for use on the buildings still to be erected in the Castle.

There was, however, no suitable accommodation within the Castle for the new Commander who was expected soon. All building work was therefore to be halted, as far as was practicable, in order to provide a new residence in the Castle. This would be done by altering the dwelling presently used by the captain and the storekeeper. They would be given appropriate accommodation in the present carpenters' lodgings, making use of materials salvaged from the old Governor's residence for partition walls and ceilings.

The old Governor's residence, however, had also been used for the accommodation of Visiting Commissioners and other eminent persons, for whom no suitable lodgings were available in the Castle. It was therefore decided to use the pavilion ("speelhuijsje") in the Company's garden for this purpose [27].

Another building to be dismantled in the old Fort was the house of the Fiscal, located over the gate of the hornwork. It was equally dangerous, as its heavy walls could offer protection to an enemy, and it was also in need of costly repairs. It was therefore decided to accommodate the Fiscal in the house of the ensign and Secretary, next to the Castle gate, and to enlarge the dwelling by building another room above the gate. A belltower of well-proportioned dimensions would be placed above this room [28]. A new dwelling for the Secretary would also be built along the curtain wall adjoining the "corps de guarde" in the northern sea bastion (Buuren), using materials salvaged from the Governor's residence in the old Fort.

The armoury in the Castle was poorly sited, as it was subjected to continual south-easterly squalls in the dry season. The effect of these was that the guns were always filled with dust, requiring regular and time consuming cleaning. A resolution was therefore taken to relocate it along the curtain wall between the south-eastern and eastern bastions (Nassau and Catzenellenbogen), above the carpenters' workshop. The new armoury would be 18 feet wide and 30 feet long, with cabinets to protect the weapons.

It was also decided that additional store-rooms would be built along the south-eastern curtain wall [29], where the foundations had already been laid for a projected Commander's or Governor's residence. These would be 96 feet long and 14 feet wide,

and would make use of the materials salvaged from the old Governor's residence and the old church. The store-rooms would be used to house materials, cannon-carriages and timber, and could also be used as place of refuge for the freeburghers' and Company's slaves in times of war.

Instructions were also given for the doors and windows of all the buildings within the Castle to be painted, to protect them from the severity of the climate. Finally, it was decided to build a paved street inside the Castle. This would be two Rhineland roods wide, and would be located next to the dwellings and warehouses already erected along two of the curtain walls [30].

It was mentioned on the 27th April 1679 that the ships' timbers had been stored under a tiled lean-to roof along the sea curtain of the Castle [31], and that the surveyor would be provided with a dwelling in the Castle, as his old house next to the Company's stable was to be converted into a brewery [32]. It was also resolved on the 7th May that the walls of all the buildings within the Castle would be plastered with lime [33]. This important instruction was evidently carried out, judging by the number of visitors who commented on the whiteness of the walls [34].

The buildings within the Castle were first described by Georg Meister in 1677: "...Inside the fort (sic) there are no high buildings, as with us in Europe, since here all barracks, offices, the fine Church, and even the dwellings of the Governor and all other officials have flat roofs like the palaces in Persia and Italy..." [35].

This description was expanded upon by Johann Wilhelm Vogel in 1679: "...The buildings in it (the Castle) are flat on top, and the platforms on these are provided with iron railings, and here at times the Governor eats, and entertains officers from abroad and Company's Servants coming with the ships. Otherwise the principal use of these terraces is that on hot days one can get fresh air on them" [36].

These accounts need to be treated with caution, however, as both refer to a Governor's residence in the Castle, which had not yet been built by 1679, as noted in the resolution of the 26th April. Both authors visited the Cape on a number of occasions, and it is possible that their memories were at fault when recording their impressions of their first visits. In other words, they could have been describing buildings erected subsequent to

the dates of these visits.

The buildings within the Castle appear for the first time on Johannes Wittebol's plan and perspective [Fig 23], dating from c1679 [37]. The Castle is depicted from the shoreline with the original entrance protected by a ravelin and palisade. Beyond is an open pentagonal court, as the "cat" wall with its associated buildings had not yet been erected.

As far as the military aspect is concerned, each of the five bastions had a "corps du guarde" on its inner edge, aligned with the buildings along the curtain walls. Underneath the bastions themselves the following accommodation was found: Catzenellenbogen contained a house for the "constapel" and a powder-magazine; Nassau a cell for prisoners and two powder-magazines; Oranje and Leerdam a powder-magazine each; and Buuren another cell for prisoners and a powder-magazine.

Of greater interest, particularly since their internal planning is shown, are the buildings along the inner side of the curtain walls. These appear along four of the five sides of the court, the fifth range not yet having been depicted. However, the reference of the 26th April 1679 to buildings having been erected along only two of the curtains suggests that those shown on the other two sides were either under construction or still at the planning stage.

Three of the four accommodated workshops and warehouses. These were simply planned utilitarian buildings, aligned with the guard-houses located in the corners. The fourth, however, housed the official buildings, which were more formally planned and were set forward from their neighbours. This range created a visual focus to the interior of the Castle, albeit seen obliquely from the entrance, a consequence of the pentagonal arrangement which prevented an axial view of any one side.

The official wing was located between the Oranje and Leerdam bastions. It was symmetrically planned, with the hall used for church services in the centre, reached by two lateral staircases which led up to a landing giving access to a central doorway, as in the "cat" of the old Fort. To the left was the Commander's residence, comprising three rooms [38], and on the right-hand side were the houses of the captain of the garrison and of the storekeeper ("winckelier"). Cellars for wine and provisions were located

below these two houses, while an armoury was located above them on the third storey.

This is the only building whose facade is depicted in Wittebol's perspective. It was well-proportioned, with regularly spaced openings. Low doorways gave access to the cellars, taller windows gave light to the "piano nobile", and square openings occurred on the third floor. The complex, moreover, was slightly higher than the flanking guard-houses, as well as being set forward from them.

It did not, however, have the visual impact of the "cat" in the old Fort. The only architectural elaboration was the staircase and the arched doorway to the central hall, contrasting with the otherwise rectangular openings. There was no articulation of the roof-line, the horizontal cornice of which continued across the centre without even a pediment to accentuate the symmetry and break the monotonous repetition of windows. Whereas the Fort had established an architectural presence with the most limited of means, the Castle was little more than an example of pragmatic military engineering.

Moreover, whatever impact this wing might have made when viewed obliquely from the original entrance was destroyed by subsequent alterations. The first of these was the moving of the Castle gateway from the sea-front to its present position, thereby relegating the facade to a flanking position. The second was the erection of the "cat" wall, which intersected the centre of the facade at right angles.

Moving around the Castle in a clockwise direction, the next buildings were those erected between the Leerdam and Buuren bastions. These were the rice and provisions warehouses, which consisted of two long rooms with a passageway placed centrally between them. This is described on Wittebol's plan as the old gateway to the Castle. It is interesting to note that it is in the same position as the present gateway, which superseded the original entrance facing the sea [39].

The next range of buildings was that between the Buuren and Catzenellenbogen bastions, with the original gateway to the Castle centrally located and protected by its ravelin and palisade. The gateway is described in Wittebol's caption as "de nieuwe poort van 't Casteel", and is shown on the perspective with flanking pilasters supporting an entablature and pediment. These elements of stone, brought over from Holland, were almost certainly transferred to the present entrance [40].

To the right of the gateway was the main guard-house or "corps du guarde", and beyond it the temporary slave quarters. Once the new slave lodge in the Company's garden had been completed, these would be used as workshops for the blacksmiths, wagon-makers and coopers. On the left-hand side were the ensign's house and the equipage magazine. This careful planning, with the gateway to the Castle flanked by the main guard-house and the house of the ensign, was also negated by the relocation of the entrance, which at this stage had food stores on either side.

The fourth range of buildings, between the Catzenellenbogen and Nassau bastions, comprised the clothing store, the pharmacy and surgeon's room, and the carpenters' workshop. Although the plan suggests another previous passageway through the wall, presumably subsequently blocked up, this wing was asymmetrically planned.

The fifth curtain wall, between the Nassau and Oranje bastions, is shown without any buildings. This was intended for barracks ("wooningen"), but these had evidently not yet been designed. Lastly, there was a well in the centre of the pentagonal court, together with two others in the Catzenellenbogen and Leerdam bastions.

The Castle was also depicted in Wittebol's plan of the town and gardens [Fig 24], also dating from c1679, with the same four sides of the pentagonal court surrounded by buildings, although the curtain between the Catzenellenbogen and Nassau bastions is described as being lined with slave quarters, in contrast to the accommodation shown in his detailed plan of the Castle described above. The fifth side between Nassau and Oranje, as yet empty, was also described as being the projected location for additional dwellings.

As was noted in the presentation of the defensive structure of the Castle (see Chapter 6.6.2), the arrival of Simon van der Stel as Commander coincided with a dearth of information on architectural projects in the VOC records, an absence which also characterized the Governorship of his son Wilhem Adriaen.

Simon van der Stel originally took up his lodgings in the old Governor's residence, presumably the one in the demolished Fort which had been occupied by Governor Bax, as there was no suitable accommodation within the Castle. He therefore requested permission from the Seventeen to build a residence along the unbuilt curtain of the

Castle, where it had been proposed that sheds would be built [41].

The paved street along the inner edges of the curtain walls of the Castle, commissioned in April 1679, had been completed by the 22nd January 1680 [42]. However, it was resolved on the 9th March that the building for the storage of timber, materials and cannon-carriages, which was to have been erected along the south-eastern curtain wall, was no longer necessary [43].

The fifth curtain wall was still devoid of buildings, although the Visiting Commissioner Dircq Blom had proposed that a monopitched building should be erected there for the storage of artillery [44]. This decision, however, was overturned on account of the shortage of dwellings within the Castle for the Company's officials. It was therefore decided on the 23rd March 1680 to build these instead, together with more offices and an armoury. They were to be be 24 feet wide, similar to the width of the Commander's residence [45].

However, the existing buildings on the one side were only 15 feet wide, whereas those on the other had a width of 18 feet. These dimensions, moreover, were considered to be insufficient for the dwellings of the officials. It was therefore decided to set the new buildings forward, thereby solving the accommodation and aesthetic problems simultaneously [46].

Permission for Van der Stel to proceed with the construction of a Commander's residence was received from Holland in a letter dated the 20th June 1680. By this time he had already moved into the Castle, occupying the house of the recently departed captain, Dirck Jansz Smiendt, on the 23rd May 1680 [47].

However, the Visiting Commissioner Rijkloff van Goens Jr did not approve of the building of a new residence, noting in his report of the 20th March 1681 that the Commander had enough space in his present dwelling, which was three storeys high. He should concentrate instead on improving the warehouses, which had been badly built, and completing the dry moat and levelling the terrain around the Castle [48]. Indeed, the flat roofs of the warehouses in the Castle were in need of repairs as noted on the 1st November 1681. However, lime was in short supply, and shells were therefore requisitioned from Robben Island [49].

The new gateway had been completed by the 30th April 1684 (see Chapter 6.6.2) and, although described at length by Pearse and subsequent sources, is worthy of further comment. This structure comprised an excessively thin architrave hovering above the setbacks from the Tuscan capitals. The frieze and cornice corresponded with these setbacks in an equally non-Classical manner, and the split pediment surmounting the entablature was given a self-consciously steep profile, as can still be seen today [Fig 27].

It was mentioned on the 20th May 1684 that the copper ore brought from Namaqualand by the ensign Isacq Schrijver was smelted by Van der Stel himself in the old Governor's residence. This was presumably the one in the otherwise demolished Fort, which thus must still have been in existence [50].

Permission was given on the 16th July 1685 by the Visiting Commissioner Hendrik Adriaan van Rheede to build the subdividing wall extending from the middle of the existing Commander's residence to the Catzenellenbogen bastion. A new residence would be built against it, using the materials salvaged from the old, as would other officials' dwellings and warehouses [51].

By the 24th July 1685 work had already begun on the demolition of the old Commander's residence ("genaamt de kat") [52], and by the 29th August this residence in the demolished Fort had been largely dismantled, in accordance with Van Rheede's instructions. The only surviving portion had been used as a bakery for the garrison, but this function was now to be relocated within the Castle in the centre of the curtain wall between the "Orangie" and "Nassou" bastions. The new bakery would be 29 feet long and 14 feet wide, with a tiled monopitch roof to protect it against fire, and would make use of any salvagable materials from the old Commander's residence [53].

Simon van der Stel evidently proceeded with the construction of his new residence, but the Council of Seventeen took exception to these building works, as stated in a letter of the 27th August 1694. No plans had been submitted for approval, and the project had not received official authorization. Moreover, the Visiting Commissioner Wouter Valckenier noted in 1700 that there was a shortage of suitable warehouses and dwellings in the Castle. The only acceptable accommodation was that of the residences

of the Governor, the Secunde and the captain, the other officials having to make do with very small and cramped apartments [54].

Tachard's description of the Governor's (sic) residence in 1685 corresponds with those of Meister (1677) and Vogel (1679): "This House consists of a large Pile of Building, two Storys high, and very solidly built. It is covered with a very fair Tarrass, paved with broad free Stone, with Balconies and Iron Rails all round; thither they commonly go to take the fresh Air" [55].

This suggests that he too was describing an earlier residence than the one erected along the subdividing wall, the foundations of which were only laid in 1687 [56]. Moreover, he also states that his party was received by Van der Stel in the apartment to the left of the church (see Chapter 6.6.3a), a description which corresponds with the position of the residential quarters of the "opperhooft" annotated on Wittebol's plan of the Castle [Fig 23].

Simon van der Stel had innovative ideas about grain storage, and had evidently written to Batavia about his proposal for vaulted cellars, as a supportive letter was received from the East on the 9th March 1695: "It may be that the wheat at the Cape will likewise be better preserved from destruction in vaults there, than on lofts, as in Surat and Bengal where it is customary to bury the wheat in pits underground" [57]. It was also decided on the 9th May to move the smithy away from the powder-magazine, because of the risk of fire. This would now be located alongside the new bakery [58].

The unsuitability of the accommodation within the Castle was outlined in greater detail by Simon van der Stel in a letter to the Seventeen dated the 15th May 1695, in which he explained that there was no space for the prison which they had ordered to be built. Even the captain had to be accommodated in one of the bastions, while the lieutenant's lodgings were in a part of the powder-magazine in the "Catsenellenbogen" bastion, the ensign's were in the masoned-up sea-front entrance, and those of the garrison book-keeper together with his office were above the new gateway. These were all no more than cottages and cabins ("cotten en cabanen").

Every corner of the Castle was used for necessary activities: the bakery was between the Oranje and "Nassauw" bastions; the lodge of the carpenters and the wine and trade

warehouses were between the "Nassauw" and "Catsenellenbogen" bastions; the equipage warehouse and the smiths', coopers' and wagon-makers' workshops extended from the "Catsenellenbogen" to the Buuren bastions; the cashier and the storeman had two particularly cramped houses between the Buuren bastion and the new gateway; and the space between the gate and the Leerdam bastion was taken up by the grain and rice warehouses. The smithy, moreover, was situated very close to the powder-magazine, and would have to be moved to the bakery. There was thus no room in the Castle for the prison and gaoler's house commissioned by the Seventeen. Criminals would therefore have to be incarcerated in the guard-room ("corps du gard") and in the bastions [59].

By this time the subdividing wall had been completed, and the "nieuwe katt" [60] was first mentioned in the Resolutions on the 19th September 1695, in connection with the auctioning of damaged goods and materials [61].

The grain stores were mentioned again in a letter to Amsterdam dated the 23rd January 1696, when it was stated that they had been built "on the Italian plan" on either side of the subdividing wall of the Castle [62]. They were vaulted and "air-tight", and had already been erected in 1694, as related in a letter to Middelburg dated the 16th June 1696 [63].

Instructions were given on the 28th August 1698 for the married Company's officials to be provided with accommodation along the curtain between the Buuren and Catzenellenbogen bastions, and for a torture chamber to be built above the gate [64]. This could have been one of the three small rooms built above the gate for the Governor's guard, which were mentioned on the 18th March 1699 in a letter to Amsterdam [65].

Robert Betton provided a description of the hall in 1699, when he mentioned that Wilhem Adriaen van der Stel "Admitted us into a long Unfurnished Roome" in the Castle, on the arrival of his party [66].

Another account of the Castle was provided by Abraham Bogaert in 1702. He described the gateway as being elegantly ("cierelyk") built of yellow clinkers, and the Governor's residence as a sumptuous dwelling ("een prachtige wooning"). This, together with the

houses of the Secunde, the captain and other senior officials, was double-storeyed with a flat roof above, paved in stone and protected with railings ("leuningen") [67].

It was mentioned in a letter to the Directors dated the 31st March 1704 that the Visiting Commissioner Harman de Wilde had given instructions for the grain vaults to be converted into bomb-proof shelters for the soldiers, owing to the threat of war. Temporary stores were to be built for the grain until the crisis was over, but there is no record that this was ever done [68].

The porch ("puije") of the Castle was first mentioned on the 28th February 1705 as the venue for an official announcement. This was the landing above the staircase giving access to the "cat" or Council Chamber, and was regularly used for such purposes [69], one of the most noteworthy of which was the dismissal of Governor Wilhem Adriaen van der Stel on the 2nd June 1707 [70].

It was mentioned on the 29th August 1705 that the buildings in the inner court between the "Orangien" and "Nassauw" bastions were seriously dilapidated and in danger of collapse. Moreover, the tiled roof of one of them, the old bakery [71], was leaking badly. The decision was therefore made to demolish these buildings and replace them with new dwellings and warehouses, as well as a new bakery. They were to be provided with flat roofs, and work would be commenced at the first opportunity [72].

This work had evidently been completed by the 31st March 1706, when it was stated in a letter to Amsterdam that "Some old buildings in the back square of the castle have been broken down as dangerous, and replaced by others" [73]. Wilhem Adriaen van der Stel was not revealing the entire truth, however, as Stade's plan of 1710 [Fig 26] shows the bakery as the building separating the new Dolphin Courtyard from the rest of the inner court. This arcaded structure surrounding a fishpond, which occupied almost half of the rear court, was not mentioned at all in his letters or elsewhere in the VOC records. Wilhem Adriaen was thus following in the footsteps of his father, who had built the old Commander's residence without permission.

Unfortunately there is no contemporary visual information on the three-dimensional form of this courtyard. The earliest record of its elevational treatment is a drawing of Herman Schutte's dating from 1801, the original of which is lost and only a tracing of

which survives, together with one of the fountain itself [74]. The elevation [Fig 28] shows the central wing with a rectangular opening on axis with the fountain, beneath the stringcourse linking the single arched openings on either side. On the upper level were three square windows, irregularly placed. Whether this was its original configuration, however, cannot be established from the available evidence.

Confirmation that the courtyard had been built by Wilhem Adriaen was given on the 16th February 1707, when it was described that water from "the fountain behind the Governor's house" was used to put out a fire in the apothecary's shop [75].

By 1708 the Company's warehouses had again fallen into a state of disrepair, as was noted by the Visiting Commissioner C J Simons. A number of the beams had rotted at their junction with the walls, and instructions were given for replacements to be requested from Holland or Batavia, as they were too large to be procured from the local forests. Simons also noted that more grain stores would soon be necessary, and that some of the old lean-to structures in the Castle would have to be demolished for the purpose. However, no work was to be commenced until permission had been received from Holland [76].

The internal arrangements of the Castle are shown again in E V Stade's plan of 1710 [Fig 26], which differs considerably from the earlier plan of Johannes Wittebol described previously. Not only does it show the "cat" wall with its associated buildings and the Dolphin Courtyard, but it also reveals marked differences in the internal planning of the buildings.

This does not necessarily detract from the accuracy of Wittebol's plan. Stade's drawing is presented with less precision, and also transposes the Nassau and Oranje bastions. Moreover, it has already been mentioned that the buildings between these two bastions were demolished and rebuilt in 1705, and alterations were necessary to resolve the problems introduced by the erection of the "cat" wall. The hall was no longer required for church services as a permanent church had been built in the town, and new official residences had been erected along the "cat" wall itself.

Stade's plan shows all five sides of the Castle surrounded by a moat, with a ravelin protecting the entrance, now between the Leerdam and Buuren bastions, and connected

to it by a bridge.

To the left of the entrance was the main guard-room, followed by a clothing store and a salt warehouse. A powder-magazine was located in the corner, beneath the Buuren bastion.

Between this and the Catzenellenbogen bastion were a staircase to the Buuren bastion, the blacksmiths' workshop, the wagon-makers' workshop, another guard-house (the "oppasserswagt"), the equipage warehouse, the house of the store-master, and another powder-magazine under the latter bastion.

Between the Catzenellenbogen and Nassau bastions were an oil store, a staircase to the former bastion, an iron store, the trade warehouse, the pharmacy, a sallyport, the dispenser's warehouse, the carpenters' workshop, a staircase to the latter bastion, a prison cell ("'t donkergat"), and another powder-magazine under the Nassau bastion.

The accommodation between the Nassau and Oranje bastions comprised a medicine store, a room for the Assistant, a laboratory, a room for the bombadier, a new blacksmiths' workshop, a new wagon-makers' workshop, a new coopers' workshop, and another powder-magazine under the latter bastion.

The old official wing between the Oranje and Leerdam bastions now consisted of a warehouse, a staircase to the former bastion, a large room described as "d' oude cat" (and set forward as in Wittebol's plan, but no longer subdivided into smaller rooms), the cellar-master's store, the dispenser's store, the house of the captain of the garrison, a staircase to the latter bastion, the butler's house, and another powder-magazine beneath the Leerdam bastion.

Between this bastion and the entrance were an artillery store, which was not aligned with the other buildings but projected into the first courtyard, and a grain warehouse which constituted the largest uninterrupted space in the Castle.

The "cat" wall had only partially been lined with buildings by this time. To the left of the central opening were the two rooms with a central entrance hall constituting the house of the Secunde, with a lean-to beyond. The rest of the wall was still exposed in the first court, but the back of it was built up with an oil store and two grain cellars.

To the right of the archway through the "cat" wall, where the well had been preserved, was the Governor's residence, with wine cellars beneath. This comprised two long rooms facing forwards, and one behind the wall which communicated with the arcade surrounding a square pond containing the Dolphin fountain.

Flanking the arcade was a bakery and pantry ("kookpakhuijs"), which was linked on its outer edge with the outer range of buildings, and on its inner edge with a lime store next to the Governor's residence on the rear of the "cat" wall. Adjacent to the lime store was a materials store, narrower than the buildings on either side and not extending as far as the archway of the subdividing "cat" wall.

As mentioned previously, the introduction of this subdividing wall was an unfortunate episode in the development of the Castle. The attempt to create an architectural presence by the articulation of the official wing in the original scheme depicted by Wittebol was totally negated by this structure. It not only bisected this wing and destroyed its symmetrical design, but also, as the result of its off-centre arched opening, prevented the possibility of any visual focus being achieved from the new entrance.

Its associated Dolphin Courtyard, moreover, while doubtless an asset to the Governor's residence, had an extremely ill-resolved relationship with the other buildings in the rear courtyard of the Castle. It was an early example of a phenomenon seen so often at the Cape during the period of Dutch sovereignty: a set-piece which, although well designed, ignored its context to the detriment of the whole.

The Castle is shown three-dimensionally in two of Stade's illustrations, the first of which depicts it as seen from the anchorage [Fig 29]. Behind the bastions, the regularly spaced windows of the buildings lining the far side can be seen, as can those of the "cat" wall. This is slightly higher than the other walls and has a tall structure in the middle, which was probably either a chimney or a look-out tower. The entrance to the Castle is also shown, its pedimented portal surmounted by a domed belltower. A curious feature is the small lean-to structure attached to the Buuren bastion, contradicting the very principles of military engineering: this will be explained below in Mentzel's account of the Castle.

The second view is taken from Leeuwenhof, the garden house of the Fiscal Blesius [Fig 30]. Here very little of the interior of the Castle can be seen, but the ramparts are shown with a number of vertical protrusions, which were probably the sentry-boxes. Particularly noticeable in this view is the large scale and stark austerity of the Castle's exterior, in comparison with the three-dimensional variety and increasing urbanity of the growing town (see Fig 53).

Further descriptions of the buildings within the Castle were provided by visitors to the Cape in the 18th century. Kolbe mentioned the spacious and impressive ("treffelyke") residences of the Governor and the Secunde along the subdividing wall, and the magazines and workshops along the curtains. These had dwellings for the craftsmen on the upper storey, and were all flat-roofed [77].

Valentyn also described the roofs as flat, paved with large flagstones and provided with railings, allowing them to be used as promenades. He also mentioned that there was a double-storeyed house above the gate, surmounted by a domed belltower [78].

According to Valentyn, the oldest building within the Castle was the double-storeyed structure on the right-hand side, as one entered from the gate. This building, which was used by the Admirals of the fleet, had a number of large rooms [79], and the captain of the garrison was also provided with a dwelling alongside [80].

Next to it was the "Kat", reached by a stairway leading to the large hall in which church services had been held until 1704. The Governor's residence was to the right of this hall, and that of the Secunde to the left (across from the archway in the subdividing wall). The Governor's residence was double-storeyed, with fine ("schoone") apartments on both floors, and had a small courtyard containing a pond with Japanese gold-fish and silver-fish [81].

Both the Governor's and the Secunde's residences were described in complimentary terms as having been whitewashed. They were seen from the gateway across a broad open space in which a large ostrich walked up and down. To the left of the gate, in which one or two lion skins were to be seen hanging, was a small house for the store-keeper ("Winkelier"), but the rest of the buildings under the walls and bastions were used for storage purposes [82].

Returning to the subdividing wall, a large opening between the "Kat" and the Secunde's residence gave access to the rear court, on the far side of which was the lieutenant's house. The other accommodation consisted of warehouses [83]. It is clear from Valentyn's description here that he was referring to the "cat" as the Council Chamber, and not as the entire subdividing wall.

This is extremely significant, as it explains the meaning of the word "cat" as applied to the present Kat Balcony dating from the 1790s. In military terminology a "cat" (or "cavalier" in English) is a work raised higher than the surrounding ramparts, in order to command them from above. This was the case in the old Fort, where the "cat" was raised seven feet above the ramparts, but could not conceivably have been applied to the subdividing wall of the Castle. However, the functions which took place within the "cat" of the Fort (church services and meetings of the Council of Policy), were identical to those within the "nieuwe cat" in the Castle. The meaning of the word had therefore been transferred from the form of the structure itself to the nature of the activities that took place within it.

Mentzel (1741) was even more definitive in his reference to the "Katt", which he described as "a small double staircase that gives access from either side to the Government House". The landing was "covered with a vaulted roof which is supported by two stone columns and between which an iron balustrade is fixed". This was evidently a less elaborate predecessor of the present Kat Balcony, but there is no contemporary evidence to suggest that its roof had already been erected by 1710 [84].

Mentzel also explained the lean-to structure shown on Stade's water-front view of the Castle, thereby giving added credibility to the accuracy of this drawing [Fig 29]: "Outside the Castle a little cottage, containing two rooms, is attached to the Bastion Buuren. The first of these is occupied by the corporal and six men who are on patrol duty; the other by the Baaspompenmaeker" [85].

He also gave an extremely detailed description of the internal organization of the Castle, but as he arrived at the Cape only in late 1732 or early 1733, more than twenty years after the period of this thesis, his account has not been included. Modifications had already been made to the internal planning, as exemplified by an antechamber

leading to the main hall, which was not shown on Stade's plan.

Mentzel's description of these rooms is of crucial importance, however, as it confirms that the hall beyond the antechamber reached from the "cat" staircase was used for the meetings of the Council of Policy, a function which had been accommodated earlier in the hall of the "cat" in the old Fort [86].

Little mention has been made here of the surviving fabric of the Castle, which is the only large-scale structure from the proto-Cape Dutch period still in existence. This is because it was a building which was by its very nature subject to constant upgrading and alteration. Apart from the entrance gateway, therefore, not much can be inferred from the Castle in its present state, despite its recent restoration, of its configuration in 1710.

6.7 THE WATER-FRONT BATTERIES

Apart from the Duijnhoop and Santhoop redoubts already described, other water-front batteries were also proposed during the proto-Cape Dutch period, some of which were erected.

Commander Wagenaer had suggested on the 19th April 1665 that a watch-house should be built at the mouth of the Salt River to prevent the smuggling activities of the free-burghers, but nothing came of this proposal [1].

The possibility of building a redoubt for the protection of the new Castle, which was originally intended to be sited around the old Fort, was raised on the 27th August. However, the project was cancelled by the Visiting Commissioner Isbrand Goske, who decided that the Castle should be located further to the east [2].

Of greater significance was the relative indefensibility of the Fort and the incomplete Castle against an attack from the rear, as was discussed on the 16th February 1671. It was therefore resolved that breastworks of earth would be erected at all the places where a landing could be attempted by an enemy [3].

This became more urgent after news had been received on the 30th August 1672 that

war had been declared with Britain and France. The coast would therefore be inspected from the Salt River to behind the Lion Mountain and the "Cloof" (the present Kloof Nek) for places where the enemy might make a possible landing. Any of these places which were not naturally fortified would be protected with breastworks of earth, as had already been decided on the 16th February 1671, but had not yet been carried out [4].

As a result of this inspection, undertaken by the Acting Commander Albert van Breughel on the same day [5], it was decided on the 3rd September 1672 that an earthwork would be erected behind the Lion Mountain, in accordance with a design provided by the surveyor. This would protect a certain inlet where two or three "chaloups" were capable of landing, and was to be built with the assistance of 25 sailors who had been taken from a ship in harbour. Other earthworks were also to be built at the Salt River and the "Cloof" [6].

This battery behind the Lion Mountain had been commenced by the 5th September [7], and the burgher councillors announced on the 7th that they would take responsibility for the erection of a small battery to replace the demolished Duijnhoop Redoubt [8].

The burgher battery at the Salt River had been completed by the 16th September [9], as was the sailors' battery behind the Lion Mountain by the 22nd [10], and it was decided on the 27th to provide the the former with two 6-pound cannon and the latter with two 4-pounders, and to garrison them with a few men [11].

There are unfortunately no verbal descriptions or visual records of the form of these two batteries, nor is there any evidence of the third one at the "Cloof" ever having been erected. However, a "Matrosen Schans" or "Fort des Matelots" is shown in the vicinity of the present Sea Point on M1/1182 [Fig 31], a French map dating probably from c1707 [12]. The "Matrose Schans" appears again in the same position on M1/1176 [Fig 32], a survey plan of the settlement also dating from the time of Wilhem Adriaen van der Stel.

Wagenaer's idea of building a redoubt at the mouth of the Salt River for the prevention of smuggling was raised again on the 11th August 1676 by Governor Bax. However, although he inspected the terrain for a suitable site, there was no further mention of this project either [13].

A battery of a different kind was commissioned by Simon van der Stel on the 21st December 1696. This was an old ship, the "Swarte Leeuw", which had been used as accommodation for convalescents awaiting the next fleet. As this vessel had been irreparably damaged in a recent storm, it was decided to sink it and use it as a battery in times of war [14]. This had been done by the 30th January 1697, the ship having been ballasted and sunk in front of the jetty, from where it could offer water-line protection to the entire shore [15].

The fortifications were inspected in 1702 by Christoffel Wels, Major of the Artillery, who arrived on the 30th August. He recommended that another battery should be erected next to the gallows on the slopes of the Lion Mountain, in order to give extra protection to the anchorage [16].

His recommendation was repeated by the Visiting Commissioner General Harman de Wilde in 1704. This was to be a musket shot from the gallows hill and armed with twelve cannon, as mentioned in a letter to the Directors dated the 31st March [17]. This, however, was the last reference to the project during Wilhem Adriaen van der Stel's period in office.

Further instructions were given on the 10th February 1710 for the coastline of Table Bay to be inspected, in order to determine how to protect the Company's ships at anchor and prevent the possibility of an enemy landing. A resolution was also passed that a battery should be erected below the gallows at the edge of the sand dunes extending from the Lion's Rump to the mouth of Table Bay [18].

A report on the inspection of the coastline was presented to the Council of Policy on the 22nd March, in a meeting presided over by Joan van Hoorn, Admiral of the return fleet and Governor-General of Netherlands India. A suitable location for the proposed battery had been found on the beach, about a musket shot to the west of the reservoir ("waterplaats"). The ground was stony and would provide a firm foundation for the artillery, and the location afforded a view over the whole of Table Bay. This would allow the battery to be erected at sea-level ("waaterpas").

A diagrammatic plan [Fig 33] was included in the Resolution, indicating that the battery would be built with two arms of unequal length, meeting at an angle of about 150

degrees. The longer arm, 24 Rhineland roods and 10 feet in length, would be equipped with twenty cannon which would protect the anchorage from approaching enemy vessels. The shorter would be 6 roods and 5 feet long and provided with four similar pieces of artillery. These would be used to outflank any hostile ships between the Whale Rock and the Lion's Rump. It was also pointed out that the cost of the project would not be excessive, and would be repaid "a thousand-fold" in terms of the losses which would be sustained in an enemy attack without the protection of this battery [19].

The construction of this battery does not appear to have been commenced until 1715. Generalized references to fortifications and batteries were made in the Resolutions of the Council of Policy on the 26th June 1714, in connection with the imposition of new taxes, and on the 28th August 1714, when instructions were given for building materials to be collected. Even the entry of the 12th March 1715 is unspecific as to the nature and location of the "nieuwe fortificatien" referred to.

A plan of Table Bay received in Holland in 1714, however, shows two batteries to the north-west of the Castle [Fig 34]. The further of these, later to be called the Chavonnes Battery, is described as being armed with 24 heavy cannon, and is almost certainly the fortification in question. The other one was closer to the town and is described as a projected battery, armed with eight pieces of artillery: this was probably the later Rogge Bay Battery.

Both of these batteries are described at length in the VOC records, but they fall outside the period of this thesis. However, another battery was also mentioned behind the Lion Mountain in the accounts of visitors to the Cape during the proto-Cape Dutch period. This was probably the "Matrose Schans" referred to previously.

According to Kolbe, it was a square earthwork mounted with four guns [20] with a small watch-house nearby, the whole area being enclosed by palisades. It had been built during Simon van der Stel's period in office, but his successor Wilhem Adriaen had removed the cannon and allowed the structures to go to ruin [21]. Kolbe was probably referring to the earlier battery erected in September 1672. Although this was armed with only two cannon, in comparison with the four of the structure in question, it is quite possible that it had been enlarged by Simon van der Stel.

Valentyn merely repeated Kolbe's description [22], but Heydt and Mentzel were more informative. Heydt described the battery in 1741 as being "mounted with some old cannon", and illustrated the "large and small Water-Redoubts" [23] in his fourth engraving [Fig 35]. He stated that "only a little of the latter" was visible "above the back of the Lion's Hills", but if it does appear at all in his drawing it is very indistinctly shown [24].

Mentzel also made reference to the old outwork "to the west of the Lion's Tail" which had been "neglected and abandoned", but mentioned that it had been rebuilt "in about 1736", and had been provided with a house for the accommodation of a corporal and six soldiers [25].

These early water-front batteries were to be followed by a more sophisticated arrangement of coastal defences in the later 18th century, but these are outside the scope of this thesis.

7. THE TOWN AND GARDENS

7.1 THE DEVELOPMENT OF THE TOWN

The initial development and subsequent expansion of the town were dependent upon the location of the Fort and the gardens, both of which predated any private residential buildings. Moreover, the orthogonal subdivision of the gardens, demarcated by ditches, was extended beyond them to determine the positions of the earliest streets. When the town began to encroach upon the lower end of the gardens towards the end of the 17th century, it continued to respect the orthogonal layout that had already been established.

It must be stressed that the town grew incrementally, and was not planned from the outset [1]. The Company's initial instructions to Van Riebeeck, dated the 25th March 1651, make it clear that no buildings were envisaged outside the Fort [2].

The Fort and the gardens had, however, been laid out parallel to each other, and the straight line demarcating the edge of the field of fire coincided almost exactly with one of the channels of the garden. It was along this line that the first buildings would be erected, and the street in front of them would later be extended into the gardens as a central avenue. The layout of the gardens and their correspondence with the edge of the field of fire thus permitted an incremental enlargement of the town on orthogonal lines. This will be discussed below, but must first be prefaced with an account of the initial development of the gardens themselves.

Work on the preparation of the first garden plots was begun on the 29th April 1652, under the supervision of the chief gardener Hendrick Boom [3]. These, however, were flooded by heavy rains on the 23rd July [4], necessitating the construction of "a furrow and a small dike on the upper side" in order to divert the stormwater around the gardens, a task which was commenced on the 31st July [5].

These entrenchments had been completed by the 29th August, when they successfully prevented another downpour from flooding the crops [6]. Their architectural importance, however, lies in the fact that they laid the foundations for the orthogonal layout of the town to follow.

The first building to be erected outside the Fort was the house of the gardener, as

mentioned on the 16th July 1653 [7]. This is depicted on the earliest surviving plan of the gardens, dating from 1654 [Fig 38].

This plan is inaccurate in many respects, not least with regard to the irregular outline of the gardens. They are also depicted as extending further towards the shore than in later drawings, which show them ending on the line of the moat behind the Fort. The latter, moreover, is given half-moons in the centre of the hornwork and cattle kraal, instead of batteries and a ravelin respectively. Even the gardener's house is incorrectly located to the north-west of the river instead of to the south-east, in closer proximity with the Fort.

It is useful, however, in stating that the "slooten" subdividing the garden plots were eight feet wide, and in showing the hen-house next to the gardener's house, with a proposed pond for the ducks and geese nearby. A distinction is also made between the lands of the Company to the south-east of the river and those recently granted to individual Company's officials on the other side.

The first traveller's description of the embryonic settlement in Table Valley was provided by Gijsbert Heeck in 1655: "To the West side of the Fort, along the flowing stream whence we drew water, there was now a fine enclosed Garden, where a Dutch Farmer of Amsterdam was set with his wife and children, to sow and cultivate the same, living there in a little house built of reeds... This Garden is being daily extended, and is surrounded and cut through by many channels leading from the stream, for the irrigation of the same..." [8].

During 1655 the gardens were extended towards Table Mountain, and were given more protection than before, as noted on the 10th September. The eight-foot wide ditches were now planted with thorn trees to protect the crops from wild animals, and a border strip three roods wide was cleared around all the gardens, now almost twelve morgen in extent. This was provided with a ditch on the outside, planted with trees for a wind-break, and an avenue of fruit trees was also to be planted within the border strip [9].

These precautions were evidently insufficient, as it was decided on the 29th April 1656 that the garden would be surrounded with a palisade, to prevent its produce from being stolen by "the common folk", especially the men from ships in harbour. Thorn

branches were also to be collected and planted outside the palisade, with the intention that they would have formed a natural fence by the time that the palisades had rotted [10].

Two plans of the Fort and gardens survive from 1656 (M1/25 and M1/26). Although differing in detail, the two drawings agree on essentials, M1/25 [Fig 40] probably being a slightly later copy of M1/26 [Fig 39], as it includes additional information. Both correctly show the orthogonal layout of the gardens beginning slightly behind the line of the rear moat of the Fort, and now extending much further towards the mountain. Both include the border strip surrounding the gardens, and the plots of the Company's officials outside on the north-western side, which now extend further up the slope.

M1/25 [Fig 40] also shows additional private gardens along the south-western and south-eastern sides of the border strip, and two new Company's gardens, one extending towards the mountain above the private gardens and another behind the Fort. The angled ditches leading water from the rivers to the gardens can be clearly seen in both drawings.

The gardener's house is correctly located beneath the gardens and close to the Fort, its front facade aligned with the re-entrant angle of the Oliphant bastion. The jetty is shown next to the mouth of the Fresh River, and two more structures have appeared to the north-west of the freeburghers' lands. These are the Company's brick-kilns and the yards where the bricks were moulded. The beginnings of a town, however, had not yet appeared. This would only follow the decision to allow freeburghers the right to erect houses between the gardens and the shore.

The first indication that this might be a possibility was given in the report of the Visiting Commissioner Rijckloff van Goens, dated the 16th April 1657. This stated that a distance of fifty roods had been surveyed around the moat of the Fort, in order to create an unobstructed field of fire. Any houses that might be built in future would have to be sited beyond this line [11].

This is a particularly important entry, as it reveals that the precise extent of the field of fire had not been considered by Van Riebeeck in his initial layout of the Fort and gardens. The relationship between the line surveyed by Van Goens and what was

eventually to become the central avenue of the garden was thus a fortuitous coincidence and not the result of prior planning.

It had already been decided by the 1st May 1656 to establish a public tavern outside the Fort [12]. This would be run by freeburghers, and permission was granted on the 18th for the gardener's wife to open the first inn [13], which was soon to be followed by others. However, it was not until the 26th July 1658 that reference was made to the actual erection of the first houses in the town [14].

These were also mentioned by Wouter Schouten in 1658: "...In this Castle (sic) dwelt the subjects and Servants of the Company, and outside it the freemen from our Fatherland... The latter... build houses of lime and brick..." [15].

A chart of the Fort, gardens and incipient town was sent to the Seventeen on the 5th March 1659. This showed "the houses that are commencing to be built in the town, whose name we are awaiting the masters to give" [16]. The map was probably M2/18 [Fig 41], the earliest plan to represent the freeburghers' buildings in the town, dating from 1658/1659 [17].

This was followed by M2/19, a drawing probably dating from 1660, as it was received in Holland in 1661. This drawing [Fig 42], which not only shows a much greater number of buildings than M2/18, but also depicts them in cavalier perspective, is the most detailed visual record surviving from Van Riebeeck's period. The earlier plan will therefore not be described here, but its differences from the later one are detailed in the notes [18].

The 1660 cavalier perspective [Fig 42] reveals that the Company's gardens had been widened to incorporate the officials' plots shown on the 1656 plan [Fig 40]. Those above the border strip had also been taken over, and the small garden beyond them was now extended to the full width of the lands below. Beyond this a new garden had been established, but this one was shifted to the south-east. The small garden behind the Fort had also been considerably widened and extended further up the slope.

New freeburghers' lands had been granted adjoining the north-western edge of the Company's garden and its lower edge, as well as below the gardener's house. The

largest of them, however, were some distance to the south-east of the Fort, and these were probably intended for pig breeding as will be mentioned later [19].

The canal excavated to protect the jetty by diverting water behind the Fort is shown, and the lower course of the river had been slightly altered and now led into a pond where water for the ships could be collected. This would be superseded by a brick reservoir after Van Riebeeck had departed.

The old gardener's house is still shown in its original position next to the Fort, with an annexed tailor's workshop. All the other buildings were outside the dotted line representing a fifty rood building line around the Fort, corresponding with a field of fire within which no new buildings were permitted to be erected.

The Company's brick-kiln shown on the 1656 plan [Fig 40] is described as being empty, and was now used as a yard behind the new stable, which also incorporated the abandoned horse-mill [20]. Close to this structure was the freeburghers' brick-kiln, also described as being empty or abandoned, despite still being used in the 1658 plan [Fig 41]. This is probably explained by the appearance of a new freeburghers' brick- and tile-kiln at the upper end of the gardens, on the north-western side.

The equipage magazine, described on the 1658 map [Fig 41] as a boathouse, and on this drawing [Fig 42] as the cable store, was on the edge of the shore of Rogge Bay, where ship repairs were undertaken. Between this building and the Company's water-mill, alongside the angled canal at the lower end of the gardens, were the houses of the freeburghers. These, together with the mill and the equipage warehouse, were aligned along the building line, which was later to become the Heerengracht. Three cross-streets, Oliphant Straet, Reijger Straet and Heere Straet had already been named, showing that at this early date the orthogonal layout of the gardens had already been extrapolated into the beginnings of a town.

By the 1st April 1661 nine town erven had been granted [21], evoking a negative response from Amsterdam on the 23rd August: "From your letters we have remarked that you are gradually tending towards the building of a town there, and the enlarging of the colony; but as we look upon it here, this idea should be abandoned" [22]. This was because of the costs already incurred in maintaining the settlement, and is a clear

indication that the establishment of a town was not the Company's intention.

Van Riebeeck replied on the 9th April 1662 that his ideas for the town were "very little" in scale, and that it had "more the name than the reality". However, he would no longer grant freedom to any burghers who were not involved in agriculture [23], and on the 5th May he instructed his successor Wagenaer to follow this directive [24].

Once the town had been established, however, its growth could not be halted, and Wagenaer granted another plot as early as the 2nd October 1662. This property was located across Reijger Straet, thus closing off one of the three original streets of the town [25].

Two buildings were also under construction at the lower end of the Company's garden on the 21st November 1663, as noted in a letter to the Seventeen. One would be used for the storage of vegetables prior to shipment, and the other was a new dwelling for the chief gardener and his family. It was also intended to build a row of huts next to the gardener's house for the accommodation of slaves [26].

A small timber bridge next to the jetty was mentioned on the 17th August 1664, when it was washed away in a storm. This must have given access across the stream which supplied water to the moat of the Fort [27]. Another building to have been erected was a large shed parallel to the shore, slightly to the west of the reservoir. This was intended to be used as a market, as noted on the 19th April 1665 in a letter to the Seventeen [28].

The growth of the town was independently confirmed by Wouter Schouten after a second visit in 1665: "We also found that around the Dutch Castle (sic) the number of houses and dwellings, all built as in the Fatherland, was so increased that this Town... stands to grow before long to a prosperous city..." [29].

However, most of the buildings already erected in the town were threatened with demolition as a result of the extended field of fire which would have been established by the initial plan to build the new Castle around the existing Fort. This was first mentioned on the 8th June 1665 [30], and was confirmed in a number of reports presented to the Council of Policy on the 27th August. These buildings were the houses

of the freeburghers, the hospital, the reservoir and the water channel, the market, the lime-kilns and the pottery kiln, the water-mill, and the slave lodge. A considerable portion of the Company's garden was also affected [31].

This plan was not implemented, though, and the Castle was sited to the east of the old Fort as indicated in a drawing of the town and gardens dating from 1665 [Fig 43]. This drawing shows some of the changes that had taken place since the departure of Jan van Riebeeck, but omits other developments. Moreover, the legend is identical to the 1660 cavalier perspective [Fig 42], apart from four extra entries added beneath it. These involved the Castle, the market, the new lime-kiln, and the new brick-kiln with its adjacent shed.

The buildings which were omitted are those at the entrance to the Company's garden (the vegetable store, gardener's house, and huts for the slaves mentioned on the 21st November 1663), and Juriaen Jansz's property (granted on the 2nd October 1662). This had closed off Reijger Straet, as mentioned above, but the plan shows the street still in existence. These anomalies suggest that the plan was only slightly later than the 1660 cavalier perspective, but had been re-used to indicate the new buildings outlined above. In its original form it could not have been made later than October 1662, given the continued existence of Reijger Straet. It was therefore probably based on a plan earlier than 1665, detailing the freeburghers' land grants in the town.

Indeed, the plots depicted along the as yet unnamed Heerengracht correspond almost exactly with the verbal descriptions of the land grants made in 1660 and 1661 [32]. These are shown on a plan derived from the verbal evidence [Fig 44], which reveals streets with a width of 48 feet and blocks with an equal depth of 140 feet. The blocks, however, are not of equal width, and there is considerable variation in the street frontages. Another anomaly is the siting of the plot of Juriaen Jansz along Zeestraet, which would block off the later Bergstraet from the water-front. These inconsistencies are a further indication that, although following a rectangular geometry, the town was expanded in a piecemeal manner without reference to a preconceived plan. A planned town, by contrast, would have had plots of consistent size.

To return to the 1665 plan [Fig 43], the old lime-kiln is shown next to the bridge at the

northern bastion of the Fort. This had been omitted on the 1660 drawing [Fig 42], although included in the captions. The new reservoir is also crudely depicted over the pond where water had been collected prior to its erection, and is another indication that this drawing was an alteration of an earlier one [33].

Of the other new buildings referred to above, the projected Castle ("'t Nieuwe begonnen project") is shown in diagrammatic outline on its present site. However, the Leerdam and Buuren bastions facing the town are not parallel with the Heerengracht, as they were later to be built. The abbatoir and market ("Marct off besaerhuijs") is shown as a long rectangular building right on the shore, directly to the west of the reservoir. The new lime-kiln ("Nieuwe groote kalck-oven") is also on the shore, between the Castle and the canal to the east of the Fort. Lastly, the Company's brick-kiln and its adjacent large rectangular shed ("Comps steenbackerij en daer bij staende loots") are shown in the south-eastern re-entrant corner of the gardens.

There are few entries on the development of the town between 1665 and 1679, when it was next depicted on plan. This is unfortunate, as considerable extensions had been undertaken in the intervening years. This scarcity of evidence, however, is partly compensated for by the accounts of visitors during the period.

De Rennefort described it disparagingly in 1666 as comprising "twenty mediocre houses" [34], but Volquardt Iversen was more complimentary in 1667/1668: "When I landed here I was astonished at the great changes I noticed since I had been there thirteen (sic: actually eleven) years before, in which time the Dutch had excellently built up the place. Previously there was nothing but a little Fort and a Garden near it, which was now grown to fifteen morgen, beside which a pretty large town had been built. There is now an excellent Church there, and many brick houses built in the Dutch manner, since they burn lime and make bricks there. There are various taverns and inns in the town, where one can take one's comfort; but they are somewhat costly..." [35].

The timber bridge outside the Fort was mentioned again on the 2nd January 1669. It had been partially dismantled in order to effect repairs, and this probably contributed to a blacksmith stunning himself when he lost his footing during a wind storm [36]. Further repairs to the bridge were being undertaken on the 24th August 1671, when it

was reinforced with stone at each of its ends [37]. However, continual repairs were still required, and it was decided on the 7th December 1672 that the timber structure would be replaced with an arched bridge of stone [38]. Instructions were also given on the 23rd April 1676 for stone to be collected from Robben Island for the construction of bridges [39]. On the 8th June work was commenced on a stone bridge at the Company's garden, and it was intended eventually to replace all the old timber bridges with structures of stone [40].

On the 25th February 1670 land had been granted to the minister for a new parsonage in the Company's garden. This entry is significant, as it was the first of a number of encroachments on the garden for the purpose of erecting official buildings [41].

The burial ground for executed criminals was first mentioned on the 26th November 1672, in connection with a public hanging. It was to the rear of the kraal behind the Fort [42]. Work was also proceeding by the 23rd October 1673 on levelling the roads and hollows of the open space between the old Fort and the new Castle. This space, later to be called the "Parade", was mentioned here for the first time [43].

Abraham van Riebeeck, when describing the construction of the Castle in 1676, also made reference to the town and its houses: "With such stones and masonry are built not only the Fort (sic), but also many of the freemen's houses, which now have been built here in large numbers, with gardens behind them, both around the new Fort and behind the Devil's Hill, as also to the left side of the old fort, where it well resembles a little Town" [44].

A temporary hospital on the water-front was under construction on the 22nd December 1676 [45], and it was decided on the 16th December 1677 that a new cemetery, and eventually a church, would be built on a subdivision of the Company's garden [46]. Further encroachments on the Company's garden were made on the 22nd February 1679, when it was resolved that a new slave lodge, chief gardener's house and vegetable store would be built there. It was also mentioned that part of the lower end of the garden had already been subdivided for use as freeburghers' plots [47].

Another plan of the town reveals its configuration prior to the arrival of Simon van der Stel. This is M2/21 [Fig 45], a drawing which has been given a number of conflicting

dates, but was almost certainly produced in 1679 [48]. The plan shows a town which had grown considerably, and was already encroaching on the Company's garden.

In 1665 there had been only a single line of houses along the Heerengracht, but by now another row of plots had been granted behind them, three of which had already been built upon. The uppermost block, moreover, which had previously comprised only the property of Hendrick Boom, had also been extended towards the garden.

Of the original three streets [49], "Elephantstraat" (Hout Street) and "Heerestraat" (Castle Street) were still in existence, but Reijger Straet had disappeared as a result of the enlargement in block sizes. However, two further cross streets had been introduced, "Zeestraat" (Strand Street) at the lower end and "Thuijnstraat" (Shortmarket Street) at the upper end.

The new plots were located along "Bergstraat" (St George's Street), which was parallel to the Heerengracht but did not extend as far as the shore, as it was closed off by the block of houses between "Heerestraat" and "Zeestraat". This was the consequence of the enlargement of the original land grant to Juriaen Jansz, which had since been extended to reach as far as "Heerestraat".

"Thuijnstraat", at the upper end, followed the line of the old boundary between the Company's garden and the gardens of the freeburghers, which had since been expropriated. The Company's garden, moreover, had been cut back to line up with the canal which had diverted the river around the Fort. This left an open space between the gateway at the top of the Heerengracht and the beginning of the garden itself.

To the east of this open space was another row of freeburghers' plots, none of which had yet been built upon, extending parallel to the shore along "Thuijnstraat", from the Heerengracht towards the Castle. These faced an open expanse of ground corresponding with the first freeburghers' gardens, which was later to become the Parade.

This row of plots was subdivided by two streets into three blocks. The first two of these blocks each contained only two plots with narrow frontages. The third had two similarly narrow plots, but there was also a considerably wider one at the end, which

was reserved for a building to be erected by the Company for visiting officials or for use as an orphanage.

The first of the two streets was "Kerkstraat" (subsequently built upon and no longer in existence), which led axially towards the projected church. The second was "Steenstraat" (Parliament Street), which ran alongside the eastern edge of the gardens.

"Steenstraat" led behind another block of four new houses along the eastern edge of the gardens, at right angles to the previous row, and separated from it by a street parallel to "Thuijnstraat". These houses had been built to replace those which had been demolished because of their proximity to the Castle. They were erected on considerably larger plots than the previous row, extending over two of the subdivisions of the old garden, thereby corresponding with the last block facing the Parade.

Another unnamed street separated this row of freeburghers' houses from the plot described on the legend as "V: Thuijnhuijs". This, however, is more likely to have been the first parsonage (see Chapter 7.5.3) than the Company's original guest house in the gardens (see Chapter 7.6.2). Not only is it similar to the other houses in the vicinity, but it also has no direct communication with the gardens. On the other hand, a rectangular structure is shown, but not captioned, on the site of the present "Tuynhuys". It is likely, therefore, that the caption on the map referred to the original name for the first parsonage, built as it was on a subdivision of the Company's garden.

Behind these five houses, the Company's garden had been encroached upon as far as its central avenue to make room for the church and the slave lodge, located on either side of the unnamed street mentioned above, and along "Steenstraat".

The church is shown as a Greek cross, standing as an independent pavilion within its square cemetery wall, the foundations for both of which had already been laid [50]. The original approach appears to have been from the direction of the shore, as a large open space, the full width of the church ground, is shown between the cemetery wall and the axial entrance from "Kerkstraat". This suggests that the original church square was intended to be on the northern side, instead of to the east as at present. This approach from the Parade would have been far more striking than the later insignificant entrance from the present Church Square [Figs 46 & 47].

The slave lodge, the foundations of which had also been laid, appears as a rectangular building communicating directly with the street behind.

The plans of the freeburghers' houses are also of interest in terms of urbanism. Of the 36 that are shown, sixteen have rectangular plans with the long facade facing the street, fourteen have L-shaped plans, five have rectangular plans where the short side faces the street, and one has a T-shaped plan [Fig 48] [51].

It is instructive that the houses to the east of the gardens all have their longer sides facing the street, whereas those entered through their gable ends are found in the older area of the town. While it is possible that some of these were out-buildings, it could be that the buildings shown on Wittebol's plan represent a change in internal planning arrangements, whereby the traditional Dutch town house entered through the shorter gable end was replaced by a new type entered transversely through the longer side. However, the configuration of the outlines shown, particularly those of the L- and T-plan, does not support such an early introduction of the "symmetrical three-roomed cell" which formed the front wing of the later town houses and farmhouses of the 18th century [52].

It is also noteworthy that the houses along the more densely built-up Heerengracht were beginning to become continuous, suggesting the street facades which were to become characteristic of the town in the 18th century, as will be seen in E V Stade's drawings of 1710.

In order to compensate for the encroachments made on its lower end, the Company's garden had been extended towards Table Mountain. The orthogonal layout was maintained, and the central avenue was described as being planted with lemon trees. However, the gardens of the freeburghers and Company's officials were largely random in form and haphazardly located, providing a counterpoint to the formality of the Company's garden.

The Castle, by its very nature as a pentagonal structure, could not be easily accommodated within an orthogonal arrangement. This was not yet an urban problem, however, as military requirements prevented any buildings from being erected within its extensive field of fire.

All that remained of the Fort by this time was the hornwork and the old Governor's residence, described here as dwellings or "huijsing". Both were to be demolished at the first opportunity. The materials salvaged from the former would be used for the slave lodge under construction. Those from the latter would be used to build either a house for visiting dignitaries from Holland or an orphanage ("weeshuijs"). This structure would be built on the plot at the end of "Thuijnstraat" mentioned above.

To the west of the hornwork was the jetty, now inconveniently sited in relation to the Castle. This was described as being 22 roods long, with stone walls on either side. At the edge of the shore was a bridge over which the water-casks were rolled, having been filled at a tank where the water channel reached the shore. This is shown as extending at a slight angle from the reservoir for an equivalent distance into the sea. Next to the reservoir a stagnant pool is depicted, which was probably the old watering place.

In front of this was the tannery ("leertouwerij"), a square building located in the corner of a square plot. Beyond it, on the edge of the shore, was a rectangular building described as a mill ("koorn en runmolen"). This was evidently built within the old market and abbatoir [53].

The last of the buildings along the water-front was the temporary hospital, which corresponds with the orthogonal layout of the residential buildings of the town. It was a square building which was aligned with the block of houses on the northern side of "Zeestraat", thereby becoming the first building to define the eastern edge of the Heerengracht.

Four other buildings are shown, all of them on the periphery of the town. The first was an L-shaped house owned by the Company, sited to the west of the open space between "Thuijnstraat" and the garden, and intended to be converted into a brewery. The second was the Company's old stable, shown in the same position as on the 1660 cavalier perspective [Fig 42], and again with three long rooms placed one behind the other. The third was the Company's old brick-kiln, beyond the parsonage ("thuijnhuijs") on the eastern side of the gardens, with its associated shed for the slaves. This, however, is shown behind the kiln, instead of alongside as in the 1665 plan [Fig 43]. The fourth was the Company's new brick-kiln, on the western side of the Company's garden above

the freeburghers' gardens. This consisted of two square structures and a rectangular building, but none of these were referred to in the Resolutions.

As has been stated previously, the development of the town was not planned from the outset, but was incremental. However, it was not haphazard, but followed the orthogonal pattern established by the earliest row of houses erected along the edge of the field of fire. Moreover, the blocks facing the Parade and those along the eastern edge of the garden corresponded closely with the lines of the irrigation channels designed by the first chief gardener, Hendrick Boom. The early town planning of Cape Town was therefore determined, if unwittingly, by the layout of the gardens which were a primary reason for the existence of the settlement.

The town, then, had taken the form of a double row of houses extending upwards from the shore, a single row at right angles facing the Parade, and another single row at right angles to the second, flanking the eastern side of the gardens. Completing the rectangular area described by the latter L-shaped arrangement of houses were the public buildings, comprising the church and the slave lodge. These would soon be joined by a new hospital across the avenue from the church, which would create one of the most effective urban compositions in the architecture of the VOC at the Cape.

The church and slave lodge, however, were not without their own urban significance. Not only were they the first public buildings to be planned outside the fortifications, thereby depriving the Castle of the central position that the Fort had held in the religious life of the inhabitants, but they also introduced a new formality to the growing town. Approached axially from "Kerkstraat", the church was originally intended to be seen from a distance across the square in front, with the slave lodge forming a backdrop which extended across the entire width of the churchyard [Figs 46 & 47].

There is a conspicuous lack of information on the expansion of the town in the Resolutions during Simon van der Stel's period in office. However, the descriptions of travellers and the reports of the Visiting Commissioners do provide a partial record of the more notable developments.

Elias Hesse described the town in 1681 as containing "some sixty or seventy Freemen, all of whom have well-built houses" [54], and there were eighty families living in the

town by the 16th July 1685, according to Raven-Hart [55].

This was the year of Visiting Commissioner Adriaan van Rheede's inspection of the Cape. He stipulated in his instructions that no houses were to be built closer to the Castle than the far side of the gardens, and that those already in existence were to be demolished [56]. This unreasonable demand (as the Castle had been re-sited in order to avoid such inconvenience) was not carried out, and the houses along the Heerengracht and "Thuijnstraat" were left intact.

Francois-Timoleon de Choisy described the town in 1685 as having "more than a hundred houses within a musket-shot of the fortress, all clean and white in the Dutch fashion" [57]. This number was also mentioned by his colleague, the Chevalier de Chaumont, who also commented that the houses "within and without, are as clean as those of Holland" [58].

Guy Tachard, another member of the French Jesuit party, stated merely that there was "a great town" at the Cape, a disappointingly uninformative account given his illuminating description of the pavilion in the Company's garden [59]. Valentyn also had little to say about the town on his first visit in 1685, apart from mentioning that one had to be careful when choosing one's lodgings, as otherwise one might well end up in a brothel ("Hoerhuys"). As a minister of the church, this was clearly a matter of concern to him [60]. Captain Ambrose Cowley was more informative, however, and wrote in 1686 that the town contained "not above 100" houses [61].

It was only in 1687 that the next official reference was made to the town and its buildings. This was on the 7th May, when Simon van der Stel suggested in a letter to the Seventeen that the Company itself should open an inn in the town, to protect the ships' crews and passengers from the exploitation of the freeburghers. Nothing, however, came of this proposal [62].

Masurier provided another uncomplimentary account of the town in 1687, describing it as "just a village, quite small, with very low flimsy houses built solely of brick" [63].

The first Resolution since 1679 to deal with matters concerning the town was made only on the 27th September 1688. Tents and stalls were to be erected for an annual fair

in Cape Town, following the example of Stellenbosch. However, there is no further mention of such events having taken place [64].

John Ovington stated in 1689 that the town contained "about an Hundred Houses", and that it had 500 inhabitants [65]. Both these figures are perhaps exaggerated [66], as William Dampier wrote in 1691 that he had counted only fifty or sixty houses in the "small Dutch town" [67]. This seems to be a more likely figure, in comparison with the 36 of 1679 and the 155 of 1709 referred to in Note 66. Christoffel Langhansz, moreover, described the town in 1694 as comprising "some 70 houses" [68].

Simon van der Stel recorded in 1695 that since his arrival at the Cape in 1679, 43 new houses had been built in Table Valley, 71 in the Cape District, 82 at Drakenstein, and 60 at Stellenbosch together with the church and drostdy [69]. If the 43 houses are added to the 36 shown in Wittebol's 1679-plan of the town [Fig 45] a total of 79 houses is realized, well short of the earlier estimates of 100. In fact, the figure might have been even lower, as Van der Stel was probably also including the farmhouses in Table Valley.

According to Picard, the Keizersgracht (the extension of "Thuijnstraat", now Darling Street) was also laid out in 1695 by Simon van der Stel, with a canal in front [70], but plots had already been proclaimed along its edge by 1679, as revealed by Wittebol's plan [Fig 45].

Valentyn noted on his second visit in 1695 that the town had been improved with regard to its buildings, but made no comment on its expansion [71]. William Erle stated in 1696 that the "Town is but small" [72], in contrast to Francois Leguat's exaggerated account of 1698, where he described it as containing 300 houses [73].

There were also few official references to the town and its development during Wilhem Adriaen van der Stel's term of office. The first of these was on the 28th September 1699, when it was mentioned that the freeburghers were levelling the open space between the Castle and the town, and constructing new water-furrows [74]. The second and last was on the 12th January 1705, when the place of execution was described as being behind the Castle, in contrast to its later siting on Gallows Hill [75].

Abraham Bogaert provided a description of the town and its houses in 1702, together with the slave lodge at the entrance to the gardens, and the church and hospital facing each other across the Heerengracht [76].

Valentyn landed at the Cape again in 1705, and mentioned the improvements to the town since his last visit in 1695, but was only specific about those of a residential nature [77].

In 1708 the Visiting Commissioner C J Simons noted that the roads leading from the Castle as well as those in the town itself were in a poor state of repair. Instructions were therefore given for them to be levelled, and inspected for further damage twice a year [78].

Maxwell stated in 1708 that there were 300 families living in the town and 120 in the country, and that there were 2000 "persons fit to bear arms", apart from the "600 soldiers" in the garrison. These figures appear to be exaggerated, however, as is confirmed by the census of 1709 [79].

There were regular censuses of the freeburgher population from 1696 onwards, the first recording a total of 1646 persons, of whom 1111 were free men, women and children, 78 were Dutch labourers, and 357 were slaves [80]. The last of these during the period under review was held in 1709. Although missing from the VOC records, it was supplied by Valentyn in his transcription of a meeting held in 1710 between the Council of Policy and the Admiral of the return fleet, Johan van Hoorn, Governor-General of Netherlands India. The total number was now 3698, comprising 1923 (sic) free persons (656 men, 339 women and 828 children) and 1775 slaves. Of these, 500 were living in the town ("at the Cape"), which now comprised at least 155 houses [81].

The land-surveyor Slotsboo was instructed on the 10th February 1710 to prepare a plan showing all the houses in the block adjoining the side of the Company's garden, together with those in all the blocks closest to the open space between the Castle and the town. Some of these houses were built too close to the Castle and should therefore have been demolished, but they had been allowed to remain where they were. Orders to this effect had already been given by the Governor General Rijkloff van Goens in 1682 and the Visiting Commissioner Hendrick Adriaan van Reede in 1685, but they had not

been carried out by the Van der Stels. This plan, which was of central importance to the period of this thesis, has unfortunately not survived [82].

The relocation of the gallows to the west of the Castle had evidently taken place by the 10th February 1710, when it was mentioned that a new battery would be built below them [83].

The first mention of the open space between the Castle and the town being used as a parade ground was made on the 20th October 1708, when a "Meeting and drill" took place "on the large square between the Castle and the houses" [84]. This open space is still known as the Parade, although encroachments subsequent to the VOC period have reduced its extent considerably.

The continued existence of the Parade was discussed on the 10th March 1710, when regulations concerning the future expansion of the town were introduced, following consultation with the burgher councillors.

There were four possibilities for future development. The first was on the Parade ("het plein voor of tusschen dit Casteel en de stad") from the house of the Fiscal Blesius [85] to the house of the burgher David Heufke. The second was alongside the Company's garden, the third at the foot of the Lion mountain, and the fourth in the vicinity of the watering place ("waterplaats").

The parade was rejected, as it was considered preferable for it to remain as an open space. The Lion Mountain and the watering place were also rejected, because of a shortage of fresh water. It was therefore decided that any future expansion would take place alongside the garden, which had an ample supply of water. This moreover was readily available for fire-fighting purposes.

A decision was also taken that the two vacant plots "adjoining" (probably on either side of) the existing Burgher watch-house would be added to the property on which it was built, which had been granted to the ex-Secunde Samuel Elsevier on the 12th March 1699 [86]. All three plots would also be partially expropriated to make room for a new road, 32 feet wide, leading to the market [87]. The two empty plots were owned by Wilhem Adriaen and Frans van der Stel, and extended as far as the rear wall of the

Fiscal's house and its adjacent properties, as did Elsevier's plot [88].

This entry suggests that all three plots extended across the present Burg Street (the width of which was expropriated) and as far as the present Long Street (there is no evidence of the contemporary names for these streets). Given that compensation was to be paid only for the remainder of these plots (between Burg and Long Streets), when it was resolved to purchase them in their entirety on the 11th March [89] (see also Chapter 7.5.1) it is likely that their extension across the former street had not been ratified by the Seventeen. Valentyn's plan, moreover, shows this street as open prior to the arrival of Wilhem Adriaen van der Stel [Fig 49].

The first Burgher watch-house would therefore have been between the vacant plots of the two Van der Stels, facing the present Long Street, and the Fiscal's house would have been on the south-eastern corner of the present Burg Street after expropriation. This house must therefore have faced "Berg-straat" (now St George's Street) rather than the square, if the new street extended as far as its rear wall.

The reconstruction outlined above [Fig 50] is only tentative, and cannot be proved without a thorough search of the original title-deeds, a task which falls outside the terms of reference of this thesis. Nevertheless, it appears to reconcile the verbal information with the visual records provided by the contemporary maps of c1699 [Fig 49], 1749 [Fig 51] and 1753 [Fig 52].

It was also decided on the 10th March 1710 that the Company would take over another two vacant plots belonging to the ex-Governors Simon and Wilhem Adriaen van der Stel. These were situated on the shore, between the equipage warehouse and the house owned by the burgher councillor Henning Hüsing [90].

The cemetery for the soldiers, sailors and slaves had still not been enclosed by the 11th March 1710, when yet another resolution was passed for a boundary wall to be erected. This was a matter of urgency, in order to prevent pigs and other animals from rooting in it and damaging the corpses [91].

Kolbe (1713) mentioned that this commoners' cemetery was located between the town and the Castle, on the Table Mountain side [92]. Mentzel (1741) confirmed that this

had been its original location, but that the cemetery had subsequently been moved to the west of the town, close to the "Water-casteel" which had since been erected [93]. The new cemetery is shown in this position in Heydt's engraving of 1741 [94].

Kolbe also stated that the town now contained 200 houses subdivided by streets with a width of 36 feet. He also mentioned that the canal between the church and the hospital had been revetted with walls of masonry, to protect it from further erosion [95].

Beeckman (1714) described the town as containing "2 or 300 Houses... having pleasant Rows of Trees before the Doors". He too stated that the stream had been canalized with walls of stone, "which adds much to the beauty of the Town" [96].

Valentyn (1714) described the view of the town from the roadstead as attractive and elegant ("aardige en cierlyke"), the buildings being mostly whitewashed. The town extended from the shore towards the Table and Lion Mountains, and was 750 paces ("treden") to the west of the ravelin protecting the entrance to the Castle. It had expanded considerably since his first visit in 1685, when the houses were few in number and sited far apart. In 1714, by contrast, he counted 254 houses, excluding the buildings of the Company [97].

There were four streets leading uphill towards Table Mountain, each 112 paces long and 15 paces wide. They were intersected by four cross-streets, of which the one closest to the shore was 350 paces long and 25 paces wide, although the others were only half this width. These subdivided the town into twelve blocks, four along the streets parallel to the shore, and three along those leading towards the garden. There were also a number of small cross-blocks ("kleine dwarsblokken"), containing three or less houses [98]. It is of interest that Valentyn makes no mention here of the new market square, which was already in existence at least five years prior to his final visit in 1714, as noted above.

Valentyn also referred to a plan of the town (No 38.B in his "Beschryvinge"), which was put at his disposal by Wilhem Adriaen van der Stel, and had been drawn shortly before the arrival of the said Governor [99]. This was M1/1165 [Fig 49], undated by the Cape Archives but presumably made in c1699, on the basis of Valentyn's evidence. The map, which shows the Duijvelsberg, the Tafelberg and the Leeuwenberg in three

dimensions, is the only one surviving between 1679 [Fig 45] and 1749 [Fig 51].

Athough inaccurate with regard to the depiction of the public buildings, it does largely correspond with the layout of the residential blocks in the 1679 plan [100]. Two further blocks of houses have now been added between "Thuijnstraat" and "Zeestraat", extending towards Signal Hill, but those on the eastern side of the garden have been omitted.

The open plot above "Thuijnstraat" giving access to the Company's garden had also been built upon, and was separated by a cross-street from the long block containing the hospital (incorrectly annotated as the church). This encroached upon the lower plots of the garden as far as the upper edge of the slave lodge, although it is shown here as extending only as far as the street between the church and the lodge.

A building is depicted in elevation, parallel to the lower end of the hospital block, towards the Lion Mountain and corresponding exactly with the position of the present Burgher watch-house, on the as yet unproclaimed Market Square. Although it is tempting to interpret this as the earlier watch-house, the evidence outlined above suggests a site on the block diagonally across the square, facing the present Long Street. Moreover, the fact that the plot in question is not demarcated suggests that it had not yet been granted or built upon.

A canal is shown in front of the houses along the Keizersgracht, linking the Heerengracht with the older canal which had diverted the river around the old Fort, no trace of which is shown on the drawing. This canal defined the upper edge of the Parade, in the centre of which a fountain was placed.

These houses are also inaccurately depicted, as the first block to the left of the Heerengracht appears as a double block extending beyond the street in front of the hospital, instead of aligning with those on either side. It is also noteworthy that "Kerkstraat", the street which had led axially towards the church in the 1679 plan, has now been built upon. The church and slave lodge, moreover, are shown only in dotted outline, confirming the tentative nature of this drawing.

Another building is shown immediately above the gardens, located on one of the

streams coming down from the mountain. This was probably the new water-mill mentioned above.

The contrast between the Company's and freeburghers' gardens is also instructive. Whereas the former are characterized by a strict orthogonal formality, the latter extend beyond them in a more random manner. Although many of these gardens have rectilinear subdivisions, they do not conform to the original grid, responding instead to the direction of the rivers alongside which they were located. This is further evidence that the rectilinear geometry characteristic of the Cape Dutch towns and farm layouts of the later 18th century was introduced by the Company rather than by the freeburghers.

Finally, the jetty is shown in a new position, far closer to the Castle than previously. There are, however, no references in the Resolutions to the rebuilding of this structure.

Two plans of the town dating from the mid-18th century are also useful in that they confirm some of the information contained in Valentyn's plan described above. The first is M1/336 [Fig 51], dating from 1749 [101]. Although inaccurate in some respects, for instance in depicting "Bergstraat" as continuing without interruption to the shore, it is useful in locating some of the buildings erected by 1710.

The row of buildings on the seaward side of "Zeestraat" extending from the Heerengracht to the jetty corresponds in location, if not in form, with the water-front buildings shown on E V Stade's drawing of 1710 [Fig 53]. These now comprised two Company's warehouses ("Magasijnen"), with the abbatoir ("Vleesch-hal") in-between. The jetty is shown in the same position as on Valentyn's plan, close to the Castle, and is described as being provided with water channels ("buizen") from which the ships were supplied.

Another row of residential blocks had been added to the north-west, towards the Lion Mountain, and the orthogonal arrangement was continued towards and alongside the gardens. A new public open space had also been created here. This was Market Square (described as the "Groote Plaats"), with the Fiscal's house shown in its eastern corner.

To the south-east of the square are the plots along the Parade, which had first appeared on the 1679 plan. These were no longer intersected by "Kerkstraat", although a bridge

across the canal in front corresponds to the position of the old route to the church. The plot on the corner, beyond "Steenstraat", which was intended to be used for an orphanage or a house for distinguished visitors, is now described as the house of the "Ondergouverneur".

Behind this row of houses are the church and the hospital, both of which are incorrectly depicted. The hospital is shown as a narrow cross occupying only half of its site, while the plan and position of the church are inaccurate. The new entrance to the church from a later square to the south-east ("Kerk-plijn") is correctly shown, however, the square having been expropriated from the back gardens of the freeeburghers' houses appearing in the 1679 plan. Behind the church is the slave lodge, which is incorrectly shown as wider than it should be. The planning is also unlikely, as will be commented on later (see Chapter 7.5.7).

Beyond the houses on the south-eastern side of Church Square, a new street extends towards Table Mountain, with buildings on either side. The continuous facade suggested by the drawing is ended on the garden side with the Company's pleasure house ("Lusthuis des Gouverneurs") and on the other side by the Company's stables, although the street continues with isolated freeburghers' houses on either side. The depiction of the guest house and the stables, however, does not correspond with earlier descriptions or later drawings. This inaccuracy applies to their siting relationship as well as their planning (see Chapters 7.6.2 and 7.3.3).

To the south-east of the stables are two blocks of what appear to be the beginnings of a suburban development. Four houses are shown, three of them U-shaped and one rectangular, each of which faces a formal garden. Two more such developments also appear to the north-west of the Company's garden, where a U-shaped house and a rectangular one face the long axes of their respective gardens. Finally, a large rectangular house with a smaller square structure placed behind it is shown set back from the street alongside the second of the suburban blocks mentioned above. This communicates with a very large garden which has been orthogonally subdivided, following the precedent of the Company's garden.

The extensions on either side of the Company's garden are almost certainly later than

the period of this thesis, although Kolbe did mention houses set back from the street. Mentzel disagreed with him on this point, but there is no record of when these developments occurred, owing to the absence of any town plans between c1699 and 1749. It is also difficult to ascertain how many of the additions on this drawing are accurate, given the unquestionable inaccuracy of many of the buildings depicted. The general layout, however, is largely correct, as can be deduced from the surveyor's plan of 1753.

This plan [Fig 52], which was produced by the sworn surveyor Carel David Wentzel in 1753 and copied by his counterpart Wernich in the 1790s, is a far more accurate depiction of the town. Although differing in detail from the 1749 plan, particularly with regard to the blocks along the water-front and the relationship between the Governor's pleasure house and the Company's stables, it does largely confirm the expansion shown in the previous plan.

Its particular interest, however, lies in the fact that it is the earliest accurate representation of the outlines of the church and the hospital. The gabled ends of these two buildings are shown as facing each other directly across the Heerengracht, creating one of the most striking examples of urban design at the Cape during the VOC period. This relationship was unfortunately lost in the late 18th century, when Simon van der Stel's hospital was demolished to make way for more freeburghers' houses, following the erection of the new hospital nearer to the Castle.

The slave lodge, on the other hand, is merely depicted as an undivided rectangular block abutting the church, and its internal planning is not shown at all. This is incorrect, as it should have been separated from the church by the street shown on the 1679 and 1749 plans [Figs 45 & 51]. Its relationship with the hospital, however, is accurately depicted. A transverse street (now Wale Street) separates the hospital from the Company's garden, whereas the slave lodge is built hard up against the lower end of the latter.

The most comprehensive illustrations of the town at the time of this thesis are those of E V Stade, dated 1710. One (M1/987) is taken from the anchorage and the other (M1/985) from Leeuwenhof, the garden house of the Fiscal Blesius in Table Valley.

The first of these views [Fig 53] extends from Devil's Peak to Signal Hill, at the foot of which were the gallows. Further gallows also appear behind the Castle, in the position of the place of execution shown in the 1767 map illustrated in Pearse [102]. The jetty is located close to the Castle, corresponding with its position on Valentyn's plan [Fig 49], and the Fresh River is crossed by an arched bridge, providing communication between the Castle and the town.

Although the Castle is still some distance from the town, the latter has begun to extend towards it along the water-front, defining the open space of the Parade behind. Closest to the Castle is the large Company's equipage warehouse. Between this and the Heerengracht are a number of small single-storeyed and irregularly planned buildings, which were also part of the water-front complex, and probably included the market and the old hospital.

The houses along the Heerengracht are double-storeyed, and lead up to the hospital, which is entered through a monumental gateway. Across the street is the church, which Stade depicts inaccurately as being closer to the shore than the hospital. The gable ends of these two buildings should have faced each other directly, as shown on Wentzel's plan of 1753 [Fig 52]. The perspective is also inaccurate here, but this was probably in order to give an indication of the shapes of the end gables of both buildings.

Next to the church, and shown too far back towards the mountain, are the houses on the Keizersgracht, facing the open space of the Parade. Although single-storeyed, these are larger in scale and more elaborately designed than those on the Heerengracht, suggesting a level of social differentiation. The most formally planned of these was almost certainly the town house of Henning Hüsing [103].

Whereas the view from the anchorage shows only one block of houses to the west of the Heerengracht, another two appear in the view looking towards the bay [Fig 54]. These extend towards the gardens in regular blocks as far as the upper end of the hospital, with more isolated buildings continuing up the hillside.

This view is on axis with the Heerengracht, with the hospital to its left and the church, partially obscured by the rectangular mass of the slave lodge, to its right. The church and the slave lodge, however, are set too far back from the street (see Fig 52), thus

obscuring one of the two triple-gabled buildings shown in the view from the anchorage [Fig 53]. On the other hand, another triple-gabled facade appears to the left of the church, which could have been the rear facade of the house shown well forward of the others in the anchorage view (see Chapter 7.2.1). The church also seems to be vertically exaggerated, possibly to allow its upper parts to be seen behind the bulk of the slave lodge.

Henning Hüsing's town house, beyond and below the church and slave lodge, was probably also not as tall as depicted here (see Fig 53). Behind it is another group of houses extending towards the mountain along the eastern side of the gardens, corresponding with those shown on plan in 1679 [Fig 45]. Only one of these appears in the view from the roadstead. Finally, another two isolated buildings appear above the gardens, one of them located on its upper boundary. This was almost certainly the new Company's water-mill.

Although the full extent of the town is not shown in the view from below, and the water-front buildings do not appear in that taken from above, and although there are certain inaccuracies in the location of some of the buildings, Stade's drawings are the most comprehensive representations of the town at this time. The diversity of the appearance of the individual buildings depicted is indicative of close and accurate observation. These drawings, therefore, cannot be dismissed, and must be considered as primary evidence of the appearance of the town in the first decade of the 18th century.

7.2 RESIDENTIAL BUILDINGS

Recent research has suggested that the form of the early houses of the town could have differed considerably from those of the later decades of the 18th century. This argument and other current interpretations will be assessed in Chapter 7.2.2, as they cannot be analysed without reference to the contemporary documentary evidence outlined below.

7.2.1 THE HOUSES OF CAPE TOWN

The houses in the town were of particular significance in the development of architecture at the Cape. It was here that new ideas were first attempted, which would later be disseminated to the inland districts. The most obvious of these were stylistic in nature, and the town already had a far higher proportion of gabled buildings in 1710 than Stellenbosch or Drakenstein did. Of greater importance, however, was the introduction of new planning types. It was in Cape Town that the first transverse plans were developed, and the "dubbelhuis" type used by Henning Hüsing and the Fiscal Blesius was as much a precedent for the symmetrical town house and farmhouse plans of the later 18th century as were the Van der Stels' residences at Constantia and Vergelegen.

The first residential building to be erected outside the confines of the Fort was the gardener's house. This was "at the gardens, outside the fort", but was blown down in a storm before it had even been roofed, as mentioned on the 16th July 1653 [1].

The location of the gardener's house (which had evidently been rebuilt) was described in greater detail on the 3rd January 1654 as "standing outside the fort at the gardens with the chicken and duck and goose houses" [2]. It is first shown on M1/22, a map of the Fort and gardens dating from 1654 [Fig 55]. It appears at the lower end of the latter, and the house is depicted as a rectangle with a hipped roof of thatch. The facade is asymmetrical, with two doors towards the edges and a single window placed slightly off-centre.

This reveals that the gardener's house was not planned as the symmetrical three-roomed cell often described as being the basis of the more elaborate T, U and H plans so common in Cape Dutch architecture [3]. Only one example of a symmetrical facade can be found in the visual records of the Van Riebeeck period, and evidence for the symmetrical plan is rare throughout the period covered by this thesis, except in the buildings of the Company and its officials.

The drawing of the hen-house suggests that it was a square structure with a pyramidal thatched roof, placed at an angle to the adjacent gardener's house.

Although the first dwelling outside the Fort, the house of the gardener can hardly be considered to have begun the development of the town. Such a development, however, was first suggested on the 21st August 1654, when a memorandum was presented to the Visiting Commissioner, the Hon Hulst, requesting permission to open a boarding house for the accommodation of visitors to the Cape. This would relieve the Company of the expense of feeding all and sundry from the Commander's table [4].

The matter was raised again in a letter to Holland on the 28th April 1655 [5], and permission for "one or more" inns to be held by freeburghers was given on the 30th October in a letter from Haerlem [6]. It was therefore resolved on the 1st May 1656 to establish one or two inns outside the Fort. These would provide board as well as lodging for the men from the ships [7].

The wife of the Company's chief gardener, "Annetje, the boerin" was granted permission to open the first tavern on the 18th of the same month [8]. This was followed on the 30th September 1656 by authorization for another inn to be opened, run by Jannetjen Boddijs of Doesburch, wife of the sergeant of the Fort, Jan van Harwaerden [9].

Permission for the latter was confirmed by the Visiting Commissioner Rijckloff van Goens in his instructions of the 16th April 1657. This would be built with the assistance of the Company, and was to be located on a line fifty roods from the Fort, as surveyed by the Company [10]. Van Harwaerden's inn therefore appears to have been the first residential building erected in the incipient town [11].

A third reference to the gardener's house was made on the 28th August 1658, when it was mentioned that it was constructed in brickwork [12]. The original house must thus have been rebuilt in masonry after 1655, when Gijsbert Heeck described it as "a little house built of reeds" [13]. It is unlikely that this was a "kapsteilhuis", given the vertical walls depicted in M1/22 [Fig 55]. It is more probable that it had a timber framework with an infill of reeds, possibly covered with a layer of clay plaster.

Its rebuilding would also explain the different facade treatment shown in M2/19, the cavalier perspective dating from 1660 [Fig 56]. There is also the possibility that it was relocated closer to the Fort when rebuilt, which would explain the siting discrepancy

between M1/22 and M2/19. Given that it appears on its new site in 1656, as shown on M1/26 [Fig 39], it is probable that it was rebuilt in masonry during 1655/1656.

This would be consistent with the fact that the first bricks at the Cape were fired only on the 24th March 1654, in order to rebuild the structures within the Fort [14]. The gardener's house in its original location would not have been a high priority in this regard, as it was isolated and did not constitute a fire hazard.

The closer location to the Fort could also have been for security reasons, given the tense relations with the Khoi. Moreover, the selection of a new site would have allowed the gardener to use the old house while the new one was under construction.

The sergeant Jan van Harwaerden was promoted to the rank of ensign on the 6th September 1658, on condition that he abandoned his "liquor and hostelry business as being too vulgar for a person of his position" [15]. His wife, however, appears to have continued to run the establishment after his promotion, and his death on the 18th February 1659. She was mentioned on the 26th April as completing the "capital house" begun by her husband, which would be used as a "first-class inn". Van Riebeeck had also contracted with the free masons and carpenters to build houses for two free bakers, as reported to the Seventeen on the same date [16].

The "Stadsherberg" kept by Van Harwaerden's widow was partially described on the 22nd November 1660, in an attestation concerning an assault there. "...He then went and lay down on a bench in the big room on the sea side, where he made a great noise and disturbance, and finally fell into the yard...". Mention was also made of a servant "retiring into the passage" [17].

This house was L-shaped in plan and located on the corner of the Heerengracht and Heere Straet, as mentioned above in the development of the town. The presence of a large room on the side facing the sea suggests that this was the bar, entered off the minor street. The reference to the passage indicates the presence of a planning element which was to be dispensed with in the Cape-Dutch houses of the later 18th century.

The other tavern in the town was mentioned on the 12th March 1661 when the inn-keeper's wife, Jannetjen Ferdinandus, was attacked by a soldier in front of the building

[18]. Apart from these two "privileged inns in the town", there was also a "fisherman's tap at the Salt River", as noted on the 20th March in an edict prohibiting the operation of illegal taverns [19].

The licence of the principal tavern was transferred on the 4th August 1661. As the widow of the ensign Jan van Harwaerden was now married to the dispenser of the Fort, she had "given up her work of tavern keeper of the main inn". This would be taken over by Hendrick Hendrickssen of Surwarden on condition that he erected a new building on the land that had been granted to him [20]. This suggests that the old inn was retained by the dispenser and his wife as a private house.

The residential buildings in the town are first shown in M2/19, the clearly presented cavalier perspective of 1660 [Fig 56]. The gardener's brick house is shown close to the Oliphant bastion, while the freeburghers' houses are further away from the Fort, along the edge of the building line demarcating the limit of the field of fire.

The gardener's house no longer has the hen-house next to it, but has an annexe which was rented to the free tailor. This is taller than the house, but it does not appear to be double-storeyed, although there are randomly positioned openings on two levels. The lower of these are on ground level and perhaps gave access to a cellar, while the door was on the right-hand edge of the facade.

The house itself has a symmetrical facade (the only one in the town, apart from the Fort), with a central doorway flanked by two equidistantly placed windows. Since this differs from the 1654 drawing [Fig 55], it is likely that the house was relocated and rebuilt, unless one or both of the drawings is incorrect [21]. The house and the annexe together form a rectangle, and both parts have pitched roofs with gabled ends, their ridges being parallel to the facade.

With one exception, all of the freeburghers' houses have rectangular plans and pitched roofs with gabled ends, superseding the hipped roofs of the earlier gardener's house and the buildings within the Fort. This may have been a result of the decision to build them of brick, allowing the use of parapet gables (where the edge of the gable projects above the thatch), which would not have been possible with wattle-and-daub walls.

Two of these houses face towards the Fort, being sited along the building line, while another six are similarly orientated but placed behind the front row of houses. Owing to the nature of the cavalier projection only the ends of these buildings can be seen, so their facades cannot be described. Six of them have doorways in the gable ends, some of these being centrally placed and others being off-set, while one has a window alongside with a loft window above. The other two do not have doors but have windows, again with loft openings above.

Whether the entrances in the gable ends of the six houses were the principal ones is not known [22], but it is more probable that they were entered from their long facades facing the Parade across the as yet unnamed Heerengracht. It is instructive, though, that even secondary doorways in the gable ends were unusual in the later Cape Dutch houses with T, U and H plans.

Four of the houses, however, are placed parallel to the shore, allowing their long elevations to be described. One of these, facing Oliphant Straet, is so small that it was probably no more than a store-room, with a single window centrally positioned in the facade. The building behind it has a single doorway towards the left-hand side, with no windows at all. The other two are closer to the shore, and both have doors at the extreme left-hand edge of the facade, the lower one also having three windows alongside. This evidence reveals that none of these houses had a symmetrical plan.

The exception to the rectangular format is the house at the corner of Heere Straet and the as yet unnamed Heerengracht [Figs 56 & 57]. This has an L-shaped plan (the earliest known instance of a non-rectangular plan), taking advantage of two street frontages, the ends and the intersection of the two wings being provided with hips instead of gables [23]. Both of the wings have centre gables, but in the facade depicted (that facing Heere Straet) the gable is not related to the asymmetrical arrangement of doors and windows in the lower portion of the facade [24]. One entrance is placed below the point where the gable meets the eaves, with a window to the left, while the other is located at the extreme right-hand edge of the facade. Between them are two more windows, neither of which is visually related to the loft window above. The latter is symmetrically located in the gable, suggesting that the upper portion of the facade (roof and gable) was considered independently from the articulation of the lower

portion. Architectural inconsistency aside, this is the earliest recorded instance of a centre gable in a domestic house at the Cape. The parapet gable itself is of a simple triangular form, with a square finial at its apex [25].

This house was the inn kept by Van Harwaerden's widow, explaining its elaboration and the necessity for two street frontages [26]. The gables would have given the inn a more notable presence than the other houses, and their existence could also be explained if the loft were used as a doss-house, given the large size of the window in the gable facing Heere Straet. The ensign was probably the only person able to afford a building of this size and complexity, receiving as he did a monthly salary of 32 guilders even before his promotion [27]. Moreover, he was also given the assistance of the Company in its construction.

The freeburghers' houses in the town were all threatened with potential demolition on the 26th August 1665, when instructions to erect the Castle around the existing Fort were discussed by the Council of Policy. Had these been agreed to, the houses would all have fallen within the extended field of fire, one of the major reasons why it was decided to locate the Castle further to the east [28]. Despite this reprieve, two of them collapsed on the 17th October 1665 following heavy rains, because they had been built with clay instead of lime mortar [29].

It was also mentioned on the 10th July 1671 that some of the freeburghers' houses in the town had again collapsed during a storm [30], but these were already being repaired by the 23rd July [31]. Further damage to the roofs of the houses was caused by a south-easterly gale on the 8th October 1673 [32], and again by north-westerly winds on the 2nd June 1676 [33].

Orders had already been issued by 1676 for all the buildings within the field of fire of the new Castle to be demolished [34]. These, however, had not been complied with by the heirs of the deceased freeburgher Thielman Hendrickz. It was therefore resolved on the 3rd September that if they were not prepared to co-operate, the officials of the Orphan Chamber would be empowered to auction the property. The highest bidder would be obliged to demolish the buildings, but could salvage the bricks, timber and ironwork [35]. The demolition of the freeburghers' houses in the vicinity of the Castle

was mentioned again on the 28th December 1676, when it was stated that four of those affected had been compensated with the granting of tavern-keeping licences [36].

Following the declaration of war between France and Holland, it was reiterated on the 2nd October 1677 that all the houses in the vicinity of the Castle were to be demolished. The four freeburghers who had not yet co-operated were given until the end of the month to do so. Orders were also given that the burghers and the Company's servants were to set fire to their houses or raze them ("off doen springen") in the event of an attack. This would prevent the enemy from using them as strongholds [37].

The freeburghers' houses in the vicinity of the Castle had all been demolished by the 23rd November 1677 [38], but the Governor's old residence in the remains of the original Fort was still standing in 1679. This had been used by Joan Bax, the very Governor who had ordered the demolition of the burghers' houses. It was therefore resolved on the 26th April to demolish this structure as well, to put an end to the ill feeling caused by the forced demolition of the freeburghers' houses two years earlier. However, visiting dignitaries had also been accommodated there, and the Castle had no suitable lodgings available for them. It was therefore decided that they would be put up in future in the pleasure house ("speelhuijsje") in the Company's garden [39].

A brief description of the houses in the town was provided in 1681 by Christopher Fryke, who mentioned their similarity to Dutch models: "Free-men... have dwellings built after a manner like as in Holland, but not so high nor so fine" [40].

The sale of one of the Company's buildings in Table Valley was concluded on the 1st July 1684. Erected by the past Governor Isbrant Goske near the Company's stable, it was originally intended for use as a brewery, but was later converted into a dwelling. It was sold to Lieutenant Jan Babtist Dubertijn, who was already living there, for 900 guilders [41]. This building appears as an L-shaped structure on Wittebol's 1679 plan [Fig 45], where it is annotated as "een Comps huys tot een brouwery geprojecteert geweest", thus inverting the sense of the resolution entry.

This was possibly the house referred to by Valentyn in 1685, when it was occupied jointly by the minister Overney and the "Geheym-Schryver" Kemels and his wife. According to Valentyn, who was annoyed not to have been offered accommodation by

Overney, it was a large and handsome house which had been erected by "Lieutenant Jan Baptista Dubertino", using the Company's materials which he was in charge of. He had subsequently been dismissed from the Company's service for this misdemeanour [42].

However, Valentyn's statement that Dubertijn built the house himself contradicts the statement in the Resolutions that it was already in existence. Moreover, the L-shaped structure depicted on Wittebol's plan was no larger than any of the other houses. It is also unlikely that a converted brewery would be described as a "large and handsome house". Indeed, the purchase price of 900 guilders seems remarkably low in comparison with the 1700 or 1800 guilders spent on the erection of Hendrick Boom's house on the Peninsula in the 1650s (see Chapter 8.4), and the houses of Blesius and Hüsing built shortly after 1700, which each cost 10 000 rixdollars to erect (as discussed later in this chapter).

Valentyn, therefore, was probably referring to a subsequent house erected by Dubertijn. According to Boeseken, he had iron, timber and bricks removed from the Commander's old residence in the otherwise demolished Fort and taken to his own house, where these materials were stored [43]. This could well have been the house he purchased in 1684, in which he had previously been living, and which he continued to occupy until the new one had been completed. Boeseken also mentions that Dubertijn had made use of materials (stone, bricks and reeds) intended for the erection of a barn at Klapmuts on his own house, confirming Valentyn's statement that he had used the Company's materials for the erection of his new dwelling [44]. Unfortunately Valentyn was not explicit about the configuration of this building [45].

Although no contemporary evidence is available on the form of Dubertijn's house, its history does illustrate that at least one of the Company's officials apart from Simon van der Stel was building on a pretentious scale as early as the mid 1680s. Moreover, he was doing so dishonestly with building materials which he had stolen from the Company. Similar practices would continue until the dismissal of Wilhem Adriaen van der Stel, but without such defalcations it is unlikely that the VOC officials would have been able to afford the imposing buildings which were later to be emulated by the free-burghers in simplified form.

Two other travellers' accounts of 1685 describe the houses of the town, but make no reference to Dubertijn's house. Francois-Timoleon de Choisy stated that: "...The houses in the town are thatched with reeds for the most part, but are so clean, so white, that one sees they are Dutch..." [46]. Captain Ambrose Cowley commented in 1686 on the lowness of the houses, owing to the strength of the winds from December to January [47].

Both accounts are instructive, De Choisy's in revealing that the earlier use of tiled roofs on the buildings of the Fort had not been continued in the freeburghers' houses, and Cowley's in confirming Fryke's account of 1681. The lowness of the eaves lines of the houses would also be addressed in another respect in a resolution of the following year.

This was on the 1st July 1686, when building regulations were first introduced at the Cape. All new houses in Table Valley were now to be built with walls at least 20 feet high, and lean-to roofs were prohibited. This would minimize the risk of fire caused by the use of thatch, which could be set alight by people smoking pipes in the street. The dry hedges ("dorre heiningen") surrounding the properties in Table Valley were also to be removed, and replaced by palisades or walls of masonry [48]. This edict was renewed on the 2nd January 1687 [49], and its necessity was confirmed by Masurier, who visited the Cape in the same year and described the the freeburghers' dwellings as "very low flimsy houses built solely of brick" [50].

Following the news that there was the possibility of a French attack, orders were given on the 23rd February 1689 that all the freeburghers' gardens, houses, fences and trees were to be removed from the vicinity of the Castle within three days [51]. Evidently the previous instructions to clear the field of fire had not yet been fully carried out.

Another building regulation was promulgated on the 12th February 1691 stating that all houses, barns and kraals were to be built with walls of masonry ("klipsteenen of klei"), without any use of timber posts ("wandpalen"), in order to conserve the limited supplies of structural timber [52]. A further regulation was promulgated on the 23rd August and again on the 27th September 1691, concerning the fire risk caused by the chimneys in the lean-to's of the freeburghers' houses. These were to be removed within the next two months, and the chimneys of the houses themselves were to be swept twice a year. The

undersides of the existing lean-to roofs were to be plastered with lime or clay as a fire precaution, but no such "afdakken" would be permitted on future buildings [53].

William Dampier described the houses in 1691 as "low, but well built, with Stone-walls; there being plenty of Stone, drawn out of a Quarry close by" [54], and William Erle stated in 1696 that "The Town is but small, & the Houses low, & colour'd white" [55]. The whiteness of the houses and the public buildings, commented on by a number of visitors, suggests that colour was not used on external walls during the period prior to 1710.

Valentyn was more specific on his second visit in 1695, stating that the burgher "Henning Huyzing" had built an impressive dwelling ("een schoon Huys") not far from the house of Olof Bergh, captain of the garrison, which was next to the church under construction on the Heerengracht [56]. This description suggests that Hüsing's principal house was not on Zeestraet, as previously assumed [57], but on the Keizersgracht, as will be discussed below.

On the 21st/22nd January 1692 the edict prohibiting the use of "wandpalen" in the walls of buildings had been renewed, but the requirement for walls 20 feet in height was relaxed, and a new regulation was promulgated stating that the eaves height could now be reduced to 15 feet above the ground [58]. However, it was noted on the 2nd December 1697, following an inspection of the freeburghers' houses in Table Valley, that many of their roofs were still too low, indicating that the previous edicts had been largely ignored. The regulations were therefore amended again to demand an eaves height of only 8 feet above street level, instead of the 20 feet and 15 feet which had previously been stipulated [59].

Abraham Bogaert visited the Cape in 1702, and mentioned that all the houses were built of stone, roofed with thatch and plastered with lime. Few of them were higher than one storey, on account of the strength of the winds, but two of them were taller than the others. These were the houses of the Fiscal Blesius and the burgher councillor "Henning Huizing" [60].

Valentyn was next at the Cape in 1705, when he mentioned that a number of double-storeyed dwellings had been erected since his last visit in 1695, when the first of them

had already appeared. He is slightly ambiguous in this regard, as he uses the term "dubbele huizen" in 1695 to contrast these houses with the single-storeyed buildings he had seen on his first visit in 1685, whereas he uses the terms "dubbelde wooning" in 1705 and "dubbel huis" in 1714 to describe a specific planning type characterized by a central hall with symmetrical rooms on either side [61]. Valentyn describes these houses as having two formal rooms facing the street, with other rooms in the middle and behind [62]. These formal "Zaletten" would not have been entered directly from the street, nor would they have been used for circulation purposes. They must therefore have been on either side of a central hall or passage, the central element of the "dubbelhuis" as defined by Meischke.

It is not unlikely, however, that the enlargement to a second storey was accompanied by a greater formality in planning. If this were the case, these "dubbele huizen" already existing in 1695 could be the first recorded examples of the transverse plan in the houses at the Cape. This plan type would characterize the Cape Dutch architecture of the 18th century, although the second storey would be omitted in these later houses of the farmers. However, the earliest firmly dated contemporary description of the "dubbelhuis" plan type is Valentyn's account of the houses of Blesius and Hüsing in 1705.

To return to the double-storeyed houses described by Valentyn, the first of these had been the two adjoining houses of Albert Koopman [63], but they could not compare with the magnificence of the later dwellings of Blesius and "Huzing", mentioned earlier by Bogaert. These were built in the Amsterdam manner, with "royale" apartments on the ground floor [64]. Both of the latter two houses were described in the "Korte Deductie" (1708) as being larger, higher and grander than Wilhem Adriaen van der Stel's house at Vergelegen [65]. However, the author of "Neutrale Gedagten" (undated) suggested that the Fiscal's house was included in this comparison only because of his lack of support for the Governor [66], and Adam Tas and Jacobus van der Heiden stated in the "Contra-Deductie" (1712) that Van der Stel was concealing the magnificence of his own house by comparing it unfavourably with those of Blesius and "Huysing" [67].

The house of the Fiscal Blesius had been erected in 1701, as revealed by a resolution of

the 28th February 1710, when he was granted an accommodation allowance to cover the costs incurred in building his own dwelling. This he had been compelled to do nine years previously, owing to the lack of suitable Company's premises, but had received no compensation [68]. Its correpondence in date with the erection of Vergelegen is particularly interesting, as both made use of the "dubbelhuis" plan type, as did Hüsing's new house which was built after 1695 but prior to 1705. This suggests that all three buildings could have been designed by the same person, but his name is unfortunately not known.

Kolbe (1713) mentioned that there were "upwards of Two Hundred handsome Houses, many of 'em very stately with large Courts before 'em, and large and beautiful Gardens behind 'em. The Streets, the Court Yards, the Houses and every Thing in 'em are kept (as is the Manner of the Dutch) extremely neat and clean". The houses, which were no more than one or at most two storeys high, on account of the strong winds, were whitewashed on the outside and had roofs of thatch, as tiles would have been blown away. They contained a number of comfortable rooms, and had an open space behind, which could be used as a kitchen garden in the wet season.

They had previously been provided with thatched lean-to roofs, but these had subsequently been prohibited. They had been only six feet high, and constituted a fire risk because of people who smoked their pipes in the streets. The chimneys of the houses were also inspected on a regular basis to ensure that they would not cause the outbreak of fire through negligence [69].

Valentyn's last visit to the Cape was in 1714. He agreed with Kolbe in describing the houses as being whitewashed, but mostly only one storey high, on account of the strong winds. They were built of stone and thatched with reeds, collected from the Buffels and Riet Valleys in the vicinity of the Company's post at Vissershok [70].

Valentyn's description of the "dubbelhuisen" has already been discussed [71], but he also provides further information on the houses of Hüsing and Blesius. The burgher councillor "Henning Husing" owned two houses, built next to each other on the road from the town to the Castle [72], the one in which he lived having cost him 10 000 rixdollars. The Fiscal Blesius had a similar house, with symmetrical rooms on the

lower and the upper storeys, and approached from outside by a staircase, as in the houses of Amsterdam [73]. The house of the equipage-master Brommert, in the street closest to the shore, was also described as an imposing building with a staircase leading to its entrance [74].

While the Resolutions reveal very little information about the form of the residential buildings in the town, Stade's two views dating from 1710 are invaluable in depicting the variety of house types in existence [Figs 58 & 59]. These fall into three groups: the "artisan" dwellings along the water-front, the larger "middle-class" houses along and to the west of the Heerengracht, and the "upper-class" residences on the Keizersgracht, facing the Parade.

The first group was located on the seaward side of the Parade between the Company's equipage warehouse and the Heerengracht. It consisted of three rows of buildings, which vary considerably in form, separated by two streets or alleys. The buildings are small in scale and, with one exception, are designed in a disorderly manner. They were interspersed with other water-front buildings such as the abbatoir.

The first block consists of four houses. The front two have shallow monopitch roofs [75], which are almost certainly examples of the notorious thatched "affdacks" which constituted such a fire hazard in the town. The two houses behind have pitched roofs with unelaborated gable ends.

Only the first house in the second block can be seen with any clarity. This appears to be a rectangular building with gabled ends and a simple triangular gable in the centre. The potential symmetry of the design is contradicted, however, by a forward projecting lean-to extension to the right. The similar structure to the left of the gable is probably a separate building, but it could be another extension. This building was possibly the abbatoir and market [76].

The first house of the third block is the most formally planned of this group, with an entrance gable placed centrally in a symmetrical five-bay facade. The central bay with its triangular gable is set forward from the rest of the facade, and the roof is hipped. This house is in the same position as the temporary hospital shown on the 1679 plan [Fig 45] and could well have been the same building [77]. This would explain its larger

scale, greater formality and different roof configuration from that of its neighbours.

The second group comprises the houses on the western side of the Heerengracht, facing the Castle across the Parade. These are double-storeyed with pedimented facades, although the pediments (or dwarf-gables) are not always depicted centrally. In contrast to the later flat-roofed double-storeyed town houses, however, they have pitched roofs with triangular gable ends. The use of two storeys is probably explained by the building regulations introduced on the 1st July 1686, requiring the eaves of thatch-roofed buildings to be 20 feet above the ground.

Although two storeys in height, these houses are comparatively narrow, the largest being only three bays wide. This suggests that although their owners had pretensions to erect more fashionable houses, they did not have the means to build on a large scale. It is instructive, however, that this street edge had been completely rebuilt during the fifty years since 1660, suggesting a considerable increase in the standard of living. Even Jan van Harwaerden's house, with its centre gables on two facades, had been replaced.

The view from Leeuwenhof shows two more rows of houses extending towards Signal Hill. Although not depicted as clearly as those seen from the anchorage, their variation in volumetric form can still be discerned. The first block consists largely of gable-ended houses, but one hipped building with a multiple-gabled facade is shown facing towards Table Mountain, aligned roughly with the shorter wing of the hospital. This building must therefore have been on the upper side of Market Square, despite the apparent open space between it and the insignificant building in the foreground.

The houses at the upper end of the outer block are similar to those along the Heerengracht, with double-storeyed gable-ended front wings. These, however, also have extensive rear wings. The first appears to be an L-shaped double storey, with a further single-storeyed rearward extension. The second seems to be a long rectangle with its gabled end facing the street. The diagrammatic nature of this area of the drawing unfortunately precludes any detailed analysis.

The third group of houses is that on the upper side of the Parade. Here again the view from the anchorage is confusing, in that the church (partially obscured by a hip-roofed building without any gables) is set too far forward. Moreover, the first of the two

triple-gabled buildings to the left of the church is set back from the second, whereas both of them should have been aligned along the Keizersgracht, facing the Parade. To compound the confusion, the church is located between two triple-gabled buildings in the view from above the gardens.

If, on the other hand, the unidentified hipped building was in fact aligned with the other two (instead of being markedly set forward as depicted), it could have been its rear facade that was shown in the view from Leeuwenhof, to the left of and thus beyond the church. This building could then conceivably be identified as Olof Bergh's house, which was on the Heerengracht and next to the church. If this were the case, though, Bergh's house would have faced the church rather than the Parade, given the triple gables shown from Leeuwenhof, but absent in the view from the anchorage. These gables, each of which is lit by a window at eaves height, are all shown as roughly full-height, in contrast to those of the other two houses under discussion.

These two buildings, to the left of the church in the view from the anchorage, both have hipped roofs and triple-gabled facades. Although depicted as single-storeyed, they were of considerably greater width than the houses described so far. The one closer to the church is the less formal of the two, with three asymmetrically positioned dwarf-gables or pediments which do not correspond with the three doorways in the facade. This building might well have been a tavern or lodging-house, given the number of entrances from the street.

The second of these houses is the most sophisticated residential building yet seen in the town, with a full-height centre gable flanked on either side by dwarf-gables. The centre gable is triangular, with its edges articulated by a moulding, while all three are separated from the facade below by a cornice which continues the line of the eaves. The facade, however, does not seem to correspond with the symmetry of the roof line. The drawing suggests the presence of a double staircase leading to a landing, but this is displaced to the right-hand side of the facade and the entrance doorway has been omitted. This contradiction is almost certainly explained by a draughting error, particularly since the rear facade has regularly spaced fenestration, in seven bays.

The view from the rear confirms the hipped roof and triple-gabled facade (seen also at

Constantia). The rear gable, moreover, is shown with a decorative outline. There is also a projecting element on the left-hand side of the roof, omitted in the view from the anchorage. This could have been a sideways-facing dormer, similar to the one at Constantia (see Chapter 8.5 and Fig 139).

This house, although conveniently located close to the Castle, could not have been the house of the Fiscal Blesius, as it has already been established that this was situated elsewhere. Its most likely owner was Henning Hüsing, whose house together with the Fiscal's was described by Wilhem Adriaen van der Stel as being "higher and grander" than his own Vergelegen.

Hüsing was also the owner of the farm Meerlust, which gave rise to speculation that it was this building that was being described in the comparison, and that the present farmhouse dated from the beginning of the 18th century [78]. This was not the case, however, as the "original" farmhouse has been "shown" to have been asymmetrically T-shaped in form, corresponding with the rear of the present house, although even this initial rearward extension is open to question (see Chapter 9.2.4).

Even in its present state, dating from an enlargement in the 1770s, Meerlust does not begin to approach the sophistication of Vergelegen. The town house in question could, however, be considered equivalent. The evidence of Stade's drawing aside, it is described (together with the Fiscal's house) by Valentyn as "schoone Huyzen, geheel op zyn Amsterdams, met royale Onder-wooningen". In other words, the houses were not only impressive, but also followed the fashions of recent Amsterdam practice.

Valentyn's evidence is also geographical. "Henning Huysing" built two houses in the town, next to each other on the road to the Castle ("op de weg na 't Fort toe naast malkanderen gebouwt") [79]. Two triple-gabled buildings do indeed appear on the Keizersgracht, facing the Parade, one of them less formally designed than the other and possibly let out as a lodging-house, as previously speculated. Moreover, it could also have been the earlier "schoon Huys" of Henning Hüsing described by Valentyn in 1695, later converted into an inn after Hüsing had built his new "dubbelhuis" next door.

The other one, symmetrical and complete with full-height centre gable at the front and

the back, both flanked by dwarf-gables, would have been the one in which "Huysing" lived. He informed Valentyn that the house had cost him 10 000 rixdollars, as had that of the Fiscal. Valentyn describes both of these houses as being "een dubbelde wooning onder en boven, en die, na de wyze der huizen tot Amsterdam, met opgaande trappen heeft" [80].

This is an extremely significant description. The "Dubbele Huis" had a central passage or hall flanked by symmetrically placed rooms on either side, a type which had developed in Holland during the second half of the 17th century [81]. The "onder en boven" refers to this plan being repeated on both storeys, which was not always the case in Holland, and suggests a particularly formally designed building. The "opgaande trappen" referred not to the staircase inside, but to the external steps leading to a raised landing at the entrance, as in the houses of Amsterdam and as suggested on Stade's perspective from the anchorage.

The plan was probably similar to the core of Van der Stel's Vergelegen, with a central passage or "galdery" having three rooms on either side, one behind the other. One of these could have accommodated the staircase, in an arrangement similar to those found in Holland and in the late 18th century Grosvenor House in Stellenbosch. The upper rooms would have been lit by the centre gables and flanking dwarf-gables, and a room across the passage from the staircase could explain the necessity for the sideways-facing dormer depicted by Stade.

What Valentyn's description reveals is firstly that "Huysing's" house (and the Fiscal's) was of the transverse-plan type, as was Vergelegen. In other words, the precedent for the symmetrical plan with central hallway extending the full depth of the house (the progenitor of the H-plan) was already firmly established by 1714. Secondly, Valentyn states categorically that the house was double-storeyed. The triple gables were therefore not an aesthetic whim, but a practical necessity for lighting and ventilating the upper rooms. This could explain the omission of the flanking dwarf-gables in the later single-storeyed farmhouses of the Cape Dutch style.

What is most significant is that it was not only the Company's officials who were capable of building houses on this scale. The precedent of the Governors' residences

was already being followed by wealthy freeburghers in the first decade of the 18th century, rather than taking a generation or two to be adopted in simplified form.

Behind Hüsing's" house are the dwellings extending up the eastern side of the gardens. These are not very clearly depicted, but most of them appear to have gabled rather than hipped ends.

Lastly, the farmhouses in Table Valley must be considered. Not many of them appear in the two drawings, but they are all variations on the house types found in the town. Some have hipped roofs and some have gabled ends, while four have centre gables. One of these is shown above the Company's equipage magazine, while another two appear directly above Hüsing's town house in Stade's view from the anchorage.

The fourth is probably Leeuwenhof, the garden house of the Fiscal Blesius from which one of Stade's illustrations was made. Shown from the anchorage above and between the church and hospital, it appears with a central gable and hipped roof. The title-deed, however, has a sketch depicting three dwarf-gables or dormers articulating the hipped roof, together with the fountain shown in the foreground of Stade's view of Cape Town taken from this house [Fig 59] [82]. Given the distance of Leeuwenhof from the anchorage, Stade probably simplified the facade, which is shown far more diagrammatically than those in the foreground, despite his certain knowledge of the building [83].

Stade's two drawings reveal a variety of house types, most of them very different from the flat-roofed town houses and single-gabled farmhouses of the later 18th century. Monopitched single-storeyed buildings, double-storeyed gable-ended buildings with pedimented facades, and single-storeyed hip-roofed buildings with triple gables all appear. None of these would survive in their proto-Cape Dutch form, but all would influence later developments in the 18th century.

What is of significance is the number of gabled buildings present in Table Valley, at a time when only two existed in Stellenbosch and none at Drakenstein or the Paarl. This supports the thesis presented here that new developments began in the town and gardens before they were disseminated to the inland districts.

Moreover, only a small number of houses have symmetrical facades, and most of these were those of the Company and its officials. This would continue to be the case into the 1760s, as shown in Johannes Rach's views of the Heerengracht and Greenmarket Square [Fig 66]. Conspicuous by its absence is evidence of the basic "three-roomed cell", the so-called forerunner of the Cape Dutch town house and farmhouse. The development of these types resulted instead from the later vernacular simplification of more complex buildings such as the house of Henning Hüsing.

Although Cape Dutch architecture had not yet been formalized, the elements of the style were already in existence by 1710. It would only be later, however, that these were fused together to create the combination of transverse plan, symmetrical facade with central gable, and gabled rather than hipped ends, that would constitute what is now understood to be the Cape Dutch style.

Experiments in planning, in three-dimensional form and in facade treatment characterized the first sixty years of the architecture of the VOC at the Cape. The codification of these experiments into a consistent language of architecture in the mid-18th century was therefore for reasons other than the culmination of the "evolutionary development" proposed by most of the works on the period.

7.2.2 ANALYSIS OF CURRENT ARGUMENTS

The evolutionary theory addressed in the previous chapter has also been challenged in recent years by other writers, Brink in particular [1]. However, the probate inventories on which she relies are liable to misinterpretation without the corroboration of contemporary verbal and visual descriptions. She makes this point very clearly herself, when questioning the deductions of Woodward, who pioneered this line of research with regard to the period in question [2].

The usefulness of these inventories thus needs to be queried in the light of other evidence, as must the meaning of the words "dubbelhuis", "voorhuis" and "galdery", which have given rise to possible misconceptions in the interpretations of the planning of the houses described in the inventories. Other possible misreadings of the wording of the inventories have resulted in unlikely interpretations of early construction methods.

The presence of the "dubbelhuis" type at the Cape in the proto-Cape Dutch period is central to the present re-evaluation, as is the question of the accuracy of the drawings of E V Stade.

The single line of development suggested by the evolutionary theory, namely that the farmhouses of the mid-18th century were derived from a basic "three-roomed cell" with central entry, has been supplemented in recent years by the recognition of a parallel development of houses entered through their narrower ends.

Walton states that most of the houses in the 1660 cavalier perspective of the town [Fig 56] had end entrances [3], but only two of these buildings were at right angles to the major street, and it is likely that those parallel to the Heerengracht were also entered off it. Nevertheless, a number of end-entry houses do appear on the earliest title-deeds of the farms in the vicinity of Stellenbosch [4].

However, these end-entry houses appear only to have been an early phenomenon, which should not be equated with the "longhouses" entered from their longer sides that continued to be built into the 18th century, although only a small number are still extant. The chief characteristic of these houses was that the dwelling adjoined the out-buildings under one roof, but the entrance through the shorter end was abandoned.

Neither the rectangular houses parallel to the street nor those perpendicular to it were to be the progenitors of the transverse plan characteristic of Cape Dutch architecture. Nor is there any likelihood that a combination of these two plan types was responsible for this development. An exemplar for this plan type had already been provided by the "dubbelhuis" plan, which was described by Valentyn as being present in Cape Town as early as 1705 [5].

Such a plan, with rooms located on either side of a central hall, would have provided a precedent for the freeburghers to attempt to emulate, partially in the T-plan house and more completely in the H-plan house, and with a hall shorter than the flanking wings in the U-shaped houses characteristic of the town and Peninsula. Significantly, there is hardly any reference to this plan type in the existing sources on Cape Dutch houses.

Pearse was the first to mention the "double house" as described by Valentyn, but

speculated that it referred to an H-plan [6]. Woodward is the only local source to have referred to Pearse in this regard, but her suggestion that the "double-house" was U-shaped in plan corresponds neither with Valentyn's description nor with the Amsterdam models on which he states these houses were based [7].

Roosegaarde-Bisschop, writing about a later period, acknowledges that most of the houses in Rach's 1762 drawing of Greenmarket Square [Fig 66] were "dubbele huizen", with "kamers aan beide zijden van gang of voorhuis", but that "enkele huizen" with "kamers slechts aan een zijde van gang of voorhuis" also appear in the "Bokaap", as shown in Gordon's panorama of c1778 [8]. The earliest "Bokaap" houses date from 1763, however, well after the period of this thesis.

Fransen notes that double-pile rectangular plans with a central transverse hall did exist prior to the 1790s, when the earliest surviving examples with thatched and gabled roofs made their appearance. However, he associates these with the flat-roofed town houses of Cape Town, which he dates no earlier than 1760, and makes no reference to the "dubbelhuis" type described by Valentyn and illustrated by Stade [9].

According to Kok, the term "dubbelhuis" was derived from a house covering two adjacent plots. An early example is the "Vergulde Dolphijn" on Singel 140-142 in Amsterdam, designed by Hendrick de Keyser in 1600 and still in existence today [10]. The symmetrical facade of this house, with its double gables and central entrance, was illustrated in "Architectura Moderna" [Fig 60]. It could therefore have been known to the VOC officials at the Cape, as a copy of this volume was one of three architectural works discovered in a store-room in the Fort in the 1660s [11].

Kok also makes reference to adjoining houses which were owned by brothers and gave the impression of a single house, citing the "Coymanshuis" and the later "Trippenhuis" as examples. However, he points out that the genuine double-house ("het echte dubbele heerenhuis") was the residence of a single family built over two plots [12].

The "Coymanshuis" is possibly of relevance to the Cape, as it was also illustrated in "Architectura Moderna", in plan and elevation [Fig 61]. This was the only building not designed by Hendrick de Keyser to be included in this volume, the facade having been the work of Jacob van Campen [13], on a plan possibly designed by Pieter de Keyser

[14]. Although the plan is asymmetrical with two doors to provide an entrance into each house, it could have suggested the idea of a hall extending the full depth of the house, as at Vergelegen and in the houses of Blesius and Hüsing, although in these examples it was in a central position.

The facade of Van Campen's "Coymanshuis" does not have the gables of De Keyser's "Vergulde Dolphijn", but it could have influenced at least one building at the Cape in respect of its greater horizontal emphasis, in comparison with the verticality which characterizes De Keyser's houses. The pilastered facade of Vergelegen as depicted in the "Contra Deductie" [15] is similar in its proportioning to the principal floor of the "Coymanshuis", and also makes use of "kruiskosynen" (cross-casements) [16]. Vergelegen was not a town house, but the same horizontal proportions, albeit without the pilasters, are also shown by Stade in the house of Henning Hüsing on the Keizersgracht.

The use of centre gables, however, follows the example of the earlier houses of Hendrick de Keyser illustrated in "Architectura Moderna". It could well be that Van Campen's proportions were followed at Vergelegen as being more recent and therefore more fashionable, and also more suited to the single- or at most double-storeyed houses at the Cape, but that De Keyser's gables continued to be used as a reminder of the home country.

It is important to note that the church in Cape Town was based on De Keyser's Noorderkerk in Amsterdam, also illustrated in "Architectura Moderna", whereas its enlargements in 1779-81 were inspired by Van Campen's Nieuwe Kerk in Haarlem [17]. This church was not illustrated in the above volume, and was thus not available as a model from the outset. It is therefore not improbable that "Architectura Moderna" was used as a text-book at the Cape, although the "dubbelhuis" type could equally have been introduced by people with personal experience of existing examples in Holland.

Kok has described the development of the Amsterdam house from a centrally entered single space to a more complex arrangement of internal rooms, reached by a passage on one side, entered asymmetrically from the street [Fig 62] [18]. Meischke has also revealed that when another room was built next to such an arrangement on the

adjoining plot (to its full width), it was called a "zijkamer" [19], and when this extended the full depth of the main house, and had its own individual roof, it was called a "zijhuis" [20].

According to Meischke, the "huis met zijhuis" developed into the "dubbele huis" in the first half of the 17th century, and this type was common in the town and country after 1650. He describes the "dubbele huis" as a house of double breadth, but one which gave the impression of a single house rather than one comprising two adjoining parts [21].

The central positioning of the door in the "dubbele huis" led to the development of the central passage ("gang") in the third quarter of the 17th century. This central passage imposed a strong sense of symmetry on the house, and the rooms on either side were made as equivalent ("gelijk") as possible. This symmetrical arrangement, however, caused difficulties with regard to the location of the staircase. It was therefore usually placed between two of the side rooms [22], as exemplified by the plan of the house at Heerengracht 520, Amsterdam, dating from 1685 [Fig 63].

In terms of the central passage (later to develop into the "voorhuis-agterhuis" combination at the Cape), the symmetrical positioning of rooms on either side, and even the position of the staircase (as in examples such as the late 18th century Grosvenor House in Stellenbosch), the "dubbele huis" was remarkably similar to the H-plan house at the Cape. Having already become common in urban and rural locations in Holland by 1650, and the central passage having been developed by 1675, this Amsterdam type was the most likely precedent for the houses of Blesius and Hüsing, described by Valentyn as "dubbelhuizen", and for the residence and the farmhouse at Vergelegen [Fig 229].

The second or third generation burghers at the Cape who built their H-plan houses in the second half of the 18th century are unlikely to have had first-hand knowledge of this type. However, it is probable that they derived it second-hand from the most imposing buildings existing at the Cape, which they simplified in accordance with their more limited means.

Before returning to the inventories, it is necessary to reinvestigate the meaning of the

words "voorhuis", "agterhuis" and "galdery". Sewel's 1727 dictionary defines "voorhuys" as "the Fore-room of the House below" [23]. This was not necessarily a room in front of others, as suggested by Brink [24], but could also have meant a "before room" or entrance hall from which the other rooms of the house were entered laterally [25], or the "foremost" or most formal room [26]. In other words, it could be used to denote a hall entered from the street, irrespective of plan configuration.

Meischke defines the "voorhuis" as the front part of the hall, which was divided into "voorhuis" and "binnenhaard". Here, however, he is referring to the early "zaalhuis", where both rooms extended the full width of the street frontage. The term "voorhuis" was also used for the front part of later houses where an "achterhuis" was present, but it should be noted that Meischke is not referring to the present South African usage of "achterhuis" as the room behind and adjoining the "voorhuis" in a Cape Dutch house. The "achterhuis" in the houses of Amsterdam was a separately roofed structure behind the "voorhuis", as will be outlined below [27].

A reading of Kok's annotations to the rooms depicted in his drawings of the development of the Amsterdam house [Fig 62] is also of interest in this regard. The "voorhuis" first appears with the subdivision of the hall-house, when it was entered centrally from the street, as was still the case when it had a kitchen behind and a passage to one side. This designation continued when the "voorhuis" was off-set but still had a central entrance off the street next to the wall separating it from the "zijkamer". Once the doorway had been relocated to the edge of the site, however, the narrower entrance hall was renamed the "vestibule", and the larger "zijkamer" was renamed the "voorkamer" [28]. This suggests that the term "voorhuis" referred to a room large enough to be used for formal occasions, entered directly from the street instead of from an entrance hall.

The "achterhuys" was defined by Sewel in 1727 as "a Back-house, an out-house" [29]. This might seem surprising to authorities who use this term for the room immediately behind the "voorhuis" in the Cape Dutch houses of the 18th century. However, the accuracy of Sewel's definition is confirmed by Kok and Meischke.

The annotations to Kok's developmental drawings [Fig 62] again provide a clue in this

regard. The "achterhuis" first appears as an independent structure behind the "hof" or full-width courtyard which separated it from the main house. However, it loses this designation when it is linked to the front room by a passage on one side, leaving a narrower courtyard ("binnenplaats") between the two parts of the house [30]. It is subsequently annotated "slaapkamer" or "zaal", depending on its specific function [31].

Meischke defines the "achterhuis" as an independent structure behind the house ("achter het huis zelfstandig bouwwerk"), and also sometimes as the rear part of the house ("soms het achterste deel van het huis") [32]. Although the latter describes rooms within the house, it refers to the entire rear portion of the house, not only to the rear portion of the central hall. The local usage of this term for the room behind the "voorhuis" in a transverse plan is thus a colonial misinterpretation of its original meaning. Moreover, the word does not appear in documentary sources during the period of this thesis, when the term "galdery" was used instead.

Sewel defined the "galdery" in 1727 as "a Gallery, lobby, ambulatory" [33]. The second definition needs clarification here, as the contemporary English meaning of a "lobby" was "a passage or corridor connected with one or more apartments in a building" [34], rather than a mere antechamber.

Meischke does not give a specific definition for "galerij", referring his readers to "gang". This he describes, amongst other variations, as the central passage of a double house ("middengang bij dubbel huis") [35]. He clarifies this by referring to the house of Isaac Jan Nijs on the Keizersgracht in Amsterdam, built in 1665, which was described as follows: "het inkomen van de straet is een Galderij van achter tot vooren" [36].

However, the "galerij" could also be a long room on the garden side of the house, as in Huis Bartolotti on the Heerengracht in Amsterdam (1617), where it linked the two rearward wings [37]. Here the term is being used in the sense of the French "galerie" and the English "gallery". The "galerij" at Huis Bartolotti was single-storeyed and flat-roofed to allow light into the upper rooms, similar to the "galdery" described by Valentyn at Constantia [38].

Valentyn also used the term "galdery" to describe the hall at Vergelegen [39], but Kok annotates the similarly transverse hall in the "Coymanshuis" as a "voorhuis" [40]. This

suggests that these terms could be interchangeable, and is further indication that the "voorhuis" did not necessarily have a room behind it.

Valentyn's description of the "galdery" at Constantia, moreover, appears to have had a double meaning. On the one hand he could have been referring to the space (including the stair-halls as reconstructed in Fig 151) giving access to the rear wings of the house. On the other hand, he clearly referred to three galleries surrounding the court between the wings. If, however, the rooms constituting these rear wings had been square in plan, as shown in this reconstruction, the total lengths of the galleries in both interpretations would have been equal [41].

The "galdery" thus appears to have had two different meanings at the Cape during the period of this thesis: as the central hall in a "dubbelhuis" plan; and as an ambulatory parallel to the facade giving access to the rearward wings of the house, which in the case of Constantia also surrounded a court to the rear. It is suggested here that, with the exception of Constantia, the "galdery" referred only to the central hall of the "dubbelhuis" plan during the proto-Cape Dutch period.

To return to the inventories, neither Woodward nor Brink appear to have recognized the importance of the "dubbelhuis" type, which in the case of the larger houses matches the room by room descriptions more closely than the plans which they have devised.

Woodward describes four of these houses in Table Valley, and one on the Peninsula [42]. All were described in the inventories as containing galleries, which Woodward has interpreted as arcades around three sides of a rear court, as at Constantia [43]. This has led her to believe that these houses were U-shaped in plan, like the later flat-roofed houses in Cape Town dating from the second half of the 18th century [44]. However, with the exception of Constantia and the Stellenbosch drostdy, there is no firm documentary evidence of the existence of U-shaped plans at the Cape during the proto-Cape Dutch period. These four houses were therefore more likely to have followed the rectangular "dubbelhuis" arrangement.

The Helot House, for which Woodward provides two alternative reconstructions, will be used as a case study. The contents of this town house, which had been occupied by the Company's Secretary and his wife Christina de Beer, were recorded in 1710. These

were described as being located in the following rooms: "in de voorste kamer aan de regter hand... in de voorkamer aan des linkerhand... in de Galderij... in de groote Kamer... in 't eene klijne agter kamertje... int andere klijne Kamertje... In de Kombuis... In de Bottelarij". Woodward notes the omission of a "voorhuis" in this house, which she suggests "may be due to the fact that there was nothing in it" [45].

Woodward herself is thus acknowledging that the inventories are not necessarily foolproof, as there is always the possibility that some rooms of a house were not mentioned owing to their absence of contents.

She provides two possible reconstructions for the plan of this house [Fig 64]. The first shows a Constantia-type ambulatory (as in Fig 151), and the second a "galdery" in the conventional position of a "voorhuis". In a "dubbelhuis" arrangement, however, the "galdery" would have extended the full depth of the rectangular (not U-shaped) house, as at Vergelegen [Fig 229], thus explaining the absence of a "voorhuis".

It is also likely that the "voorkamer" communicated with the "groote kamer" and together took up the whole of the left-hand side flanking the "galderij". The accommodation on the other side would then have comprised the smaller or less formal "voorste kamer aan de regterhand", followed by the two "agter-kamertjes" and the kitchen ("kombuis") and pantry ("bottelarij").

The "dubbelhuis" was evidently not uncommon in Cape Town by 1710, as Woodward described three houses with "galderijen", all of which can be reconciled with this plan type. These, moreover, do not include those of Blesius and Hüsing documented by Valentyn [46].

Woodward also makes reference to the passage ("gang"), which was described in the inventories of "three important houses before 1715". She suggests that this could have been "a rather inferior alternative" to the "galdery", but in the same position within the house [47]. Meischke's definition of the central passage as a "gang" and Kok's annotation of the roughly equivalent space in the "Coymanshuis" as "voorhuis" suggest, however, that all three terms were interchangeable. It could have been that the "gang" was narrower than the "galdery", and used only for circulation, but the distinction in terminology could also have resulted from the preferred terms used by the assessors

responsible for the inventories under discussion. The reliability of the inventories should therefore be questioned again, this time with regard to the consistency of room descriptions provided by different assessors.

Walton has criticized Woodward with regard to her interpretation of the term "galderij", but the examples to which he refers date from after the termination of her cut-off date of 1714, and are therefore of no relevance to the period of this thesis [48].

Brink states correctly that "it is erroneous to look upon early dwellings as merely smaller and simpler versions of the later, 'traditional' Cape Dutch House". However, while there may be validity in her contention that "earlier dwellings were rooted in the European vernacular and the switch to a more formal, traditional (sic) mode of dwelling did not take place until the mid-1730s" [49], this can be applied only to the more conservative of the town houses and farmhouses. Even if the houses of the wealthiest inhabitants are excluded as exceptions, symmetrical facades, if not plans, can be seen in Stade's views of the ordinary freeburghers' houses in Cape Town and Stellenbosch.

While the Cape Dutch architecture of the mid-18th century had certainly not yet emerged by 1710, in which respect Brink is quite correct, the precedent for its development had already been established. The formality of the more prominent buildings of this early period is clearly revealed in the official records of the VOC, in the accounts of visitors to the Cape, and in the drawings of E V Stade and those of Vergelegen. It was these buildings, designed on Renaissance principles, which established the precedent for the widespread adoption of symmetrical formality in Cape Dutch houses later in the 18th century.

With regard to the evidence of the probate inventories, it must be stressed that these were legal documents, not architectural descriptions. Their use in revealing planning arrangements is therefore limited (as Brink herself acknowledges when criticizing Woodward), as they can be interpreted in a number of different configurations. The verbal and visual descriptions of visitors to the Cape should be regarded as more authoritative, since their purpose was to reveal to their countrymen in Europe (and in one case Japan) the architectural reality of the Cape at the time of their visits.

Brink also introduces the argument that the "voorhuis" was not centrally located in the

early houses, but was on the side of the dwelling as in contemporary houses in Amsterdam. She cites Zantkuyl in this regard, and also states that "It was not until much later in the 18th century that larger houses in the Netherlands were built with a central passage" [50].

Zantkuyl's description of the development of the Amsterdam house corresponds closely with those of Kok and Meischke, but appears to suggest that the "wide house... with the door and corridor in the middle" was only an 18th century phenomenon [51]. It is more likely, in the light of the evidence already presented, that Zantkuyl was referring to the popularization of the "dubbelhuis" type, and not its initial formulation [52]. The evidence of Kok and Meischke reveals that houses with a central passage had been introduced in Amsterdam prior to 1650, and Valentyn's descriptions of the "dubbelhuis" at the Cape prove that it was already in existence as early as 1705.

The central entrance hall was thus firmly established at the Cape prior to 1710. Moreover, by that time it was no longer the preserve of the urban upper classes, as can be inferred from the exterior form of the farmhouse Voorgelegen on the outskirts of Stellenbosch. This house was depicted by Stade in 1710 with a symmetrical facade and a central gable [Fig 188].

Brink, however, suggests that the inventories could be interpreted as describing houses of the asymmetrical Dutch urban type, citing a house in the "Bo-Kaap" as an extant example [53]. However, this house dates from no earlier than 1763, and its use in this context is disconcertingly similar to Walton's argument that early plan types can be derived from surviving examples of less complexity, an argument that Brink herself criticizes.

The plots in the "Bo-Kaap", which was first established in the 1760s as a worker's quarter comprising "huurhuijsjes" [54], had narrower frontages than the earlier parts of the town. This necessitated a reduction in size of the already established symmetrical town house type. Instead of shrinking the rooms to uninhabitable dimensions in an attempt to emulate middle-class living on a reduced scale, those on the one side of the passage were omitted, just as the farmers in the country with limited means built only the front wing of the "ideal" H-plan house to begin with.

A similar reduction in width of the symmetrical Georgian houses in New England, by omitting the rooms to one side of the hall due to financial constraints, has been noted by Glassie [55]. In both cases the privacy offered by the passage or hall was retained at the expense of overall symmetry. Moreover, in both cases the asymmetrical form resulted from the partial realization of an existing symmetrical model, rather than being the progenitor of this type.

Brink may be correct in stating that the "small, L-shaped houses" shown on Wittebol's 1679 plan [Fig 48] (which she dates as 1693) "would not have had symmetrical facades". However, her speculation on their internal planning arrangements is based only on the evidence of the inventories, and that of the more conservative conventions of the contemporary Dutch urban house types through which she has interpreted them [56]. Moreover, Stade's drawings of Cape Town [Fig 58] and Stellenbosch [Fig 188] provide evidence that by 1710 the central entrance was more common than a doorway at one end of the facade. While this does not necessarily indicate a central "voorhuis", it certainly precludes the possibility of a narrow "voorhuis" to one side in these examples.

She also suggests, on the basis of a "preliminary survey of the inventories", that the "voorhuis" existed from the outset in rectangular buildings perpendicular to the street and in L-shaped buildings, but was absent in rectangular buildings parallel to the street, and made its re-appearance only in the 1730s in buildings with central rearward extensions. Her explanation for its absence in the rectangular buildings in the interim is that it had no further accommodation behind it. She also argues, on the basis of a statistical analysis of 18th century inventories, that the existence of a "voorhuis" increased dramatically in the 1730s. She suggests, moreover, that this increase coincided with the introduction of the T-plan [57], but makes no reference to the symmetrical "dubbelhuis" type already extant at the Cape prior to 1710 [58]. The emergence of the T-plan or H-plan, however, is indicated more conclusively by the presence of a "galdery" (or "agterhuis") than by the existence or absence of a "voorhuis".

Another misreading of the inventories that needs to be corrected is Woodward's contention that the earliest houses at the Cape were log cabins, derived from her

translation of the word "timmerage" [59]. This word, spelled "timmeragie" in the Resolutions, had the contemporary meaning of "A building, a structure, an edifice" and was spelled "timmeraadje" in Sewel's dictionary of 1727 [60].

Log cabin construction was dependent on abundant supplies of coniferous timbers, explaining its use in Scandinavia but its absence in Holland and at the Cape. Even in North America, where log cabins were also known, the contemporary Dutch "timmeragie" had a timber framework with walls of clapboard or wattle-and-daub, as revealed by Zantkuyl's description of a building contract of 1642 [61].

The "wandpalen" (wall-poles), the use of which was prohibited in 1691 as noted by Woodward, comprised the structural timber framework of the early wattle-and-daub houses. Construction entirely of timber poles was used only for palisades, as employed in fortification works, kraals and boundary fences [62].

Lastly, the accuracy of E V Stade's drawings of the town [Figs 58 & 59] needs to be addressed in the light of criticisms from previous writers in the field. These drawings are of central importance to an understanding of the architecture of the proto-Cape Dutch period, but have seldom been treated as valid documentary evidence.

Roosegaarde-Bisschop was the first to question their accuracy, particularly with regard to the dwarf-gables, or "driehoekjes" as he called them. He cited the lack of correspondence between the two views of the town as evidence, suggesting that the only buildings consistently shown were the church and the Castle. However, he omitted to mention three others: the hospital, the slave lodge, and the house of Henning Hüsing. On the basis of this so-called inaccuracy he proposed that the "driehoekjes" were diagrammatic representations of the pedimented dormers shown by Heydt at Constantia [Fig 140] and Rach in Greenmarket Square [Fig 66] [63].

Fransen repeats this argument, although he also suggests that they could have been swept dormers. With reference to Stade's drawing of Constantia [Fig 139], however, Fransen notes that although triangular "gablets" appear on the facade, the "little sideways-facing gable" is shown with vertical sides. This has led him to question whether Stade used "a standard simplification for all these front gables and dormers because there were so many of them", and whether the real form of Stade's triangles

was that of the gable of Voorgelegen, shown in the foreground of the Stellenbosch drawing [Fig 188] [64].

It is unlikely that Stade would have used a graphic shorthand for the dwarf gables he was depicting on the facades of buildings, and yet have shown a side-facing dormer in greater detail. Given the diversity of building forms that he depicts, as will be revealed in the analysis of his other drawings, it is far more probable that the triangular dwarf-gables were accurately represented.

Lewcock does not comment on Stade's accuracy, but does draw attention to a watercolour of Cape Town painted in 1780 by John Webber, the draughtsman on Captain Cook's third voyage. This painting, in the British Museum, shows the house "Rosenburg" to the right [Fig 65]. Lewcock states: "This house was built on land granted in 1705, and has a classicist central gable, as well as flanking dormers with classicist semicircular pediments... But an even earlier record of classicist dormers and gables is known, in Johannes Rach's precise drawings of... 1762. Dormers of an identical type appear in Webber's and in Rach's drawings. There is strong reason for thinking that in both cases the houses involved were built before 1710" [65].

The likelihood of Rosenburg dating from the Van der Stel period is strong, given its triple-gabled format. Moreover, M A Cook's research reveals that it was probably built soon after the original grant of 1707 (sic) [66]. However, the precise form of its centre gable and flanking dwarf-gables is not necessarily contemporary with its original appearance. These could well have been rebuilt in the seventy years between the erection of the house and its depiction by Webber.

The houses surrounding Market Square shown in Rach's drawing of 1762 [Fig 66] may also have existed by 1710, although the square had only been recently developed. While the asymmetry of the facades probably indicates an early date for these houses, their pedimented dormers could also have been built or altered in the interim. An even earlier example of similar dormers is depicted in Heydt's engraving of Constantia [Fig 140], which reveals that such features were in existence as early as 1741.

However, this evidence is contradicted by Stade's drawing of 1710, which depicts Constantia's dwarf-gables as triangular in shape and its centre gable as decidedly non-

classical [Fig 139], and also by the contemporary perspective of Vergelegen in the "Contra-Deductie" [Fig 230]. Although the latter is depicted with pilasters supporting a full-width entablature, the centre gable is a precursor of the Baroque rather than an example of Classicism. It is therefore unlikely that Rosenburg would have been built with an outdated gable, given that its facade treatment follows the precedent of the two Governors' residences.

It is possible, therefore, that after the hiatus in architectural development following the departure of Wilhem Adriaen van der Stel, Classicism made a re-appearance in Cape Town and the Peninsula prior to the 1740s, before its replacement by the tri-lobial and quinque-lobial gables in the town and in the country districts, which were followed by the concavo-convex, Baroque and Rococo developments, prior to the introduction of Neoclassicism.

If this were the case, it would explain three questions. The first is why Rosenburg should have had such a different gable treatment from Constantia, Vergelegen and Henning Hüsing's house. The second is why the houses in Greenmarket Square should have had such sophisticated dormers above such asymmetrical facades. And the third is why Constantia's dwarf-gables changed their appearance between 1710 and 1741.

The last is crucial to the thesis and to the evaluation of its evidence. Heydt's 1741 drawing clearly reveals that the centre gable of Constantia had been removed (it is not obscured by the trees, but has gone). Given that the owners at the time appeared to have limited means (it was in a state of serious disrepair by 1778, when it was bought by Hendrick Cloete), and moreover were probably not confident enough to attempt to replace the centre gable, they could well have tried to compensate for its absence by rebuilding the dwarf-gables or dormers in the current fashion.

If this were the case, as it could also have been in Greenmarket Square and at Rosenburg, it would explain the difference in the depiction of these dwarf-gables by Stade and Heydt. Both drawings could therefore have been equally accurate, just as they were in the depiction of the coach-house and stable at Constantia, which was subsequently converted into a farm-manager's house (see Chapter 8.5).

Stade's drawings, together with certain of Kolbe's and Valentyn's written descriptions

of the Cape, have either been ignored or discredited by most Cape Dutch authorities because of their lack of correspondence with subsequent and less imposing developments. However, there is a notable degree of correlation between these visual and verbal sources of evidence, suggesting a more accurate portrayal of the buildings of the proto-Cape Dutch period than has previously been acknowledged. This, together with the reinvestigation into the meaning of contemporary terminology, indicates a different sequence of development towards the Cape Dutch architecture of the later 18th century from those previously posited.

7.3 NON-RESIDENTIAL BUILDINGS

7.3.1 THE EARLIEST BUILDINGS

For the first few years of the settlement, the non-residential buildings at the Cape were hardly different from the houses in the incipient town. The similarity is evident in their construction, their form and their scale, as a result of common responses to available materials and climatic constraints. For this reason they will only be separated into different building types after the period of Van Riebeeck's term of office [1]. The one exception in this period is the vaulted train-oil store, which will be discussed separately below.

The first structure outside the Fort was a small watch-house erected for the hunters on the 7th August 1652. This was built of reeds and sited next to the Fresh River on the slopes of Table Mountain. It was probably similar in form to the first temporary shed at the Fort, taking the form of a "kapsteilhuis", with the roof extending down to the ground [2].

The earliest animal enclosure, a kraal built to protect the livestock at night, was also outside the Fort. It was circular in form and probably constructed of thorn-bushes as a temporary measure. Work on a trench surrounding this enclosure had been commenced on the 21st October 1652, and it was mentioned on the 29th that this would be eight feet wide and four feet deep [3].

The need to erect a covered shed for the animals was raised on the 11th December, following the death from exposure of two sheep and a calf. However, the "rafters, poles and planks" needed for such a structure were not available [4].

The insecurity of the kraal was emphasized when it was plundered by wild beasts on the 24th and 25th December 1652, and again on the 9th and 12th January 1653, despite the eight-foot wide ditches filled with water to a depth of four feet. It was therefore decided to build a new cattle kraal adjoining the Fort, work on which began on the 3rd July [5]. The location of the original kraal is unfortunately not shown on any of the surviving plans of the settlement.

It was mentioned on the 22nd August 1653 that a number of sheep in "the tents within the kraal" had been killed by wild beasts, and that all the geese and ducks had been "snatched from the closed pens". It was therefore resolved that strong enclosures would be built for their protection [6]. The sheep were probably already accommodated in the new kraal behind the Fort, but the fowl-houses were still outside in the gardens [7].

More animals died of exposure on the 21st October owing to the lack of a suitable stable, which had not yet been built because of a shortage of timber [8].

The siting of the "chicken and duck and goose houses" was first described on the 3rd January 1654, when it was stated that they were located "outside the fort at the gardens", together with the gardener's house. This is confirmed by the 1654 plan of the Fort and gardens [Fig 55]. A rabbit hutch was also mentioned on the 2nd April, when it was decided that the animals should be transferred to Robben Island, but there is no verbal or visual record of its location [9].

The sheep enclosure, now surrounded by a two-foot thick wall of sods, was nevertheless plundered by wild animals on the 2nd May 1655, as was the hen-house. This was entered again by wild beasts on the 1st June, when it was mentioned that it was near to the kraal, the stable and the hospital [10], which were in the enclosure behind the Fort.

On the 16th June 1656 it was noted that stronger shelters would be needed for the sheep and horses, after one of the latter had been eaten by a wild beast [11], and the pigsty

was first mentioned on the 16th August. This was located outside the kitchen in the hornwork of the Fort [12]. The pigsties of the town burghers were also mentioned on the 20th April 1660, when a regulation was introduced compelling them to confine their pigs within the sties at night, in order to keep them out of the gardens [13].

Stables outside the Fort were first depicted in the 1658 plan of the settlement [Fig 41], located to the west of the gardens and comprising the central part of a complex which also contained the horse-mill and the old brick-kiln ("ledige steenoven"). This was probably the horse-stable mentioned in a letter to the Seventeen of the 5th March 1659 [14]. This was described in the report of Visiting Commissioner Andries Frisius, dated the 4th July 1661, as follows: "For stabling the said horses two old brick kilns adjoining each other were built up ("voorts opgehaelt") and covered with tiles as well as provided with a good loft for the storage of grain, &c. The building can easily accommodate 30 horses" [15].

The new stables are shown on the 1660 cavalier perspective of the town and gardens [Fig 67]. They consisted of three adjoining structures, all rectangular in plan. The first of these was the Company's old horse-mill (Caption E), which had fallen into disuse in 1659 and was now incorporated into the stable. This front wing had a hipped roof with a swept dormer in the centre, giving access to the grain loft above. This is the third example of a building with central emphasis but, as with the inn of Jan van Harwaerden, the fenestration beneath does not correspond with the formality above eaves level. The main entrance is displaced to the left of the centre, with one window to the left of it and two to the right, beyond which is a smaller doorway. Another entrance gives access to the lean-to extension on the right-hand side of the building, the first visual evidence of the "afdack" that would become the subject of building regulations in subsequent years. The stable behind (Caption F) is shown with a hipped roof parallel to that of the old mill, and the disused kiln at the back has been left unroofed and was presumably used as a service yard.

Frisius also mentioned on the 4th July 1661 that the shed for the livestock in the kraal behind the Fort had originally been built of planks and covered with reeds. This had now been renewed, presumably with a masonry structure, and was protected by a heavy palisade. This structure also appears in the cavalier perspective of 1660, and has

already been described [16].

A carpenters' workshop "outside the fort" was mentioned on the 7th December 1652, when it was broken into, and again on the 9th. This must have been a temporary structure erected to facilitate the construction of the timber buildings within the Fort [17].

A cornmill was first requested from Holland on the 14th April 1653 [18], and further requests for a horse-mill were made to the Seventeen on the 25th March 1656 [19] and to Amsterdam on the 10th June of the same year [20]. Three millwrights and the materials for a barley-mill were sent out later that year, as mentioned in a letter from Amsterdam dated the 18th November. The millwrights could be used to erect the mechanism, but would then have to be sent on to Batavia [21].

The erection of this first mill at the Cape was commenced on the 7th May 1657. It was a horse-mill, the mechanism of which had been brought from Holland. A suitable site was selected with the advice of the millwrights, and orders were given that the timber for the structure was to be prepared and brought from the forest. The masonry of the horse-mill had been erected by the 17th July [22], and the mechanism must have been completed by the 8th September, when the three millwrights left for Batavia [23].

The horse-mill was leased to the free miller, Wouter Cornelissen Mostaert, on the 26th July 1658 [24]. He would be provided with the necessary equipment, but would have to use his own slaves and oxen (owing to the absence of horses), and would be responsible for any damage. The Company would retain ownership of the mill and would continue to use the loft for grain storage [25].

The location of the horse-mill is shown on the 1658 plan of the Fort and gardens [Fig 41], adjoining the lower edge of the stables on the north-west side of the Company's garden. On the 1660 plan [Fig 56] it is indicated as part of the stable (Caption E), suggesting that the latter had incorporated the structure of the old mill which had fallen into disuse by 1659. The first mill had not been a success, as mentioned in a letter to the Seventeen of the 5th March 1659. This was because of the absence of horses, and the unsuitability of oxen for the task. The latter, moreover, were

in short supply. A request was therefore made for a water-mill to be sent out [26].

By the 27th August the free miller had begun constructing the new water-mill. He was making little progress, however, and requested assistance from the Company. This was granted, in order that the six months' supply of grain waiting in storage might be ground without further delay. The Company also offered to take over the mill and compensate Mostaert for his expenses if the project proved to be too costly for him [27]. The water-mill was in working order by the 27th October, and the free miller was given the option of retaining ownership. He decided against this, however, asking to lease it instead, as he could not afford to build the permanent structure needed to replace the straw shelter which was being used to protect the mechanism.

It was therefore agreed that the Company would purchase the mill for 218 guilders, 11 stivers and 2 penningen, minus the expenses incurred in assistance to the free miller. It was also resolved that the Company would construct "a square, fire-proof building of stone over the mill". This would not include a miller's house but would merely enclose the mechanism and protect the water-wheel from the sun. The building would be "16 feet wide, 18-20 feet long and 13 feet high, and above that a breastwork of 3 feet and the cap, which could serve as a grain loft". Instructions were given for the carpenters to begin preparing the timber at once, after which work would be commenced with the masonry. It was also agreed that the new mill would be leased to Mostaert under the same conditions which had applied to the horse-mill, including the Company's use of the grain loft [28].

It was mentioned on the 7th January 1660 that the new water-mill was the first building to have been roofed with locally baked tiles. These had proved so successful that it was decided to use them on all the Company's buildings, as they were fire-proof in contrast to the existing roofs of thatch [29]. The construction of the mill was described further in the report of Visiting Commissioner Andries Frisius, dated the 4th July 1661. It had been "masoned up all round with brick and covered with tiles" and "was provided with a strong solid loft for the storing of corn" [30].

The location of the water-mill and its end elevation are shown on the 1660 drawing of the Fort, town and gardens [Fig 56, Caption D]. It was sited closer to the bay than the

old horse-mill, immediately above the aligned row of freeburghers' houses and set slightly forward of them. The tiled roof was pitched with parapet gable ends, one of which faced towards the Fort. The water-wheel on this side, supplied by the Fresh River, is not shown, but the facade facing towards the bay can be seen. This consisted of a door at the left-hand edge and a window to the right. Access to the grain loft would have been through an opening in the right-hand gable.

The lack of an equipage warehouse was first noted on the 4th July 1655, in a letter to Holland. This was a serious inconvenience, as more than one ship had been sent away without the equipment it required. The skippers in harbour therefore agreed that a small store for anchors, ropes, masts and pumps should be erected [31]. Although permission to proceed with the equipage store appears to have been received from the Seventeen [32], the project was rejected as unnecessary by Visiting Commissioner Rijckloff van Goens in his report of the 16th April 1657 [33]. This decision was conveyed to the Directors in a letter of the 21st June [34].

Another Visiting Commissioner, Joan Cuneus, agreed that a cable store was unnecessary, as appears in his instructions of the 18th March 1658 [35], but it was mentioned on the 19th March 1660, in a letter to the Seventeen, that a boathouse had been erected "near the seaside outside the fort" in which ships' cables were stored [36].

The first direct reference to the "Company's cable house or shed" was made only on the 1st April 1661, in connection with the granting of erven in the town [37]. It was also described on the 4th July, in the report of Visiting Commissioner Andries Frisius, as a "wooden shed... covered with reeds", and built on the shore. He suggested, however, that it should be rebuilt in brickwork to avert the risk of fire [38].

It is interesting that the first equipage warehouse should have been of timber construction, whereas the buildings in the Fort had been replaced by masonry structures, and the stable and the mill had been built of brickwork. This was possibly due to the uncertainty of official approval for the project. Had this been refused, the timber could have been used elsewhere.

The first visual reference to the "boat-house or shed" was on M2/18, the plan of the

Fort and gardens dating from 1658 [Fig 41], where it is shown closest to the shore on the edge of the line defining the field of fire. The 1660 cavalier perspective [Fig 56] reveals the three-dimensional form of the equipage warehouse (Caption B), described here as a cable house or shed. It was a rectangular building with a thatched roof and gable ends, with large double doors in the end facing the shore.

A brewery and brandy distillery were first suggested on the 18th March 1658, in the instructions of the Visiting Commissioner Joan Cuneus. These were to be built in the vicinity of the mill [39], and notification was sent to the Seventeen on the 31st March that a building for brandy stills, and a bakery with corn lofts above, were to be erected that year [40]. There was no further mention of the brewery and distillery during the Van Riebeeck period, however, and the erection of the bakery also appears to have been delayed.

Permission was therefore given on the 3rd December 1659 for the free bakers to use the Company's oven and bakery "in the communal kitchen outside the fort" until they had erected their own bakery [41]. This communal kitchen was in the northern corner of the hornwork, and is shown on the 1660 cavalier perspective of the Fort and gardens [Fig 10, Caption L].

The brick- and tile-kilns, the form and location of which are not described in the Journal or Resolutions, are shown in the visual records of the settlement. The two 1656 plans [Figs 39 & 40] both show brick-kilns in the position of the later horse-mill and stable, adjacent to the brick-moulding yards. The brick-kiln of the freeburghers is also shown on the site of the old brick-moulding yard in the 1658 plan [Fig 41], described in the legend as being filled with the bricks baked during that year.

The 1660 cavalier perspective reveals the three-dimensional form of these buildings, as well as the later freeburghers' brick- and tile-kiln near the top of the gardens [Fig 42]. The earlier freeburghers' brick-kiln (Caption R), by now empty or abandoned, was an unroofed rectangular structure, with openings in the wall at ground level which were probably for ventilating the kiln. The new freeburghers' brick- and tile-kiln (Caption X) was similar in form, although smaller, and had a shed next to it with a pitched roof and

gable ends, a door being placed asymmetrically along its longer side.

The visual evidence presented above reveals that at this stage of the development of the town there was virtually no architectural distinction between residential and non-residential buildings. Both used a language of gable ends for rectangular plans and hipped ends for buildings of greater complexity. The latter category also made use of gables and swept dormers to emphasize the main facade, indicating that these architectural elements were present from the earliest years of the settlement [42]. After the departure of Van Riebeeck, however, the non-residential buildings began to develop their own characteristics, and will therefore now be described in terms of building type.

7.3.2 THE TRAIN-OIL STORE

The necessity for a train-oil store was first raised on the 27th June 1652, when a large number of whales were sighted in Table Bay. Van Riebeeck suggested that an underground trough should be constructed for this purpose, similar to those used in Holland, but the necessary materials were not available [1]. A year later, on the 30th June 1653, the issue was raised again when Van Riebeeck noted that cement and lime were needed for the construction of underground cisterns [2], and a formal request for cement and clinkers was made to Holland in a letter of the 24th February 1654 [3].

There is no further mention of this project during Van Riebeeck's period at the Cape, although it was the first structure to have been proposed outside the Fort. Its intended site was also not mentioned, but a probable location would have been next to the train-oil boilers protected by the Duijnhoop redoubt at the mouth of the Salt River [4].

An underground cistern built of bricks and cement suggests that a vaulted structure was envisaged, similar to the vaulted sluice surviving from Wagenaer's reservoir [5], but on a larger scale. Despite the fact that vaulted structures were uncommon during the VOC period at the Cape, they were used for utilitarian buildings, powder-magazines being a particularly noticeable example [6].

There is no information of when or whether this structure was erected, but repairs to

the "train-oil warehouse" were ordered on the 23rd June 1670 [7], and it was described on the 11th July 1673 as being situated outside the Fort [8]. A new train-oil trough ("traanbak") was already contemplated on the 1st October 1676, when it was resolved that 12 000 rough clinker bricks ("graeuwe klinckert") would be taken from a ship in harbour [9]. Its intended location was not disclosed, but a resolution was taken on the 7th May 1679 for a new train-oil store to be built in the Castle [10].

This decision, however, was overturned by Simon van der Stel on the 9th March 1680, when it was resolved instead to build it next to the old one on the shore. This was partly because of the stench and mess that would have been caused, and partly because of the high risk of fire damage to the Castle. Moreover, the situation on the water-front was more convenient for storing the train-oil and loading it on to the ships, and if either of the cisterns developed a leak the other could be put into service.

There is no indication of the precise location or form of these structures, but it is perhaps significant that the earlier one is again described as a warehouse ("packhuijs waar in de traan wert geborgen"), whereas the word trough ("traanbak") was used for the new one. This would be built of Dutch clinkers laid in cement, but there is no mention of when it was begun or completed [11].

7.3.3 KRAALS AND STABLES

Apart from repairs to the Company's stable [1], structures of this type were not mentioned again until the 7th November 1671, when eight sheep at the "Cloof" (Kloof Nek) were killed by a lion. These were apparently sheltered in a strong stockade at night, but there is no mention of when this had been erected [2].

It was noted on the 11th June 1674 that the "stables" for the cattle had been "enlarged by one half". This was to accommodate the increased number of draught oxen used on the Castle works [3]. This structure was probably the old cow shed in the kraal behind the Fort.

The "horse stables" were also mentioned on the 15th December 1676, when an inventory was taken of their contents. These included a coach and seven "pleasure wagons", as well as twenty horses and their associated tackle [4]. On the 27th April

1679, however, this "paerdenstal" was reported to be in a dilapidated condition [5].

It was decided on the 23rd December 1687 that each of the members of the Councils of Policy and Justice would be provided with a horse. A new stable would would therefore be built for them, large enough to accommodate thirty horses, but its location was not disclosed [6].

The Company's pound ("schuthok"), first mentioned on the 23rd April 1687, was used for impounding stray animals which had damaged the Company's or freeburghers' gardens [7]. No indication is given of its form or siting, but it was mentioned on the 24th November 1693 that the Company had erected a kraal between the garden and the Lion Mountain, for accommodating the oxen and wagons of the freeburghers from the inland districts [8].

Instructions to erect another "schuthock, of corael" were given in 1708 by the Visiting Commissioner C J Simons. This would house the oxen of the inland burghers who were visiting the town, and was to be built near the slave lodge so that the dung could be used in the gardens. There is no further reference to this pound, however, nor is it mentioned in the travellers' accounts [9].

An animal shed ("hok") had also been erected at Lion's Head by the 4th December 1690, when it was mentioned in connection with an auction of some of the Company's horses [10]. This shed, which was probably within the stockade at Kloof Nek mentioned in 1671, collapsed and caused the death of 36 sheep. It had therefore been replaced by a new sheep shed, as noted on the 1st August 1696 in a letter to Middelburg [11]. The new shed, however, had become so dilapidated by the 8th February 1708 that it was decided to sell it by public auction [12].

The Company's old stable had fallen into a dangerous state of disrepair by the 15th March 1699, and the Visiting Commissioner Daniel Heins agreed that a new building should be erected as soon as possible. This would be moved to a more protected site, as the existing stable to the west of the gardens was apparently vulnerable to stormy weather [13]. The new site for the stable was described on the 1st April 1703, in a letter to Amsterdam, as "on the side of the canal of this fort, opposite the point Leerdam" [14]. Construction was well advanced by the 31st March 1704, as reported to

Middelburg, and it was expected that the work would be completed by the end of summer [15].

This objective appears to have been achieved, but the new stable was blown down in a south-easterly gale on the 18th November 1704 [16]. Its siting, "behind the fort near the place of execution", had evidently not been sufficiently invulnerable. A decision was therefore made on the 12th January 1705 to relocate the building yet again. The new site would be "on the plain nearly opposite the Company's garden house", where the wall and hedges of the garden would afford protection from the wind [17].

A more detailed account of the damage sustained was given in a letter to Middelburg dated the 28th March 1705. The roof of the new stable had been blown off, "and the whole building ruined". It was hoped, however that its replacement would be erected before the winter rains [18], and the Journal records that it had indeed been completed by the 20th April [19].

There is no mention in the Journal or Resolutions of the form of the new stable, but Kolbe provides an extensive description. His account, moreover, is given added credibility by his accurate location of the first stable which had stood "ter zyde van 't tegenwoordige Ziekenhuis" and of its short-lived successor which was built "achter de Vesting". He was, however, less forthcoming about the site of the existing stable, describing it merely as being close to the Company's garden [20].

The new stable was square in plan, with sides of 150 Rhineland feet. It was entered through a large gateway in the middle of the side facing the Company's garden. On either side of the gate were the dwellings of the men employed in the stable. These comprised the large and handsome house of the "Stalmeester", at the lower end closest to the town, followed by the smaller dwelling of the saddle-maker. On the other side of the gate were a handsome apartment for the "Onderstalmeester", a room for storing saddles and other tackle and, at the upper end, a large apartment for the Governor's coachman [21].

The upper and lower sides were used for stabling, and for the sleeping accommodation of the slaves who looked after the horses. Although the building was only single-storeyed, its walls were 16 feet high, thus permitting lofts above for the storage of

fodder. The fourth side was also roofed, but the inner wall had not yet been built. The roof was supported on pillars along this edge, and the space beneath was used as a temporary timber store.

The large open court was used for parking the Company's wagons, where they could be guarded against damage from the sailors and slaves [22]. Kolbe also mentioned that there was a coach-house within the complex, but was unspecific as to its location [23].

Valentyn did not describe the stable itself, but was more explicit about its siting. This was across the street from the Company's guest house, "directly opposite" ("regt tegen over") the entrance to the latter. However, this translation of Valentyn's statement is contradicted by M2/1698, a plan of the town dating from 1753 [Fig 52], which depicts the stable and guest house as being related diagonally across the junction of two streets [24]. This is a more likely arrangement, as otherwise the town entrance of the guest house would have faced the stable directly, and been subject to its concomitant noise and odours. Their diagonal relationship, moreover, is confirmed by survey plans dating from the late 18th and early 19th centuries.

Mentzel's account of the stable is less detailed than Kolbe's in that he does not describe the location of the internal rooms. The accommodation mentioned is not surprisingly more extensive, as Kolbe left the Cape before it had been completed, and 29 years earlier than the departure of Mentzel. Both agree, however, on its overall plan and dimensions: in Mentzel's words it was "a square building, 150 feet long and about the same in width and enclosing a capacious yard" [25].

These dimensions differ significantly from the detailed plan prepared by the sworn surveyor Wernich in 1791 [Fig 68]. Here it is shown with external dimensions of 177 by 142 feet, and was by now double-storeyed, with a markedly different internal arrangement from that described by Kolbe. This is explained by the rebuilding of the stable in 1743 [26], but the new structure did follow the general format of its predecessor, and also had a central gateway facing the gardens.

The one element that was not described by any of these writers was the roof. This could have been pitched (as in the hospital), a monopitch lean-to (as in the slave lodge) or flat (as in the Castle). The first of these options is the most likely, for two reasons. A flat

roof would have been too heavy to be supported on the pillars in front of the back wall, and a lean-to monopitch would not have been visible from outside. Kolbe mentioned that this side of the stable, which had also been roofed, appeared to be complete from the outside. This suggests that the roof was visible, in which case it must have been pitched [27]. Whether this roof was covered with thatch or tiles, however, cannot be established.

The courtyard arrangement is also of interest, as it was uncommon at the Cape. Admittedly, the slave lodge had already been erected on such a plan, which would be repeated in other VOC stables and barracks later in the century. However, the court continuously enclosed by buildings on all sides was not a type used in the farm layouts of the later 18th century, although Mentzel had described the stable as resembling "a German military outwork or a dairy farm" [28]. This, then, was one of the architectural precedents established by the Company which was ignored in the Cape Dutch architecture of the freeburghers.

7.3.4 MILLS

The water-mill completed in 1659 was already in need of repairs by the 21st November 1663, as noted in a letter to the Seventeen. Moreover, it was of little use during the summer, when the river which supplied it was prone to drying up. It was therefore suggested that a new water-mill should be built in the hornwork of the Fort, as the water in the moat could be regulated with sluices to provide a constant supply. The water-wheel would be on the outside of the wall, while the mechanism would be protected within the defensive enclosure [1].

By the 4th October 1664 the mechanism of the old water-mill, the water-wheel in particular, was so worn and rotten after six years of constant use that it was incapable of further repair. It was therefore resolved again that another water-mill would be built, close to the Fort on its western side. Here it would be possible for a reliable water supply to be ensured by a sluice leading from the moat [2]. The mechanism of the new water-mill had been completed by the 19th April 1665, as reported to the Seventeen. However, it had been taken apart and stored in one of the lofts of the hornwork, and would only be erected and tested on the selected site after the departure of the return

fleet [3].

The intriguing idea of building a mill within the fortifications appears to have been rejected, as no such building is annotated on the 1665 plan of the Fort and projected Castle [Fig 43]. Moreover, it was mentioned on the 26th August 1665 that the mill was one of the buildings that would have to be demolished if the new Castle were to be built around the existing Fort [4]. There is no mention in the VOC records of the "selected site" mentioned above, but a water-mill is shown on the 1679 plan of the town and gardens [Fig 45, Caption O], close to the shore and slightly to the west of the reservoir. The site corresponds with that of the old market and abbatoir, suggesting that this corn- and tannery-mill ("koorn en runmolen") was erected within the existing structure (see Chapter 7.3.6). [5].

Apart from periodic repairs [6], the mill was not mentioned again until the 19th April 1682, when the free leaseholder Tobias Marquart was granted permission to build an annexe to the millhouse [7]. It was noted on the 28th November 1684, however, that this second water-mill was also badly sited, as the water supply during the dry season was still insufficient to turn the water-wheel. Since the building was also in a state of disrepair, it was resolved that a new water-mill should be erected closer to Table Mountain. Here it would be guaranteed a constant supply of water throughout the year [8].

The new water-mill behind the Company's garden was already in service on the 30th October 1685, when it was reported by the free leaseholder Hendrick Mulder that the water channel of the old mill had been damaged in a storm. Since this building was no longer necessary, and was in a very dilapidated condition, it was decided not to waste money on repairing it [9]. The cornmill "above the Company's gardens" was inspected on the 1st August 1699, in connection with repairs which were required, but it does not appear again in the Journal or Resolutions [10].

Descriptions of the mill do, however, appear in the travellers' accounts. Kolbe stated that the mill was supplied with water led in channels over a great distance from the mountain, in order to create a sufficient head to drive the wheel during the summer, when the rivers were almost dry. He also mentioned that although the exterior was

unpretentious, there was a large space inside for the storage of grain bags, and a room reserved for the use of the miller [11]. Mentzel confirms Kolbe's account of the water supply, by stating that "it was found necessary to lead the water to the mill-wheel in pipes resting upon poles for a couple of hundred paces" [12].

This mill is probably the structure shown above the gardens on the plan of c1699, slightly off axis from the main avenue [Fig 49]. A building with a pitched roof and gabled ends also appears in this position on Stade's 1710 view of the town from above the gardens [Fig 59]. Unfortunately, however, the water-wheel is not shown.

Two other mills were also mentioned during this period. The first was a barley-mill ("grutmoolen"), which was suggested in a letter from Middelburgh dated the 16th March 1696 [13], and mentioned again in the reply of the 30th June 1697, when a miller was also requested [14]. However, it was not referred to again until the 4th September 1708, when the free baker Claas Maijboom was given permission to erect a barley-mill in Table Valley [15].

The second was a powder-mill, which was requested from Holland on the 30th June 1697, as the magazines in the Castle were incapable of keeping the gunpowder sufficiently dry [16]. Although the Batavian authorities supported this request on the 30th November 1697 [17], a negative response was received from Amsterdam on the 27th June 1699 [18].

Despite a further appeal to Batavia on the 26th March 1700 [19], it was not until the 30th January 1710 that permission was given by Joan van Hoorn, Visiting Commissioner and Governor-General of Netherlands India, for the powder-mill ("kruijtmolentje") to be finally erected. Instructions were therefore given for a suitable site to be located, and for a specification of the necessary materials to be prepared for approval by the Seventeen [20].

This task was undertaken by the lieutenant Kaije Jesse Slotsboo, the Junior Merchant Johannes Swellengrebel, the chief gardener Jan Hartog and the former chief wood-cutter Jan Vosloo, who provided two reports for discussion. The first was submitted on the 15th February 1710, and concerned the location of the powder-mill. The most suitable site would be about 33 Rhineland roods below the "waterhuijsje" [21]. This

was above the cornmill, which could still be supplied with water from the same source. The relationship between the two mills was shown in an accompanying map, but this drawing has unfortunately not survived.

The second report, submitted on the 28th February, concerned the mechanism of the mill. The timber water channel supplying the cornmill was one and a half feet wide and carried water to a depth of three inches during the dry season, whereas in the winter the water was three or four times as deep. According to the miller, three inches would be enough to turn the twenty-foot overshot water-wheel which a powder-mill required. Such a wheel could be used to drive a mechanism consisting of stampers or millstones. Both of these options were depicted in drawings, but these have also been lost.

After thorough discussion of the above two reports, it was resolved on the 11th March 1710 that the suggested site for the powder-mill would be adopted, and that millstones would be used for the mechanism instead of stampers. The project, however, still required the authorization of the Council of Seventeen, which had not yet been received by the end of 1710 [22].

7.3.5 THE EQUIPAGE MAGAZINE AND THE BOATHOUSES

The equipage warehouse was referred to again on the 9th November 1663, when thieves were able to break in through the roof on account of its low walls and the age of the reeds with which it was thatched [1]. This building had become so dilapidated and insecure by the 30th December 1664 that sixteen sailors were landed from a ship in harbour to transfer its contents to a more suitable structure, which had been erected nearby on the shore [2]. This was probably the large shed mentioned on the 19th April 1665, which would later be used as a market [3].

A new warehouse for cables and other shipping equipment was begun on the 2nd June 1666. This was also on the shore, to the west of the Fort and next to the shed mentioned above, which now was in use as a market building [4]. However, this building was not large enough for the requirements of the ships in harbour, and its contents were moved into the "church" in the Castle on the 16th May 1670. This was not in use at the time, as the garrison had been reduced sufficiently for the hall in the

Fort to be used again for religious services, but it could only serve as a temporary store. Instructions were therefore given for the equipage warehouse to be enlarged without delay [5].

Repairs were also necessary, as noted on the 23rd June [6] and on the 17th December 1670. It was mentioned in the latter entry that the previous Commander, Jacob Borghorst, had added two "sheds and outhouses" to the "Harbour premises". These, however, were not strong enough to withstand the wind and rain, and would therefore be strengthened and raised as high as the walls of the "Harbour House" in order to provide more storage space [7]. By the 7th January 1671 sufficient progress had been made that it was hoped that the "shed at the Harbour House" would be completed by the arrival of the return fleet [8].

Valentyn mentioned the "Compagnies Magazyn van Touwerk, &c." in his account of his first visit to the Cape in 1685, but did not provide any description of the building, although he stated that it was located on the site of the old Fort [9]. This statement was incorrect, however, as the equipage magazine was westward of the Fort.

It was resolved on the 4th August 1682 that a boat shed would be erected at a suitable location on the Salt River. This would be 85 or 90 feet long, with a thatched roof, and would serve to protect the Company's smaller craft from the damage caused by exposure to the rays of the sun. There was, however, no further mention of this structure [10].

The equipage warehouse was not mentioned again until the 24th March 1700, when the "Company's marine stores facing the sea" were referred to as "the old hospital" [11]. A temporary hospital had been built on the water-front in 1676 after the demolition of the old one in the hornwork [12], and its cellar had been used for the storage of equipage wares, as mentioned on the 5th April 1685, but these had subsequently been removed to a lean-to structure on the western side of the hospital [13].

This entry suggests that the old equipage magazine was no longer in use. Moreover, it was mentioned in a letter to Amsterdam dated the 14th March 1701 that new sheds with tiled roofs had been erected for the storage of masts and spars "behind the old hospital on the beach", and that a "ships' wharf, hitherto wanting" had been built

alongside [14].

Following an appeal from the "equipagiemeester" Jan Brommert, it was resolved on the 12th October 1705 to erect a boathouse at Rogge Bay. This would be located alongside the shipbuilding yard ("equipagiewerff") facing the old hospital, and would protect the boats from storm damage [15]. This had been completed by the 31st March 1706, as mentioned in a letter to Amsterdam [16].

It was also decided on the 10th March 1710 that two vacant plots which had belonged to Simon and Wilhem Adriaen van der Stel would be repossessed by the Company. Situated on the shore between the shipbuilding yard, with its adjacent warehouses, and a house owned by the burgher councillor Henning Hüsing, they would be used for the enlargement of the existing warehouses and the erection of new ones [17].

The equipage warehouse was also described in the accounts of visitors to the Cape. Kolbe (1713) mentioned that Simon van der Stel had converted the old hospital into an equipage warehouse, and that a shipping yard had been built behind it [18].

Valentyn (1714) described it as a "very long and large warehouse" on the site of the old Fort [19]. This corresponds with the location shown in Stade's 1710 drawing [Fig 53] and Wentzel's 1753 plan of the town [Fig 52]. However, it was not on the site of the temporary hospital (as suggested by Kolbe), which was immediately to the east of the Heerengracht, as shown in Wittebol's plan of the town dating from c1679 [Fig 45, Caption P].

This anomaly is a possible explanation of Valentyn's mislocation of the equipage warehouse in 1685, as he probably had the later structure in mind when writing about his earlier visit. Of more significance is the apparent relocation of this structure in the intervening period, a major building work of which there appears to be no mention in the Journal or Resolutions.

The equipage magazine was still in existence in the time of Mentzel, who arrived at the Cape in 1731/32. He described it as the "most prominent building at the Cape next to the Castle", which is the impression given by Stade's view of the town from the anchorage. It was a "large and lofty rectangular building situated upon the beach", and

it had "an exceptionally high roof covered with very old-fashioned tiles, which were shaped like an S, but placed horizontally... Although these tiles weighed 16 to 18 pounds no amount of plastering prevented them from being torn off the roof during a South-Easter. It was found necessary to encase the roof in a framework of laths fastened by iron clasps".

He also mentioned that a building for the storage of timber, near to the equipage warehouse, was the only structure surviving from Van Riebeeck's period of office. According to Mentzel this was the old hospital [20], but it has been clarified elsewhere that this structure dated from 1676, long after the departure of the first Commander (see Chapter 7.5.5).

A large warehouse on the water-front is shown in E V Stade's 1710 view of the town taken from the anchorage [Fig 69]. The closest building to the Castle, it is double-storeyed with a walled yard in front. At first glance it appears to consist of three parallel wings, each of which has a pitched roof and is terminated with parapet-gabled ends. On closer inspection, however, it can be seen that this was in fact an asymmetrically U-shaped building, enclosing a small courtyard. The rear wing does not extend as far as that facing the shore, and the ridge of the central gable facing the town is discontinuous [Fig 70].

The wing facing the town contained the lodgings of the senior officers [21], and was therefore probably the main entrance to the complex. This would explain the addition of a central gable, which was used here not for structural necessity, but for visual emphasis. Despite its utilitarian purpose, this building also had three dwarf-gables or pediments articulating its sea-front facade.

Immediately to the left of the warehouse is the forward-facing gable end of another double-storeyed building. It is not clear whether this was attached to the warehouse, but it is more likely that it was a separate structure, given the heavy shadow line separating the two and the difference in their ridge heights.

7.3.6 THE MARKET AND ABBATOIR

This was the only non-residential building type in Cape Town not to have been introduced during the period of Jan van Riebeeck, and its origins seem to have been through accident rather than design. It was mentioned on the 19th April 1665, in a letter to the Seventeen, that a shed had been erected for the carpenters and wagon-makers the previous year. This was located on the shore about two stones' throw to the west of the Castle, and was 100 feet long with a breadth of 18 feet. Since these artisans were now accommodated in the new hospital, it was decided to use the shed as a bazaar or market ("een bezaer off marckplaets") where fresh meat, fish and vegetables would be sold [1].

The new market had evidently been opened by the 6th August 1665, as the freeburghers were instructed to bring their carcasses to the "passer" every Saturday, where they would be sold by the Company's butcher [2]. The "nieuwen Marcktplaats off passer" was mentioned again in an edict of the 22nd August, when the prices of the free-burghers' produce were established [3].

The "Marckt off bezaerHuijs" was first depicted on M3/10, a plan of the town dating from 1665 [Fig 43]. It is shown as a long rectangular building parallel to the shore, slightly to the west of the reservoir.

The "passer" was severely damaged in a storm on the 16th October 1665. The volume of water from the mountain was so great that one of the streams broke right through the building, causing the partial collapse of the walls on both sides. Indeed, the whole structure would have fallen in had it not been propped up in time [4].

The market was also used on occasion for accommodating the sick, as first mentioned on the 26th August 1666. This occurred when more patients were landed from the ships than there was room for in the hospital [5].

Further damage to the "basaer" was narrowly averted on the 3rd December 1670, when it would have been blown down by a south-east gale if it had not been secured in time "with supports" [6].

The abbatoir and market is annotated as a corn- and tannery-mill on Wittebol's 1679

plan of the town [Fig 45, Caption O], but was probably also still being used for its original purpose. This was a very suitable location for a water-mill, given the strength of the water supply which caused such damage to the first "passer", as described above.

A new abbatoir was first contemplated on the 12th February 1680, when it was resolved that a plot of land near the jetty would be granted to the free butchers "Hemming Huysen" and Willem van Dieden to be used for this purpose. This building was to be erected with an adjoining lean-to market where the Company's vegetables would be sold. The cost of the abbatoir would be met by these two freeburghers, but the Company would pay for the lean-to market [7].

"Huijsen" and his partner had already been permitted to use the front of the dilapidated old hospital as a sheep kraal on the 28th September 1678 [8], and this latest land grant was a further indication of the Company's increasing reliance on the freeburghers for commercial activities.

The abbatoir was referred to again on the 27th October 1681, when it was reiterated that this building would be used as a bazaar or market, for the sale of grain and vegetables as well as meat. It was also resolved that all the burghers would contribute towards the cost of the structure. The Company would erect the building, but would be reimbursed on account [9].

There is no further reference to the construction of the abattoir ("vleeshuijs"), but it had evidently been completed by the 3rd July 1686, when it was mentioned in connection with the newly inaugurated fire-watch [10]. It was also noted on the 5th June 1687 that it had an annexed room for book-keeping, and that it was located on the water-front next to the jetty [11].

It is possible that this second abbatoir was never built, and that the free butchers continued to use the original structure, which was also close to the jetty. The milling activities annotated on Wittebol's plan are unlikely to have required the use of the entire structure, and it is improbable that the building had been so poorly constructed that it was in need of replacement a mere nineteen years later.

Nevertheless, a new abbatoir was commissioned by the Company on the 17th February

1700. This would be built with an adjoining kraal, the dung from which would be used to fertilize the Company's garden [12]. This new abbatoir, together with its kraal, had been completed by the 14th March 1701, as noted in a letter to Amsterdam [13]. It also contained a room for the book-keeper who was to live on the premises, as mentioned on the 19th December 1705 [14].

The only description of the new abbatoir was given by Mentzel, many years later. It was "quite an unpretentious building" in comparison with the equipage magazine which was close by, with a room for the book-keeper attached [15].

There is no reference to this building on plan until the inaccurate drawing of 1749 [Fig 51]. Here the "Vleeschhal" is shown on the shore between two blocks of "Magazijnen", but the reliability of the plan is brought into question by the incorrect depiction of the church, the hospital, the slave lodge, the guest house and the stables. Nevertheless, this location does correspond with Mentzel's description, and it could have been the gabled building to the left of the old water-front hospital depicted in Stade's 1710 view of the town from the anchorage [Fig 58]. The forward-projecting lean-to on the right-hand side, moreover, would correspond with the descriptions of the book-keeper's room.

7.3.7 BAKERIES AND BREWERIES

The first freeburghers' bakery was mentioned on the 8th February 1664, when Thomas Christoffel Mulder was given permission to erect one in his house on the corner of Zeestraet [1]. The bakery was taken over by Matthijs Coeijmans on the 25th April 1668, after the departure of Mulder [2], but this was the last reference to buildings of this type in the town.

The brewery was not mentioned until the 6th August 1676, when storm damage threatened its collapse. This was a new building which had only been erected a few months previously and instructions were given for it to be shored up at once [3]. The location of this building was not disclosed, but it was evidently only a temporary structure, as it was mentioned on the 27th April 1679 that the surveyor's house, next to the Company's stable, had been intended as a brewery [4]. This building appears on

Wittebol's plan of the town [Fig 45], dating from c1679, as an L-shaped structure (Caption X).

There is no further mention of this structure either, but the burgher councillor Theunis Dirksz van Schalkwijk was granted permission to erect a private brewery on the 14th June 1694 [5]. He was also granted land for the erection of a brewery in Table Valley on the 17th November 1706. This was situated "at the foot of Table Mountain", next to the river where the water channels ("water-buijzen") were located [6]. This, however, was the last reference to this brewery, and its location is not indicated on contemporary maps.

7.3.8 BRICK, LIME, TILE AND POTTERY KILNS

The pottery kiln was first mentioned on the 19th April 1665, when it was noted in a letter to the Seventeen that two potters had begun the erection of a suitable house and oven [1]. The kiln must have been close to the Fort, as it was one of the buildings threatened with demolition by the initial plan to build the new Castle around the old Fort, as stated on the 26th August [2]. However, it does not appear on either the 1665 or 1679 plans of the town.

The pottery kiln had been completed by the 26th September 1665, when the first baked and glazed earthenware products were sold in the market [3]. However, the building was damaged in a storm on the 29th October, when the south-east winds dislodged the tiles from the roof [4].

A large new lime-kiln had also been erected between the Fort and the projected Castle by the 15th October 1665 [5], and it was decided on the 18th December to establish a new brick-kiln in Table Valley, above the Fort and to the east of the Company's garden [6]. It was also mentioned on the 22nd May 1666, in a letter to the Seventeen, that a shed was under construction for moulding and drying the bricks in wet weather. This would be 270 feet long and 42 feet wide [7], and already appears next to the kiln on the 1665 plan of the town [Fig 43], to the east of the upper part of the Company's garden.

The pottery kiln was said to be working well on the 22nd May 1666 [8], but it was mentioned on the 21st October 1669 that it was being converted into a smelting house

for minerals [9]. This had been done by the 26th November, when the assayers and miners submitted their first report [10]. This was unfavourable, however, and no useful minerals were ever found during the period of this thesis, apart from the copper in Namaqualand which was too distant to exploit economically.

The Company's tile-kiln was first mentioned on the 18th July 1672 when it was "thrown down and levelled with the ground" during a storm [11], but there was no reference to repairs until the 12th June 1673 [12]. This "tile factory", which had not previously been mentioned, was probably attached to the brick-works.

A small shed was erected on the 9th November 1672 to protect the lime from rain and secure it against theft [13], and a well was sunk on the beach near the largest kiln on the 2nd February 1673 to obtain a supply of fresh water for slaking the lime [14].

It was also mentioned on the 30th November 1676 that 257 slaves who had recently arrived were being temporarily accommodated in a building at the Company's brick-kilns [15]. This must have been the large shed first mentioned in 1666.

A new pottery kiln was commissioned on the 13th July 1682. This would be built outside the Castle, and Cape bricks would be used for its construction [16]. This kiln, however, is also not shown on the maps of the period.

Kolbe mentioned that the freeburgher Abraham Hertog had built a tile-kiln ("Tegelbakkery") in Table Valley. This was on a plot of land opposite the Company's pottery kiln, separated from the latter by a canal [17]. Valentyn also made reference to Hertog's brick-kiln (sic), located on the side of the Lion Mountain facing "towards the Fort and the Table Mountain" [18]. Again there is no visual evidence of the kiln in question.

Few of the non-residential buildings outlined above were of any particular architectural significance, and many of them were mentioned in the records without any description of their configuration in plan or three-dimensional form. All, however, contributed to the urban character of the town in the early 18th century.

7.4 HARBOUR FACILITIES

7.4.1 THE ANCHORAGE AND THE SHIPBUILDING YARD

Table Bay was not the ideal choice for an anchorage, owing to the dangers presented by the north-westerly winds in winter. This was first partially recognized on the 22nd June 1652, when the dangers of the south-easterly (sic) gales were noted in the Journal [1]. There was, however, no alternative harbour. Saldanha Bay was too barren to support agricultural activities, and Simon's Bay (discovered only later) suffered from the same disadvantage, although it would be used as a winter anchorage from the 1740s.

Table Bay was first used for the careening of hulls on the 4th May 1654 [2], and for ship repairs on the 11th July [3]. However, it was mentioned on the 28th January 1656 that its facilities were unsuitable for major repairs, which would have to be undertaken at Saldanha Bay instead [4].

The shipping yard at Table Bay was used for shipbuilding as well as ship repairs, the first boat to be built at the Cape having been completed on the 31st May 1654. This was a "sampan, 32 feet long and 8 feet broad, to be used for carrying salt, wood, cow-manure and other things from the river to the fort" [5]. Other vessels, for communication with the outposts at Robben and Dassen Island and Saldanha Bay, as well as explorations further afield, were also built throughout the period of this thesis [6]. The supervision of the shipbuilding operations was formalized on the 12th February 1659, when the master carpenter Cornelis Cornelissen of Haerlem was appointed to keep the Company's ships in repair. This was by now a major responsibility, as is revealed by the number of vessels under construction [7].

The location of the venue for ship repairs was first mentioned on the 28th January 1661, when it was stated that a galiot "was drawn up on to the beach opposite the gate of the fort and less than a pistol-shot away" [8]. Given how close the Fort was to the shore, it is unlikely that the ship was beached directly in front of the hornwork. A more probable location would have been beyond the jetty, between the mouth of the Fresh River and the equipage magazine (see Fig 42). Moreover, it was mentioned on the 28th May 1666 that Rogge Bay (even further to the west) was used for this purpose [9].

Careening was also carried out at the Salt River, as was first mentioned on the 28th April 1664, when the locally built "Bruijdegom" was sent there to be cleaned [10]. Repairs were also undertaken further afield, and on the 17th November 1686 the carpenters of the shipping yard were sent to repair a salvage ship that had been wrecked at Cape Agulhas [11].

An attempt at providing extra protection for the anchorage was made on the 21st December 1696, when the decision was taken to scrap an old ship which had been damaged in a storm. This vessel had been used to accommodate the sailors who had recovered in the hospital and were awaiting the next fleet. It would now be sunk near the end of the jetty, where it would serve as a mole to protect the ships in harbour from unexpected storms. Moreover, the hulk could also be used as a battery in times of war [12].

The dangers of the anchorage in Table Bay were outlined again on the 21st February 1699, when instructions were given for False Bay to be inspected, sounded and charted [13]. It was also mentioned on the 18th March 1699, in a letter to Amsterdam, that the mouth of the Salt River had silted up the previous year. A canal had therefore been cut to allow the boats access to the large and shallow pool where repairs were carried out. This canal was shown on an "annexed chart", but this does not appear to have survived [14].

The shipping yard or "equipagie-werff" was an essential component of the Company's establishment at the Cape, and an example of its self-sufficiency. Its associated marine warehouse or "equipagie-magazijn" has already been discussed [15].

7.4.2 THE JETTY

The erection of a jetty next to the Fort had first been suggested in the memorandum of Janssen and Proot, long before Van Riebeeck set sail for the Cape [1]. However, it was only in 1656 that work was commenced on the project, once the fortifications had been completed.

Van Riebeeck first mentioned his intentions of building the jetty in a letter to Batavia dated the 13th May 1652. This would permit the ships' boats to load their water barrels

directly, and prevent the sailors from having "to go up to their necks in water", thereby falling ill. He asked for the necessary timber for the jetty to be sent over [2], and the request was repeated on the 30th May, as well as for the timber required for a system of "locks" that he was proposing on the Fresh River [3].

Preliminary work on the jetty had evidently begun by 1655, as it was mentioned in a letter to Batavia of the 24th July that the floor of the beach was too hard for poles to be driven in. The supports would have to be built of stone instead, and assistance was requested from the men of the fleet. The jetty would be 70 roods long and 24 or 30 feet wide at the base, giving a breadth at the top of between 10 and 12 feet [4].

Permission to proceed was received in a letter from Batavia dated the 24th December 1655, and the Commander of the return fleet had been instructed to assist with men and boats in the transporting of the necessary stone [5].

Work on the jetty was commenced in earnest on the 4th March 1656, when the majority of the men were sent to drag out the beams that had already been prepared in the forest [6]. These would be cut "into joints, ribs, heavy frames, &c.", which would "be filled with stone and sunk" to create the supporting structure, as outlined in a letter to Batavia dated the 7th April 1656 [7].

It was mentioned on the 29th April that the beams for the jetty were still being transported from the forest, as was the case as late as the 22nd July. By this time the carpenters were already at work on the structure, but "an enormous quantity of timber" would still be required as the jetty was "to extend between 70 and 80 roods into the sea". Work on the structure was delayed by the weakness of the labourers, a common occurrence during the winter months, and it was reported on the 5th August that the master carpenter and his best assistants had become seriously ill [8].

A description of the structure of the jetty was given on the 3rd and 4th October. The foundations consisted of boxes of "heavy beams connected with hasps, anchors and dovetails", placed in position "with the help of tackle fastened to anchors". This work could only be done at low tide, but on the 6th work was begun on the filling of these timber boxes with bushes and large stones. The workmen were given incentives on the 8th to continue with the heavy labour of carrying the stones for the jetty, but the next

day it was observed that the project would take a long time to reach completion [9].

Work on extending the jetty continued on the 18th December, when a further "heavy box made of thick beams, connected with joists and dovetailed" was added. It was stated that another eleven of these boxes would be required, placed fifteen feet apart and joined together with heavy beams laid across in the form of a bridge. Further progress was made the following day, when another two "boxes or containers were placed in position in the sea and sunk with branches and stones" [10].

On the 23rd more timber was brought from the forest, but a large amount was still required. Two more foundation boxes had been sunk that day, but another seven or eight still had to be constructed, apart from the beams and planks needed for the superstructure of the jetty. Another consignment of timber was ordered on the 28th, when the urgency of completing the project before winter was stressed [11].
Timber deals [12] were again requested from the Seventeen on the 5th March 1657, having been refused in their letter of the 12th April the previous year. It was pointed out that over a thousand planks would be needed for the jetty, and that "two or three hundred Norse beams" sent in "each vessel of the respective chambers" would be a considerable help. By this time the structure had been largely completed, comprising "thousands of heavy beams made into cases and sunk into the sea with heavy rocks". These had then been linked together with beams in the manner of a bridge.
A temporary covering in the form of a gangway would be erected before the arrival of the winter fleet expected in May, until suitable timber was available for the final platform [13].

On the 21st March 1657 the opportunity was taken of using the men from the fleet in harbour to assist with the work on the jetty. Following a request from Van Riebeeck, the Visiting Commissioner Rijckloff Van Goens instructed forty wood-cutters to assist with the preparation of as many beams as possible within the next twelve days. These would be dragged out of the forest by 200 men seconded from the fleet [14]. In his report of the 16th April, however, Van Goens contradicted Van Riebeeck by stating that there was no need for imported timber as ample supplies were available at the Cape. He also stated that the planks ordered for the jetty would be unsuitable, and that split beams should be used instead [15].

Beams for the jetty were still being brought from the forest on the 7th July, revealing that Van Riebeeck's deadline for a completion of the structure by winter had not been met. Moreover, all the carpenters were taken off the job on the 20th in order to begin erecting the granary at Rondebosch (see Chapter 8.3.2b). This was done in accordance with the instructions left by Commissioner Van Goens, who had said that the jetty was not the sole priority and could be completed with the assistance of the carpenters from the next fleet. Indeed, seventy men were taken from the ships in harbour on the 14th August to collect more timber from the forest [16].

Notice of the postponement of the work on the jetty was sent to the Seventeen on the 31st August [17], and to Batavia on the 28th September [18], Van Riebeeck evidently wishing to clear himself of any possible accusations regarding the delays. However, the construction of the jetty was postponed again on the 17th October, in order to alter the course of the adjacent Fresh River to prevent its winter floodwaters from damaging the foundations. On the 20th, however, the workmen on the granary were given incentives to complete it as soon as possible in order to resume work on the jetty [19].

This was fast approaching completion on the 17th January 1658, when Van Riebeeck walked along the beams that had already been erected and boarded a boat at the far end. All that remained was to cover this framework with the four-inch thick planks that were being prepared in the forest. These were collected on the 16th February, and on the 20th June men from a ship in harbour were sent to collect more beams with which to extend the structure. By the 3rd August the project had presumably been completed, as it was mentioned that boats were arriving at the jetty [20].

The jetty had not yet reached its full extent, however, as it is annotated on both the 1658 plan [Fig 41] and the 1660 cavalier perspective [Fig 42] as being 60 feet too short. Unfortunately there are no surviving drawings depicting it in elevation.

The extensions to the jetty, which involved a further length of 150 feet, were mentioned on the 27th July 1660 in a letter to Batavia. Permission was requested to make use of the timbers of the French ship Mareschal, which had been wrecked at the Salt River, for this purpose [21]. The reason for having to extend the jetty was given in the report of Commissioner Andries Frisius on the 4th July 1661. This was because of the

shallowness of the sea, which rendered it unusable at low tide. It was therefore intended to increase its length by ten or twelve roods, using the timber from the wrecked "Marischal" if permission was received to do so [22].

It appears that permission to make use of the French wreck was given, as repairs to the jetty were under way on the 5th March 1662, when the remains of the ship were destroyed in a fire [23]. However, the extensions do not appear to have been started, as Van Riebeeck's instructions to Wagenaer on the 5th May 1662 mentioned the necessity for increasing the length of the jetty by eight or ten roods. Annual repairs would also be required [24].

The location of the jetty is first shown on the 1656 plan of the Fort and gardens [Fig 40], where it is inaccurately depicted as being some distance to the north-west of the mouth of the Fresh River. The 1658 and 1660 plans [Figs 41 & 42], however, agree in situating it right next to the river. This is confirmed by the entry of the 17th October 1657 mentioned above, which raised the necessity of diverting the river to prevent the foundations of the jetty from being damaged.

There were not many further references to the jetty after the departure of Van Riebeeck, and most of them dealt only with periodic repairs. These were necessitated not only by the action of the sea, but also by the damage caused by the heavy barrels of water rolled along it [25]. It was mentioned on the 14th April 1673, however, that the jetty was to be lengthened [26], and on the 27th January 1676 a number of soldiers from a ship in harbour were brought ashore to rebuild the supports of the jetty in stone. This was to avoid the expense of continual repairs to the original structure [27]. Further work on the stonework of the jetty was commenced on the 17th October, following instructions given the previous day [28].

The jetty is shown again on Wittebol's c1679 plan of the town [Fig 71], where it is described as being (only) 22 roods long, and now having a stone wall on either side. A ramp ("bruggetie of holling") is also shown close to the shore, along which the water barrels were rolled.

It is depicted in a new position next to the Castle, however, in two later plans, M1/1165 and M1/336 [Figs 49 & 51]. Although inaccurate in many respects, these

plans are probably correct in their siting of the jetty, as it corresponds with that shown on later visual records. There is no reference to a new jetty in the Resolutions, despite the amount of work that it would have entailed. However, given that it was built after 1679 (the date of the Wittebol plan [Fig 71]), its relocation must have taken place during the Van der Stel period, which was notable for its absence of information on building works.

The new location is confirmed in E V Stade's two views of the town, dating from 1710 (M1/987 & M1/985) [Figs 53 & 54]. The first of these (M1/987) is the only detailed depiction of the jetty, showing five vertical posts supporting its front edge, with further posts along the sides [Fig 72]. Two rectangular water tanks are also shown at the end of the jetty in both drawings.

Valentyn described the jetty in 1714 as being located between the Castle and the equipage magazine, thus corresponding with its position on Stade's drawings. It was 165 feet long and five or six feet wide, and was constructed of heavy beams over which planks had been nailed [29]. The jetty clearly served its purpose, as it was described in complimentary terms by other visitors, although without the detail provided by Valentyn [30].

7.4.3 THE RESERVOIR AND THE WATER CHANNEL

Of central importance to the VOC fleets was the supply of fresh water to the ships in harbour. This was first mentioned on the 10th February 1655, when the authorities in Batavia stated that complaints had been received about the poor quality of the drinking water. This had led to illness on the ships, and was reportedly because the stream providing this water was also used to irrigate the Company's gardens [1].

Van Riebeeck refuted this allegation in his reply of the 14th April, stating that the pollution was caused by the skippers themselves, who had permitted the sailors to wash their clothes upstream of the watering place. This practice was now forbidden [2], and the necessary edict had already been promulgated two days previously [3].

Despite the fact that one branch of the Fresh River had its mouth next to the jetty, both the 1658 and 1660 plans [Figs 41 & 42] describe the other north-western branch

(between the jetty and the equipage magazine) as being the place where the water casks were filled [4]. Although this might seem illogical, given its distance from the jetty, the closer branch was the one which discharged the water which had been used to irrigate the gardens [5], and was considered unfit for drinking purposes. Moreover, the later plan shows a pond which corresponds with the position of the reservoir commissioned by Van Riebeeck's successor, Zacharias Wagenaer.

Nevertheless, the closer branch of the river does appear to have been used for a short period as a supply of drinking water. Complaints about the muddiness of the water in the pond, which was stirred up by the men filling the casks, were noted by the Visiting Commissioner Pieter Sterthemius on the 12th March 1660. He therefore gave instructions for an embankment of earth to be erected across the moat ("canal") next to the jetty ("platform"), and to be provided with six or eight wooden or bamboo pipes with which to fill the water barrels [6].

By the 20th August 1660 work had been commenced on the damming of the moat beneath the "Reijger" bastion. The new dam wall would be provided with "taps and chutes" for supplying the ships with water, thereby fulfilling the instructions given to Van Riebeeck in 1651, before his departure for the Cape [7]. It appears, however, that another reservoir had been built by the 6th February 1661, when a further edict was published forbidding any bathing or washing of linen in the reservoir itself or in the river which supplied it with water [8].

This was described in the report of Commissioner Andries Frisius, dated the 4th July 1661, as "a small dike" built "around the old watering place". It was provided with a sluice at the lower end to facilitate run-off in the wet season [9]. This sluice, which had evidently been built of planks, burst on the 22nd March 1663, but was repaired by nightfall [10]. By the 16th May, however, the masons were already collecting stone with which to rebuild the reservoir in masonry [11].

The resolution to erect a new stone reservoir to the west of the Fort was approved by the Visiting Commissioner Harmen Klencke on the 23rd May 1663. This would be four roods wide and sixteen roods long, with a breastwork of kiln-baked bricks above the stone walls to prevent cattle or other animals from gaining access to the water. The old

timber sluice would also be replaced by a new one built of brickwork, three feet wide and somewhat deeper [12].

Work on the new reservoir had been commenced by the 20th June, but delays were caused by the inevitable bad weather [13]. On the 19th July, however, eighty men were landed from two ships in harbour to assist with the excavations [14]. Moreover, all the available unskilled labourers were put to work on the 6th August, in order to ensure that sufficient progress was made during the dry season for the foundations to be laid for the new sluice. This was time consuming labour, however, on account of the large number of boulders on site, which needed to be broken up [15]. Khoi labour was also used, as mentioned on the next day when it was stated that "15 young Hottentoos (sic) were added as assistants" [16].

By the 10th August the masons had begun laying the foundations of the sluice [17], but the work was damaged by flooding on the 20th. The rivers had overflowed their banks, causing the collapse of two roods of the newly built wall of the reservoir, the masonry of which had not yet been dry. One of the walls of the sluice was also damaged, these having been built of baked brick and raised to a height of three feet on either side [18]. Repairs, however, were commenced on the 22nd August [19].

The masonry walls of the reservoir were finally completed on the 14th September 1663, but they were allowed to dry out for a few days before the water was let in [20]. This was done on the 18th [21], but the brick floor behind the sluice had not yet dried enough, and was loosened when the water was let out [22].

The reservoir appears to have been effectively completed by the 21st November, when it was described in a letter to the Seventeen. It was sixteen roods long and four roods wide, with two pairs of stairs on either side, and a sluice at its lower end. It had been constructed with four-foot thick walls of stone, with a parapet of baked bricks above [23]. This letter was accompanied by a detailed cavalier perspective of the reservoir [Fig 73] [24]. The drawing shows that it was built slightly to the east of the old natural watering place, which had been filled in with the earth excavated from its replacement.

The reservoir took the form of a long rectangle, with two flights of steps on either side from which the water barrels were filled. Below these the lower end was angled, with a

sluicegate at the end. This is shown in the drawing as being flanked by pilasters supporting an entablature and pediment, the latter elaborated with spheres at its apex and edges. This led into an underground channel which discharged a short distance further from an outlet with splayed and angled sides, the facade of which was elaborated with piers surmounted by pyramidal finials.

The siting of the reservoir is first shown accurately on M2/21, the c1679 plan of the town and gardens [Fig 71]. It is depicted immediately to the south-east of the old watering place, which is described as a stagnant pool. The numerous meandering streams which had previously led to this pool were now diverted into a canal at right angles to the Heerengracht, which led to the stream on the north-west side of the demolished Fort. The reservoir was fed by a sluice leading off this canal, suggesting a system of water regulation to prevent it from being inundated. Immediately below the reservoir was the later water channel, separated from the former by a bridge giving access to the town from the Castle.

The reservoir needed to be cleaned periodically to remove the silt and clarify the water, the first such instance being mentioned on the 18th July 1669 [25]. Another problem concerned the method of transporting the water to the boats. This was partially solved by the water channel ("watergoot") mentioned above, which was described in detail in the Journal and the Resolutions, as outlined below. These descriptions also give an insight into contractual arrangements at the Cape in the 17th century.

As a result of continual damage to the jetty, caused by the water barrels which were rolled over it, and of the damage to the barrels themselves, it was resolved on the 25th February 1670 that a stone water channel would be built between the reservoir and the jetty. This decision was made with the approval of the Visiting Commissioner Mattheus van den Broeck, following consultation with the engineers and foremen. The channel would allow the ships to fill their water casks without having to take them ashore, thus saving a considerable amount of time and effort.

The construction of the project would be contracted out to one of the freeburghers, under the following conditions:-

1) The channel was to be 36 roods long, extending from the sluice of the reservoir to a

point between the jetty and a rock to the north-west of it, and no closer to the jetty than six roods. The foundation was to be one and a half feet deep, and eight feet wide for a distance of 33 roods and two feet from the shore. Over the last three roods leading to the wings of the reservoir sluice, it would be widened to sixteen feet. This widening would occur on one side only, however, as the side facing the hospital was to be kept straight. The superstructure was to be set in six inches from the foundations on either side. The levels of the foundation of the channel and the surface of the sluice of the reservoir were to be the same, raised seven feet above the floor of the latter at the outlet, where the channel was to have a gradient of three inches in every foot. Lastly, a parapet of kiln-baked bricks was to be provided, one foot three inches wide and one foot high, with an incline [26] of three inches, as shown in the "attached drawing", no record of which survives.

2) Lime and cement for the project would be supplied by the Company at no cost. The stone would have to be collected by the contractor, again free of charge, as long as the Company was not prejudiced thereby. The kiln-baked bricks, however, would have to be purchased from the Company at a rate of six guilders per thousand. Tools and equipment would be supplied by the Company free of charge, but any loss or damage would have to be made good after the completion of the project. The Company would also make available any labourers it was able to spare, as long as their wages and rations were paid for by the contractor.

3) The account for the project would be settled in three stages: the first on commencement of work; the second when half of the work had been done; and the third when the project had been effectively completed.

4) The contractor would have to provide surety ("suffisante borge") of twice the amount of every payment, in order to protect the Company from his possible bankruptcy.

Lastly, the contractor was required to complete the project within six months, or face the damages arising from any delays. If none of the freeburghers were willing to take on the project, the Company would undertake the task itself [27].

The contract for the stone water channel was awarded to the freeburgher Wouter Mostaert on the 4th March 1670. The cost of the project would be 3000 rixdollars

(9000 guilders), and the first payment of 1000 rixdollars would be made immediately. The burgher Thielman Hendricx would stand surety for Mostaert [28], and the first stone of the new watercourse was laid on the 8th March by the Visiting Commissioner Matthaeus van den Broeck [29].

Apart from a request for lime from Robben Island on the 9th May [30], there was no further mention of the project until the 10th October, when it was seriously damaged in a north-westerly gale. Most of the work completed to date was destroyed by the surf, apparently because the masonry had been defective. This was now being rebuilt with more suitable materials [31], although there was a shortage of good stone, as was mentioned on the 7th January 1671 [32].

The water channel was almost complete by the 10th February, the "stone embankment over which the water must flow" and the brick parapet being the only parts still outstanding. The intention had been to construct the latter of locally-baked bricks, but concern was expressed that the Cape bricks were insufficiently durable. It was therefore decided to use Dutch clinkers instead, a decision approved by Commissioner Goske [33].

Work continued on the "upper courses" of the "stone furrow" on the 20th February 1671 [34], and 100 000 clinkers for the parapet were landed from a ship in harbour on the 27th May [35]. The water channel had presumably been completed by 1672, when it was damaged in a north-westerly storm on the 30th June, some of its stonework being washed away [36]. The necessary repairs were commenced on the 7th July [37], but further damage was recorded on the 22nd May 1673 [38].

The settlement of Wouter Mostaert's account for the construction of the water channel was discussed on the 31st December 1675, when it was finally agreed to pay his last instalment of 1000 guilders (sic). This had already been approved by the Council of Seventeen on the 4th May 1674 [39]. However, it appears that Mostaert had still not received the outstanding amount by the 10th July 1676, when the Council of Policy agreed once again that the account would be settled [40].

It was noted on the 7th May 1679 that the water channel, which had eventually cost 12 000 guilders, was still not being used effectively. Although a wooden tank had been

constructed at its outlet, this only held enough water for three or four barrels. As a result, no more than two ships could be supplied at once, and the fleet as a whole was being delayed. Moreover, the barrels still had to be rolled from the beach on to the jetty, with the same risk of breakages that had obtained before the erection of the water channel.

It was therefore decided that the stone channel would be extended a further sixteen roods into the sea by a wooden channel, resting on box-piles constructed of heavy cross-beams of hard Cape timber two roods apart. Further cross-beams would be placed between the piles to protect the structure from the action of the sea, and poles would be set on either side of the main structure to prevent it from being damaged by the ships' boats. The new channel would also be kept three roods away from the jetty to give the boats room to manoeuvre. Three or four of them would now be able to fill their casks directly from the channel, without having to take them ashore [41].

The water channel is first shown on the plan of the town and gardens dating from c1679 [Fig 71]. It was linked to the reservoir by an underground brick-vaulted drain [42], over which a bridge permitted communication between the Castle and the town. The water channel was at an angle of about 160 degrees to the reservoir, with a tank on the shore for filling the water barrels. The channel then extended a similar distance into the sea, but did not reach as far as the jetty, in accordance with the specification outlined above.

A newly erected fountain above the jetty was mentioned on the 10th February 1687, in connection with the health regulations regarding the stream which supplied it [43]. This was probably part of the improvements to the water channel commissioned by Simon van der Stel, and described by Ovington in 1689: "The watering for Ships is contriv'd with such Convenience, that it is scarce equalled by any in the World. For from the Mountains are convey'd in narrow Channels clear Water down to the Shoar, from whence in Leaden Pipes it is carried above forty Foot in the Sea, and there rais'd so high above its Surface, that the Ships Long Boats can row under the Pipes, and fill their Vessels with much Ease" [44].

However, the pipes supplying the tanks on the jetty were actually made of timber,

which had become rotten by the 1st August 1699. Orders were therefore given for enough wood to be cut in the forest for another 1600 pipes [45]. One of the water tanks, moreover, was washed away in a storm on the 16th [46]. The water pipes [47] and the tanks on the jetty [48] had been repaired by the 1st March 1700, as mentioned in a letter to Amsterdam.

Another building to have received repairs was "the little water-house in which the water is collected", about "half-an-hour's distance from the Castle" [49]. This structure, which had not previously appeared in the records, was referred to again as the "water house" on the 11th March 1710, when it was described as being located above the mill at the upper end of the Company's garden [50]. It was probably the upper reservoir mentioned by Mentzel, as will be seen below.

The "waterhuijsje" also appeared in an edict of the 11th December 1708, which prohibited the drawing of water from the channel or the pumps between this structure and the jetty. Water could only be collected from the fountain on the Parade, from the water tanks on the jetty, and from the natural streams [51]. By this time the old water channel was no longer in existence, having finally been demolished by the 14th March 1701, as mentioned in a letter to the Seventeen. Its site had been contracted out to the freeburgher Henning Hüsing, and a new abbatoir now stood in its place [52].

The continual repairs to the wooden pipes supplying water to the jetty were exacerbated by the abandonment of Mauritius, which had been a useful source of timber. A request was therefore made to Amsterdam on the 15th April 1707 for two hundred lead pipes, and more in subsequent years. These would be used to replace the old timber piping incrementally [53]. Only eight of these lead pipes, however, were sent from Amsterdam on the 14th May 1708, although another 92 were promised with the autumn fleet [54]. These were evidently insufficient and, as the likelihood of receiving enough for the entire length was remote, another request for timber would be made to Holland and Batavia, as resolved on the 4th February 1710 [55].

Descriptions of the water supply to the town and harbour were also provided in the accounts of prominent visitors to the Cape. Kolbe (1713) described how the water from the mill beneath Table Mountain was led in large pipes to the square (now the Parade)

between the town and the Castle. Here pumps had been erected for the supply of drinking water to the houses and the fortress [56].

Valentyn (1714) mentioned that there were three water channels to lead water from the mountain, all equipped with pumps. One led to the jetty, one close to the Castle, and the third to the Parade. The last of these, erected by Wilhem Adriaen van der Stel, was close to the first orthogonal street ("regte straat") towards Table Mountain, and provided a constant stream of water for the use of the town burghers [57]. Valentyn's description of the fountain on the Parade corresponds with the depiction of "een Fonteyn die altyt springt" on the site of the demolished Fort, shown on a plan of the town and gardens dating from c1699 [Fig 74]. This is almost certainly the plan given to him by Wilhem Adriaen van der Stel, which he included in his "Beschryvinge" [58].

Mentzel (1741) confirmed that there was a fountain on the Parade, and also described the upper reservoir as being a stone structure provided with a roof, capable of holding "several thousand cubic feet of water". Although his description was much later than the period of this thesis, it does correspond in location with earlier and less specific entries concerning the "waterhuijsje" [59].

Although of little aesthetic significance apart from the elaboration of the reservoir, the harbour facilities were essential for the maintenance of the settlement at the Cape. Moreover, they were prominent features in the townscape and in the lives of the inhabitants and visitors, and the detailed descriptions of their construction provide further insight into the building techniques and contractual procedures of the proto-Cape Dutch period. These civil engineering works therefore deserve the attention they have been denied in previous publications relating to this period.

7.5 PUBLIC BUILDINGS

7.5.1 THE BURGHER WATCH-HOUSE

The Burgher watch-house was the venue for the meetings of the Burgher Council as well as the headquarters of the burgher watch. The present building in Greenmarket Square, dating from 1755, is described by Fehr as being the second watch-house, replacing the first one built on the same site in 1716 [1]. However, there had also been an earlier structure built during the period of this thesis, as will be revealed by the evidence outlined below [2].

The first burgher councillor, who was admitted as a full member to the Council of Justice whenever freeburghers' matters were considered, was appointed in 1657. He was joined by another in 1658, and their number was increased to three in 1675 [3].

The burgher watch was first mentioned on the 3rd July 1686, when it was resolved that ten freeburghers would be required to patrol the streets of the town in shifts every night, under the command of a sergeant and a corporal. Their purpose was primarily to act as fire-wardens, thereby reducing the duties of the garrison, as the policing of the town was done by the soldiers. The burghers were to assemble at the "vleeshuijs" or abbatoir, while the military were posted in the hospital next door [4].

The burgher watch had been increased in size on the 1st April 1696, as mentioned in a letter to Middelburg of the 1st August. It was now "divided into six companies, so that each will consist of 30 men" [5]. They were to assemble at four o'clock each afternoon at "their station near the 'Bazar' (market and abbatoir)" in order to "prevent thefts, fights, murders, and other irregularities at night" [6].

This "station", though, does not appear to have been a building designed for their specific use, as previous references mentioned a location at, not near the abbatoir. Moreover, land had been granted to the Secunde Elsevier on the 12th March 1699, which was evidently leased to the Burgher Council for the site of a watch-house [7]. If this building had been erected at once, it would already have been standing for a number of years when it was decided on the 10th March 1710 that a new watch-house ("wagthuijs") would be built, to be followed by a town hall ("stadhuijs") in the course

of time. These would both be located on the site of the old Burgher watch-house.

There is some ambiguity regarding the extent of the site. The burghers believed that it would include the adjoining plots, as resolved on the 10th March (see Chapter 7.1). However, it appears that the intention of the Council of Policy was to purchase all three properties ("naast en bij het burgerwagthuijs geleegen...") for public use ("...voor 't gemeen aan te neemen..."), and to expropriate them in part for a new road to the market [see Fig 50] [8]. The burgher councillors, it should be reiterated, did not have title to the plot on which their watch-house stood.

Kolbe stated in 1713 that the burghers did not have a separate council house ("Raadhuis"), and that their meetings had to be held in the houses of the individual burgher councillors [9]. They did have a watch-house, but this was so dilapidated that it threatened their lives with imminent collapse [10].

He also mentioned that the burghers had been offered a plot for a new watch-house in 1708 by the Visiting Commissioner and Governor-General of Netherlands India, Joan van Hoorn [11]. This, however, was still in the possession of the ex-Governor Wilhem Adriaen van der Stel, and after Van Hoorn had been approached by the latter's representatives, he agreed that it would have to be purchased for the sum of 1000 rixdollars. This was unacceptable to the freeburghers, who would not have been able to pay for the necessary materials and labour given this extra expense, and the project was therefore held in abeyance [12].

Valentyn (1714) repeated Kolbe's account of Van Hoorn's offer, but added that the site in question was in the same street as the house of the Fiscal Blesius, giving further information as to the location of the first Burgher watch-house [13]. If the street in question was "Thuijnstraat", which demarcated the edge of Market Square (flanked although not faced by the Fiscal's house), this would have given the new Burgher watch-house a far more prominent position than the insignificant site of the existing building facing the present Long Street behind Van der Stel's property [Fig 50].

The plan of the town dated c1699 [Fig 49], illustrated in Valentyn's "Beschryvinge", shows a diagrammatic representation of a building in the position of the present Burgher watch-house. This, however, cannot have been the original watch-house, given

the evidence outlined above (see also Chapter 7.1).

The erection of the second watch-house was commenced only in 1716, when the Council of Policy agreed on the 3rd March to supply the necessary materials on credit [14]. Moreover, the 1716 resolution refers to a site having been found ("en nu een plaats daar toe is aangewesen"), which suggests a different location from that decided upon in 1710, and from that of the first watch-house, but this building is beyond the period of this thesis.

The suggestion of the 1716 resolution is therefore that the first Burgher watch-house was not on the site facing Market Square of the second and third (surviving) examples, thus corresponding with the information revealed in the resolution of 1710. This would explain the 1716 reference to a site having been found for the new building, instead of its having been erected on the site of the old one. It would also explain Kolbe's reference to the burghers having rejected Van Hoorn's offer of the plot owned by Wilhem Adriaen van der Stel next door, once a price had been attached.

The author acknowledges that the evidence presented here is circumstantial. What the evidence does reveal conclusively, though, is that the Burgher watch-house commenced in 1716 was the second such building, not the first.

7.5.2 CHURCHES AND CEMETERIES

The four buildings used for religious services prior to the erection of the first church have already been described. These were the hall in the Fort, the temporary shed in the middle of the Castle court, and the halls adjoining the Governor's residences in the latter, the first on the perimeter of the pentagon and the second on the subdividing wall [1].

The burial ground was originally behind the kraal to the rear of the Fort, as mentioned on the 4th July 1661 in the report of Commissioner Andries Frisius. This was not enclosed, with the result that wild animals ("jackhalsen ende leeuwen") were able to dig out the corpses. Van Riebeeck, however, intended to surround this cemetery with a palisade, but there is no reference in the written or visual sources that this was ever done [2].

Dignitaries were later buried in the "church" in the middle of the Castle court, but it was noted on the 16th December 1677 that this was soon to be demolished. It was therefore resolved that no more people would be buried there, and that a new cemetery surrounded by a wall would be erected in the Company's garden. The bodies under the old "church" would be exhumed and reburied in the new cemetery, and a proper church would also be built in the course of time, within the boundary wall [3]. This was the first mention of a permanent church, but it would not be completed until 1704.

Further deliberations concerning the new cemetery were made on the 30th December 1677, when it was confirmed that the boundary wall would be six feet high [4]. The foundation ceremony was held on the 9th April 1678 [5], and the deceased Governor Joan Bax was buried in the new "church" on the 29th June. This, however, could not yet have consisted of anything more than foundations [6].

The church and the cemetery wall, the foundations of which were annotated as having already been laid, are shown on the c1679 plan of the town and gardens [Fig 75]. The church appears with a plan in the form of a Greek cross, with arms of equal length, set centrally within a square cemetery wall. This was entered axially across an open space from Kerkstraat, which cut through the new line of house plots facing the Parade. It was flanked by the main avenue through the Company's garden on the north-western side and by Steenstraat on the south-eastern side. Another street behind separated it from the long facade of the slave lodge, which would have formed a backdrop to the church.

No progress, however, appears to have been made during Simon van der Stel's period in office. Construction of the church was postponed in accordance with instructions received in a letter dated the 20th June 1680 [7]. Significantly, this order was not recorded in the Resolutions, suggesting that it was not even discussed in the Council of Policy. This absence of architectural information is characteristic of the Van der Stel period.

The building had evidently not yet been recommenced by 1685, when Visiting Commissioner van Rheede noted that he had seen "het fondament van een kruijskerk", and that church services were being held in the meantime "in de zael van 's

Commandeur woning". Van Rheede also contributed to its continued postponement, as he was concerned about the proximity of the projected church to the Castle, believing that it could be used as a stronghold in the event of an enemy attack. He stated, moreover, that a new church was not necessary, as he considered the hall to be large enough for the purpose [8].

There is, however, no specific mention of the church in Van Rheede's instructions to Simon van der Stel, although he did give orders for all the houses closer to the Castle than the outer edge of the gardens, facing the Lion Mountain, to be demolished. These included the recently erected slave lodge, which was sited behind the church [9]. Nor is there any mention of Van Rheede's concerns about the church in the Resolutions of the Council of Policy, suggesting again that this was not a matter for debate. It is interesting, too, that Van der Stel did not comply with Van Rheede's orders regarding the demolition of the freeburghers' houses and the slave lodge, but nevertheless made no attempt to recommence the construction of the church.

Kolbe suggests that work on the church was halted because Simon van der Stel's energies were fully occupied with the erection of his house at Constantia [10]. Kolbe's statement was certainly derived second-hand from the freeburghers [11], but could well have been accurate. Van der Stel's prevarication with regard to the Cape church is in marked contrast to his particular concern for the completion of the church at Stellenbosch [12].

Constantia was a structure of considerable size, and it is not unlikely that Simon van der Stel made use of the Company's workmen and materials, as his son was later to be accused of having done at Vergelegen. The correspondence in dimensions between the crossing of the church and the entrance hall at Constantia is instructive in this regard: both were thirty feet, the largest unsupported span recorded at the Cape during the period of this thesis and until the end of VOC rule in 1795. The similarity of these dimensions, and the correspondence in date with the erection of Constantia and the cessation of building operations on the church, could well have been coincidental. Kolbe's account, however, suggests that the freeburghers might have thought otherwise.

Moreover, the new Council Chamber, built next to the new Governor's residence along the subdividing wall of the Castle, was inaugurated as a church on the 22nd May 1695 [13]. This is surprising, given that the foundations for the church in the Company's garden had already been laid. The church council also appear to have been dissatisfied with this venue, as will be revealed below.

The only other reference to religious precincts during Simon van der Stel's period in office was to the cemetery, on the 25th December 1687, when it was stated that slaves as well as freemen would be buried there [14].

The new church was not mentioned again until the Governorship of Wilhem Adriaen van der Stel, when a petition from the church council was received on the 21st July 1699. Although its members had been given authorization by the Visiting Commissioner Daniel Heins on the 12th March to proceed with the building, a shortage of funds had prevented them from even making a start. It was therefore resolved that work on the new church would be recommenced with the assistance of the Company. Moreover, a wall would be built at once around the cemetery, which had not yet been enclosed [15].

This wall had been erected by the 28th December 1700, but the original foundations of the church laid in 1678 were discovered to be "very bad and small". New foundations "of a proper depth and width" were therefore marked out by the church councillors, in the form of an octagon, and the first stone was laid by the Governor on that day [16]. This entry is ambiguous with regard to the foundations, as it is not clear whether the old ones were simply widened and deepened, or whether new foundations were laid on a larger plan. However, it is explicit about the foundations being too small, and about the octagonal form of the new structure. It is therefore likely that the foundations of the Greek cross shown in the c1679 drawing [Fig 75] were increased in size, and that the four wings were linked by splayed foundations, thereby converting the cross into an octagon internally and thus also increasing the internal area of the church.

Indeed, a letter to Amsterdam of the 28th March 1701 stated that the foundations of the church under construction had "been laid many years ago". The walls had been raised above ground level by this time, and the churchyard had already been enclosed [17].

The original intention had been to erect the tower over the crossing, but the church council decided on the 4th April 1701 to build it against the end of the north-eastern wing instead. It was also decided on the 14th May 1703 that its height would be increased by a storey [18]. The reason for the change in location of the tower was almost certainly structural, caused by the alterations in plan. A masonry tower could have been supported on arches between the re-entrant angles of the crossing of a church built on a Greek cross plan. However, the circular columns and horizontal beams set within the perimeter of the new octagonal plan would not have been strong enough to support a tower of masonry.

An example which was probably similar to the intended first design is the Dutch church at Jaffna in Ceylon, with arches at the crossing supporting a low tower above [Figs 76 & 77]. The interior was depicted by J W Heydt, whose views of Cape Town and Constantia are discussed elsewhere in this thesis.

A further progress report to Amsterdam dated the 1st April 1703 stated that, apart from the tower, the church was almost ready for use [19]. On the 30th August another 4000 guilders were granted to the church council, whose own resources were now exhausted [20], and the Secretary De Goyer was buried in "the newly-built church" on the 4th December [21]. The new church was finally inaugurated on the 6th January 1704, when the first service was held by the Rev Petrus Kalden [22], and it was confirmed in a letter to Middelburg dated the 31st March that the church and the tower had been completed [23].

Bogaert described the church in 1702 as being built in the Dutch manner ("op de Hollandsche wyze"), with a moderately high tower and set within a churchyard surrounded by a brick wall. This description was written two years prior to the inauguration of the church, suggesting either that Bogaert was describing the intended reality, or that he re-wrote his 1702 entry in the light of his experience of the completed structure on his return in 1706 [24].

Kolbe (1713) provided a more detailed description of the church. It was similar to the hospital in its use of a cross-shaped plan, and he made specific reference to their urban relationship, mentioning how pleasant it was to have two such wholesome, useful and

highly necessary ("heilzaam, nuttelyk en hoogdnoodzakelyk") buildings facing each other across the street.

The church differed from the hospital, however, in that the arms of the cross-shaped plan did not meet at right-angled re-entrant corners. These instead projected outwards ("dezelve springen uit"), giving the overall shape of an irregular octagon. The building was surrounded by a high wall, enclosing a cemetery reserved for the senior Company's officials and the families of the freeburghers. Within this wall, next to the gate facing the hospital, was a small house for the sexton and his family.

The churchyard wall was between ten and twelve feet high, but the church itself was much taller. It was also whitewashed, and thus clearly visible from the harbour. There was a tower of average height at the lower end, set on the foundations of the church wall ("op de fondamenten der Kerkmuur gebouwt"), with a moderately steep thatched roof above, similar to that of the church itself and to those of the houses in the town. This tower contained two bells, which were rung only for services.

Two large portals led into the church, which had a tiled floor. The roof was not vaulted on account of a lack of funds, according to Kolbe, and there was also an absence of sufficiently strong roof beams. It had therefore been necessary to introduce four wide circular columns for the support of the roof timbers above. The church had also not yet been provided with a ceiling, owing to a shortage of planks.

Benches ("banken") for the male members of the congregation were located around the wall, except in the choir, while the women sat on chairs in the body ("buik") of the church. The dignitaries had wooden pews ("gestoeltens") in the crossing defined by the interior columns ("rontom de vier gemelde pilaren"). There were four of these pews, entered up three steps and through a small door. The Governor sat in the one to the right, next to the minister's seat, and was faced by the members of the Council of Policy. The two on the lower ("benedenste") side were reserved for the burgher councillors and the military officers.

Beyond the central space with the pews were two rows of benches for the minister and the church officials, and between them was a large arched opening containing the pulpit. This was a neat structure of brown-painted timber, similar to other Reformed

pulpits, but without any carving. Behind the minister's seat was a large empty space, which served as a choir.

Kolbe also stated that the crossing was given a flat roof [25], to avoid the possibility of a pitched roof being blown over by the south-east gales. This had been surrounded by a wooden "galdery" on which one could walk, which had long since been blown down by the wind [26]. None of the other evidence supports his statement, however, and it is possible that Kolbe was confusing the "galdery" with the railed walk-way around the roof of the tower. It is also possible that he was referring to a ceiling erected over the crossing, as in the Jaffna church, and had mistakenly extrapolated this in hindsight as having been the underside of a flat roof above.

According to Kolbe, the cost of the church, the cemetery wall and the sexton's house amounted to more than 30 000 guilders. He also mentioned that the following inscription written by the minister Petrus Kalden appeared above the doorway facing the hospital:-

"Aegrotis solamen ego, fessisque levamen
Fonsque salutiferos suppeditans fluvios;
Si modo laete hos rivos afflictus adibit
Non tantum incolumis, sed satiatus erit" [27].

Valentyn described the church as a very fine building, which had cost about 11 000 rixdollars to erect. It was almost octagonal in form, with four large spaces ("groote vakken") [28]. Each of these had walls twenty to thirty feet high, and contained two large glazed windows [29]. The four wings of the main roof were all provided with gabled ends, similar to those of ordinary houses in Holland. Those on the northern and southern sides (sic), however, were higher than the others. These contained the two entrances to the church, which comprised double doors with a fanlight ("spinnekop") above [30], surmounted by another large window which was half the height of those mentioned previously. Valentyn also stated that the doors had beautiful portals ("schoone portaalen"), ten or twelve feet high, and marbled ("gemarmert") in red and white paint [31].

Inside the church were four round white columns, about three feet in diameter and 25

feet high, including their marbled capitals. Next to each of them was an elegant pew, the most ornate of which was that of the Governor. This had a canopy over it, supported on four spiral ("geslingerde") columns, and a carpet in front, and was situated next to the south-western pillar [32].

The pulpit was situated on the western (sic) side of the church, and was an extremely handsome octagonal structure, embellished with ebony. It was also covered by a canopy above, supported in this case by eight black spiral columns, and was raised four or five feet above the floor and reached by stairs. A stained glass window was placed in the wall behind the pulpit, but Valentyn gave no indication of its height. This was probably similar to those above the entrances, as in the Jaffna church.

To the right of the pulpit were the seats of the ministers and the elders, faced on the other side by those of the deacons. There were also pews for the skippers of the fleet along the back wall adjoining the belltower.

According to Valentyn, the length and breadth of the church were both 50 of his paces, while the outside perimeter was 173 paces long [33]. The outer doors were painted brown, and made a fine impression with their obelisks [34]. He also mentioned the belltower with its short spire surmounted by a large copper weather-vane. The tower was about twenty feet square and between seventy and eighty feet high, and was whitewashed like the rest of the church.

The building was surrounded by a wall 106 feet in length. It was seven feet high on the side facing the slave lodge, but only four feet high on the entrance side. Valentyn's main criticism of the church was that it had not been vaulted, resulting in structural instability during strong south-easterly gales [35].

Mentzel's description (1741) agrees closely with those of Kolbe and Valentyn, and indeed he acknowledges that he made use of the former's transcription of the Latin inscription facing the hospital [36]. His account is useful, however, in clarifying some of the descriptions of these two contemporary writers, although other points appear to be obfuscated through uncritical repetition. The following entries are particularly enlightening:-

"The building has four gables, under two of which are found the main entrances that are ornamented with porches in red and white marble" [37].

"Under each gable the walls run obliquely and thus the whole church is octagonal in shape, giving more room than one built in the cruciform shape which it resembles. Towards the lower side a plain square tower has been set up facing North. Both the Church and the Tower are covered with thatched roofs...

"A ten-foot wall, with two gateways, encloses the Church and the Churchyard. The building also contains many lofty windows. In the centre of the Church there is a wooden platform resting upon four columns of masonry [38]. The pulpit is formed of East Indian Chiaten wood and is well finished; it looks as if it were painted brown, but this is the natural colour of the wood..." [39].

"To prevent draughts the outer doors of the Church lead into two vestibules, on either side of which swing doors open into the Church. The vestibule through which the Governor enters the Church has a double door, or rather a door with two wings in the centre, which is opened only upon the Governor's arrival. The throwing open of these doors is a signal for the whole congregation to rise, and the Governor is received on all sides with a respectful and deep obeisance" [40].

Evidence of the configuration of the church is largely absent from the visual sources, and there is no surviving plan of its internal arrangement. The churchyard is shown only as a dotted outline on Valentyn's map of the town dating from c1699 [Fig 49], and the church itself is not shown until the 1749 plan of the town [Fig 51]. Here it is incorrectly depicted as a longitudinal building which widens out to a roughly half-octagonal structure at the entrance [41].

Apart from the omission of its tower, the first accurate drawing of the church is probably the 1753 plan prepared by the sworn surveyor Wentzel, copied by Wernich in 1791 [Fig 78]. It is shown as a Greek cross, the arms of which were linked close to their ends by long splayed walls, thereby suggesting an octagon. The gabled ends of the cross-shaped church and hospital faced each other across the Heerengracht, although the public entrance to the former was almost certainly from Church Square, on the opposite side.

This is shown surrounded on two sides by an L-shaped block of houses. These are cut back on the north-eastern side to the same extent as the width of the street to the south-west, which defined the third side of the square. Although the whole composition is symmetrically arranged around the entrance axis of the church, there is no central approach to the square. This approach is thus less formal than that depicted on the plan of c1679 [Fig 75], where Kerkstraat not only gave an axial view of the church, but also linked it visually to the Parade, the major open space of the town. The original open space between the church and the houses facing the Parade had now become another housing block, although it may not yet have been built upon, given that no subdivisions are shown.

The church appears in three dimensions on E V Stade's two views of the town dating from 1710 [Figs 79 & 80]. The first of these, taken from the anchorage, shows it partially obscured by a building in the foreground. The upper part of the tower can be seen, however, with its steep pyramidal roof surmounted by a cross. Behind is one of the pitched-roofed cross-wings of the church, which is terminated by clearly depicted parapet gables. That on the Heerengracht side is shown obliquely and appears to be a bell-shaped gable, corresponding with that of the hospital across the road [42].

The view from above is even more interesting. Again the church is obscured below eaves level, this time by the slave lodge in the foreground. Above this can be seen the gable facing the mountain, shown here as a simple triangle, lower than the parapets of the gables facing the Heerengracht and Church Square, with the tower beyond. Two diagonal lines, however, are also depicted on the roof, extending from the crossing of the arms at the ridge to the eaves line, short of the north-western and south-eastern gables. These are a clear representation of the valleys which would have been required by the splays shown on the 1653 survey plan [Fig 78] [43].

Apart from Kolbe's inaccuracy concerning the flat roof over the crossing, there is a notable correspondence between all the written descriptions of the church and the visual evidence.

The Journal entry of the 28th December 1700, describing the new foundations as being of octagonal form, is confirmed by the statements of Kolbe that it was an "irregular

octagon", of Valentyn that it was "almost octagonal", and of Mentzel that "the whole church is octagonal in shape, giving more room than one built in the cruciform shape which it resembles".

The cruciform plan referred to by Mentzel is also mentioned by Kolbe, who describes a "cross-shaped plan with angled corners", and by Valentyn who mentions that all four wings were provided with gabled ends.

The integration of the cruciform and octagonal plans described above is explained by Wentzel's survey plan of 1753. This depicts a building in the form of a Greek cross with splayed re-entrant angles. The proportions on this survey drawing are of particular significance, although the dimensions appear to have been over-estimated.

As drawn, the wings of the cross are 108 feet long, comprising a 1:2:3:2:1 subdivision of projection to splay to wing to splay to projection. The dimension of the wings at three roods gives a width of 36 feet, but this is almost identical on the drawing to the scaled dimension of the hospital across the road, which was only 30 feet wide. Moreover, if the conversion factor of feet to Valentyn's paces (1,8:1, as derived from his description of the hospital [44]) is applied, a length and width of 90 feet is obtained.

Wentzel's dimensions, incidentally, agree with those of the Greek cross in Wittebol's plan of the town in c1679, which shows a length of nine roods for both wings and a width of three roods. This confirms that the positions of the original foundations were adhered to, and that the only addition comprised the angled splays. The 36-foot width in both buildings is probably explained by Wentzel having based his dimensions on Wittebol's drawing of the foundations of the first church, which would have been wider than the walls.

The correspondence of the length of the perimeter between Wentzel's drawing and Valentyn's description is equally consistent. Working with the 1,8:1 conversion factor for feet to paces, the proportions of the survey plan (if the wings are reduced to a width of 30 feet) reveal a perimeter of 312 feet as opposed to Valentyn's 311,4. This gives credence to Valentyn's statement that the tower was only 20 feet square, two-thirds of the width of the seaward-facing arm of the cross.

Moving to the interior, the approximation to an octagon referred to by Kolbe and Valentyn is explained by a width for the main wings of 30 feet, versus a length for the angled splays of only 28 feet. Since this space was interrupted only by the four round columns, it would have been perceived as a continuous eight-sided space, with extensions off the wider sides.

These extensions were probably all reached through arches similar to the one over the pulpit described by Kolbe. The one on the opposite end of this arm, where the pews of the skippers were located, could also have given access to the belltower. The projections on the cross-wing contained the vestibules mentioned by Mentzel, which were almost certainly Valentyn's "schoone portaalen". Although the sequence of his text suggests that they were external, there is no evidence in Stade's drawing or in those of the enlarged church of projections beyond the gable ends.

These must therefore have been interior vestibules, but extending beyond the central octagon. Valentyn describes them as being ten or twelve feet high, the larger figure corresponding almost exactly with half the height of the 25-foot columns. It is likely, therefore, that they extended up to the springing points of the arches, leaving a semi-circular opening above. This would also explain the marbling, which must have been internal, and would have had the effect of making the vestibules appear to recede from the octagon, in keeping with the arched openings on the other two sides.

Mentzel describes both of these vestibules as having doors "on either side", but one of them had "a door with two wings in the centre" (presumably a central double door) for the sole use of the Governor (see Note 40, above). The public entrance was probably on the Church Square side, where the congregation would have gathered before and after services. The Governor's entrance must therefore have been on the other side, facing the hospital, and reached more formally from the Heerengracht.

The dissimilarity between the entrances from these two vestibules would have accentuated the centrality of the church, as it prevented a dominant cross-axis. The main liturgical axis was perpendicular to the entrance axis, as revealed by Kolbe's and Valentyn's descriptions of the furniture layout.

Not much can be established about the precise form of the exterior facades, as Valentyn

is the only source to have provided any written indication of their original appearance. It is likely that they were remodelled when the building was converted into a quincunx in 1779, as shown on Comfield's 1824 and De Meillon's 1832 drawings [Figs 81 & 82], given the complete integration of the articulation of the central gabled end with its flat-roofed annexes. It is unlikely, however, that the openings in the gable ends would have been altered.

There is only one likely configuration for the roof of the church, depicted so carefully by Stade. This can be inferred from the original design of a simple Greek cross without the angled splays, and from the re-appearance of this form in the enlargements of 1779, when it was converted into a quincunx with flat-roofed annexes in the re-entrant angles.

Given the Company's emphasis on economy, it is inconceivable that the main roof of the first church would have been rebuilt entirely when it was enlarged. Moreover, Valentyn and Mentzel stated specifically that the building had four gabled ends, and Kolbe that it was a "cross-shaped plan with angled corners". It is therefore clear that the main roof comprised two pitched wings meeting at right angles, with gabled ends, against one of which the tower was placed. The only uncertainty concerns the roofing of the angled splays, which converted the interior into an octagon. These could have been flat-roofed, as in the annexes to the hospital which predated it across the road, and as in its own later extensions. They could also have had lean-to roofs, as suggested by Fransen, except that they would then have been too low to accommodate the windows described by Valentyn.

Neither of these possibilities, however, is supported by contemporary descriptions of the building or by Stade's 1710 drawing of the town as seen from Leeuwenhof [Fig 80]. This shows valleys extending from the angles of the splayed walls to the apex of the crossing. The sides of the octagon therefore also had pitched roofs, on jack-rafters built against the main roof structure. This would have permitted the cruciform structure to be maintained when the church was enlarged.

The reconciliation between the verbal and visual evidence outlined above is illustrated in the reconstructed drawings of the church [Figs 83 & 84]. These differ significantly from the previous reconstructions offered by Bax and Fransen [Figs 85 & 86] [45].

The Cape church was not without precedent. It was described in 1710 by the ex-Governor General of Netherlands India, Joan van Hoorn, as being similar to the "Casteels kerkje" at Batavia, but although it was the finest building ("frayste gebouw") at the Cape, it was roofed with thatch and was built in such an outdated manner ("soo anticqsen gebouw") that it raised astonishment in the eyes of the observer ("men sig met verwonderinge daarin moet bespiegelen") [46].

Bax describes the "Casteels kerkje" as an octagonal building with a flat roof [47]. However, he believes that the Cape church was more similar to the "kruiskerk" in Batavia, which was outside the castle [48]. Bax, unfortunately, does not illustrate these two churches, and commentary on his observations is thus not possible. However, there is also a similarity between the new church at Batavia, illustrated by J W Heydt in 1739, and the Cape church. Although markedly different in three-dimensional treatment, with its central dome and lantern above and absence of gables, his view does suggest a similar planning arrangement, comprising an octagon with lobbies or "portaalen" on the major axes [Fig 87].

However, it is more likely that the Cape church was derived directly from Holland, rather than indirectly through a Batavian example. Bax has noted the possible influence of Hendrick de Keyser's Noorderkerk in Amsterdam [Figs 88-90] and the Grote Kerk at Maassluis [Figs 91-93] in this regard [49]. The latter is closer in form to the Cape church in having gabled rather than half-hipped ends, and in having a tower attached. However, the Maassluis church was clearly derived from the Noorderkerk, as two members of the Maassluis church council were sent to Amsterdam in April 1629 to make "pertinente aftekeningen van die Noorderkerk", and the church itself was commenced later in the year [50].

The similarity between the Cape church and the Noorderkerk in Amsterdam is unlikely to have been coincidental, as a copy of the "Architectura of Hendrick de Keyser" had been discovered in an unmarked case in the Fort on the 8th January 1661 [51]. Given that its owner was unknown and it could not be re-addressed, this treatise would probably still have been at the Cape at the time of the building of the church. Significantly, the Noorderkerk is illustrated in part-plan, sectional perspective and elevation in this work [Figs 94 & 95]. This also gives greater validity to Bogaert's

comment that the Church had been built "in the Dutch manner", suggesting that it reminded him of a building in Holland with which he was familiar.

Bax noted that the "timmerman Jan Thriex" had worked on the project, as had the "baastimmerman" Jacobus van der Steen, and suggested that one of them might have been the designer of the church [52]. This, however, is extremely unlikely in the case of a building of such importance, based on the theoretical principles of the Renaissance. By this time the master craftsman would no longer have been the principal designer (as he had been in the Medieval period). This is demonstrated by the involvement of the surveyor Wittebol in the design of the first parsonage in 1670 [53]. It is more probable that it was designed by the current surveyor, with reference to De Keyser's drawings, or even by the Governor himself, Wilhem Adriaen van der Stel, given his apparent interest in the octagon as noted by Brink [54].

Of greater importance than the identification of the architect is the difference between the Cape church and its counterparts in Holland. Both the Noorderkerk and the Maassluis church were entered through the diagonal splays, but the church in Cape Town was entered through two of its gabled ends. This was probably because the Cape church was set within a churchyard which related to the orthogonal grid of the town, whereas the Maassluis church was freestanding within the urban layout, as was Hendrick de Keyser's Noorderkerk in Amsterdam.

The result was that the interior of the Cape church was less disorientating on entry and perhaps, therefore, less appropriate for a centralized building. On the other hand, the comparatively slender central supports and the wider splays permitted the internal octagon to be perceived more clearly. Despite its structural shortcomings, therefore, it was arguably more spatially sophisticated than the two Dutch examples, where the octagonal form was suppressed and the Greek cross emphasized.

The spatial sophistication of the Cape church supports the argument of this thesis that the earlier buildings were more complex than their Cape Dutch successors, in contrast to the "evolutionary" theory usually propagated. Subsequent churches in the outlying districts followed the precedent of the Greek cross type (Stellenbosch, Tulbagh, Paarl [55] and Graaff-Reinet), but without the added complexity of the splayed corners. This

is another case of the exemplar of the Company's buildings in Cape Town being simplified into the vernacular of the interior districts.

7.5.3 PARSONAGES

There is little firm information on the architectural form of the first two parsonages in the town. Although they are described in the Journal and Resolutions, as well as in the accounts of Valentyn and Kolbe, their plan configuration is not clearly revealed.

To begin with, the ministers were accommodated within the Fort, but this was an unsatisfactory arrangement as will be explained below. By 1666 the Rev Joan van Arkel had already built himself a house outside the Fort, for which he was paid an accommodation allowance, but this was not an official parsonage [1]. Moreover, no indication is given of its location.

On the 25th February 1670, however, the minister Adrianus de Voogt requested that a parsonage be provided for him outside the Fort. His present lodgings were too small to include a study, and were located right next to the "corps-de-guarde", the noise of which interrupted his concentration when working. It was therefore decided that a plot of land, twelve Rhineland roods long and six wide, would be granted to him on the south-eastern side of the Company's garden, close to the brick- and tile-kiln. Here a small house would be erected, comprising a "voorhuijs", a bedroom and a study, as well as a lean-to "bottelary" (pantry) [2].

The proposed new parsonage was mentioned again on the 23rd June 1670, in connection with a shortage of bricks [3], but instructions were nevertheless issued on the 10th July for construction to be commenced as soon as possible. This building, however, which had been designed by the land surveyor Wittebol, was far larger than the small house approved in the Resolution of the 25th February. It was therefore decided that the width of the house would be reduced from 59 to 44 feet, and that it would be constructed as economically as possible [4].

The foundation stone of the parsonage was laid on the 14th November 1670, by which time all the necessary timber had been prepared [5]. Shells for lime were ordered from Robben Island on the 30th December [6], and it was mentioned on the 7th January 1671

that work on the parsonage was "rapidly advancing" [7]. The completion date was unfortunately not mentioned in the Journal or Resolutions.

Valentyn (1714) described this first parsonage as a handsome dwelling comprising two rooms and a "voorhuis", and roofed with thatch [8]. This was occupied by the Rev Joannes Overney from 1678 until 1685, when he moved into the "schoone groote woning" which had been illegally erected by the lieutenant "Johan Baptista Dubertino" [9]. Kolbe also makes reference to these two parsonages, but in less detail. However, he does mention that the earlier one was across from the Church and was now being used by the sick-comforter. The second one was slightly further behind the Church ("een weinig verder achter de Kerk") [10].

It must therefore have been this second parsonage that was referred to on the 8th November 1688, when it was resolved that Johannes van Andel, the minister at Stellenbosch, would be given access to a room and kitchen there whenever he was present in Cape Town [11].

The last official mention of this parsonage within the period of the present thesis was on the 3rd January 1708, when it was resolved that the dismissed minister Franciscus le Boucq would be requested to vacate it, in order that repairs might be carried out before the arrival of his successor. This was followed by an eviction order on the 10th, as he had made no attempt to comply with the request made a week earlier [12].

There is no further information on these early parsonages, but it is possible that the first of them was the house marked "W" and annotated incorrectly as "V. Thuynhuys" [13] on Wittebol's town plan of c1679 [Fig 75]. It was diagonally opposite the as yet unbuilt church, corresponding with Kolbe's description "across from the church". Moreover, it was the closest house to the brick-kiln, thus corresponding with the description in the Resolutions, and its L-shaped plan corresponds with one of three possible interpretations of the arrangement of its rooms.

The four rooms could have been arranged in a row with the lean-to "bottelary" at the end, or in the form of a T-plan with the lean-to in the centre, or as an L-plan with the lean-to forming the rearward extension. There is indeed a T-shaped house (the only one in the town) on the plot diagonally opposite the front corner of the churchyard, but this

is clearly annotated as a freeburgher's property.

If the parsonage was the L-shaped house marked "W", as seems probable, it is likely that the front wing would have had a double-pitched roof of thatch as described by Valentyn, with the lean-to forming the rear wing. He describes the house as comprising "two rooms and a voorhuis", while the Resolution entry describes a "voorhuijs", bedroom and study, together with the lean-to "bottelary".

A literal interpretation of these descriptions could suggest a "voorhuis" to one side giving lateral access to a study with the bedroom beyond, or vice versa. The "bottelary" could then have been attached to the rear of the "voorhuis", satisfying Brink's criterion that a "voorhuis" required another room behind it (see Chapter 7.2.2). However, a more convenient arrangement for the minister would have been a central "voorhuis" giving access to his bedroom on one side and his study on the other. The "bottelary" would then have been attached to the back of one of these two latter rooms, and would probably have had an outside entrance from the yard.

This first parsonage dating from 1670 could therefore have been a simplified version of the "dubbelhuis" plan already current in Amsterdam (see Chapter 7.2.2), reducing the "galdery" to a mere "voorhuis". If this was the case, the parsonage would be the first known example of a symmetrically fronted house at the Cape [14]. Significantly, it was designed by the Company's surveyor Joan Wittebol, whose drawings of the Castle reveal a clear understanding of the architectural principles of the Renaissance.

"Dubertino's" house, which became the second parsonage, does not appear on Wittebol's plan as it had not yet been built. However, Kolbe's description of its siting, as slightly further behind the church than the earlier parsonage, is further evidence that the building occupied by Overney and described by Valentyn was not the converted brewery referred to in Chapter 7.2.1, but a completely new house on a different site.

7.5.4 SCHOOLS

There is even less information on the architectural configuration of the early schools at the Cape than there is on the parsonages. The first school, where slave, Khoi and Dutch children were given lessons together, appears to have been in a room of the house of

the sick-comforter. After 1676, when a discriminatory ruling was introduced, the slave children were given instruction in the slave lodge. However, the school as an independent building type did not exist at the Cape prior to 1710.

The first school at the Cape was established for slave children in 1658. These had been captured from a Portuguese ship off the coast of Brazil and, after many deaths on board, 170 of them arrived at the Cape on the 28th March. They were cynically described as being mostly "young boys and girls, who will be of little use for the next 4 or 5 years" [1].

Nevertheless, it was decided on the 17th April that a school would be established for these children, where they would be taught the Dutch language and given religious instruction. In order to encourage them in their studies, each of them was to "receive a small glass of brandy and two inches of tobacco" after classes. There is no mention in the written or visual records of the venue for this school, but perhaps it was the house of the sick-comforter Pieter van der Stael of Rotterdam, who had been appointed as schoolmaster [2].

The local school was evidently not good enough for the children of the Commander, as it was mentioned on the 1st January 1661 in a letter to Amsterdam that Van Riebeeck had sent his two sons to the Latin school at Rotterdam the previous year [3]. One of them, Abraham, was later to become the Governor-General of Netherlands India.

The school was still being run by the sick-comforter on the 12th March 1661, when it was mentioned that Khoi children were being taught as well as slaves. Again, however, there is no information as to its location [4].

The suggestion was raised on the 28th December 1676 that a separate school should be opened for slave children. It had already been noted in the time of Jacob Borghorst that the original school established by Van Riebeeck was now admitting Dutch pupils as well [5]. This suggestion was followed, and schools for slave girls and boys were incorporated in the slave lodge built three years later, thus signalling the beginning of educational segregation at the Cape. It was also resolved that the master blacksmiths, carpenters and masons should each take on at least two of the more intelligent slave children ("swarte jongetjes") as apprentices [6].

The segregation was probably the result of Visiting Commissioner Verburgh's memorandum of 1676, which stated that a good school was needed for preparing "Staatsburghers" for the growing colony. He also gave orders for the Commander to appropriate one of the masonry houses for use as a school, and to appoint the surveyor Wittebol as schoolmaster [7].

The first mention of the building used for Dutch schoolchildren [8] was in 1685, when Visiting Commissioner van Rheede resolved that the Rev Overnij should move into the very attractive dwelling ("zeer fraaie woning") vacated by "Jan Babtist" (Dubertijn) [9]. This would allow the old parsonage to be used as suitable lodgings for a schoolmaster and also as a classroom [10]. Whether the classroom was the "voorhuis" or the minister's old study (see Chapter 7.5.3) is not clear from this entry.

However, a further mention of the school for the Dutch children was made on the 12th September 1685, when the new Fiscal Joannes van Ceulen was given temporary lodgings there. It was made clear that this was an exceptional dispensation which would be permitted only until the arrival of the new schoolmaster. Moreover, the Fiscal would only be allowed the use of half the house, the other half being reserved for the use of the interim schoolmaster and his classroom. This satisfied the spirit of Commissioner Van Rheede's recent instructions that the house should be used solely for educational purposes, given that the interim schoolmaster presumably lived elsewhere [11].

Although ambiguous in terms of the house being divided into two halves, this reference probably indicates that the Fiscal was given the use of the room on one side of the "voorhuis", and the one on the other side was used as the classroom. If the "voorhuis" had been at one end, either the Fiscal or the schoolchildren would have had to pass through each others' room in order to reach their own, which would hardly have been a practicable solution [12]. Moreover, an L-shaped plan under a pitched roof, with a lean-to added at one end, would have been improbable in terms of roofing economy [13]. It is more likely, therefore, that the front of the house was symmetrically planned, with the "voorhuis" in the centre.

The school for the Company's slave children was referred to again on the 15th September 1687, in connection with the dismissal of the schoolmaster. It was also

decided that handcrafts such as sewing and knitting should be taught to the young slave girls in the Company's slave lodge [14].

In addition, the first private Dutch school was established on the 6th June 1690, when the widow Aagje Keysers was granted permission to open a school for children below the age of seven years [15]. Again, though, this appears to have been held in a private house.

The Company's school was evidently not run as regularly as it should have been, as orders were given on the 12th July 1707 that the sick-comforter's house was to be used solely for school purposes. The previous incumbent Van Hoorn had apparently also been using it as a shop and an inn [16]. This use again suggests a plan arrangement comprising a central "voorhuis" (shop) and rooms on either side, one for the "schoolmaster" and one for his "guests".

There is no mention in the Journal or Resolutions of the location of this school, but Kolbe describes the house of one of the sick-comforters (which had previously been the parsonage) as being across from the Church ("tegen de Kerk over staat") [17]. This house, which he states was also used as a school, has been identified by the present author on Wittebol's c1679 plan of the town [Fig 75] as Caption "W". The plot on which the first parsonage stood thus appears to have been diagonally opposite the churchyard [18].

The other sick-comforter's house was probably the original school (while the one described above was still being used as a parsonage), but Kolbe does not reveal its location apart from the fact that it was outside the Castle [19]. It is unlikely that either of these buildings differed from ordinary houses in the provision of schoolrooms, and is more probable that classes were merely held in one of the rooms of a conventional dwelling.

7.5.5 THE HOSPITAL ON THE WATER-FRONT

The provision of a hospital was a matter of crucial importance to the Company, in order to give its sailors and other employees the opportunity of recovering from the diseases contracted on their long voyages between Holland and Batavia.

Van Riebeeck's first hospital dating from 1653 in the kraal behind the Fort has already been described, as have his second hospital in the hornwork built in 1656, and the third hospital in the new hornwork erected by Wagenaer in 1663 [1]. However, two hospitals were also built outside the confines of the fortifications during the period of this thesis.

The first of these was on the water-front, and replaced its predecessor in the demolished hornwork of the Fort [2]. The new hospital was already under construction in 1676, as was mentioned on the 22nd December [3]. In the same year Commissioner Nicolaes Verburgh had indicated that the rice warehouse near the shore should be used for harbouring patients, but this could only have been a temporary measure. This is confirmed by a letter written to Holland on the 14th March 1677, stating that the new hospital had been inaugurated in 1676, and was large enough to accommodate 400 patients [4].

This structure evidently also included residential accommodation for its staff, as it was decided on the 4th August 1682 that the chief surgeon's house at the hospital would be enlarged. It was to be lengthened by twenty feet, and costs would be reduced by making use of second-hand timber and Cape bricks [5].

By the 5th April 1685 the hospital was already too small to accommodate all the patients from the ships in harbour. It was therefore decided that a loft would be erected to serve as an additional ward, and that the cellar would be given over to the hospital as well. The loft was to be built of planks one and a half inches thick, and the cellar would be paved with floor tiles [6], thereby allowing a total of 200 patients to be housed instead of the 100 which it was actually capable of accomodating (see Note 7, below). The letter of the 14th March 1677 was thus clearly overestimating the number of patients that this building could contain.

The equipage wares that had been stored in the cellar would be transferred to an existing lean-to structure on the western side of the hospital. The dispensary ("medicinale winckel") was also mentioned in the same resolution [7].

It was decided on the 28th June 1687 that the Company's midwife, Aletta Kaisers, would be appointed as matron ("binne moeder") of the hospital, and provided with an appropriate dwelling. It is not revealed, however, whether this was within the hospital

or outside in the town [8].

Christoffel Langhansz wrote in 1694 that "the Hospital for the sick brought by the ships is as bad as it could be. It is left more like a dilapidated dwelling than a hospital" [9]. The fourth hospital was also described in a letter of the 4th April 1695 as being inappropriately ("onbehoorlijk") sited, on account of the strong winds off the sea ("zwaare zeewinden") and the unpleasant odours, or "vapours" ("vuijle dampen") [10].

It was also mentioned on the 21st December 1696 that an old ship in harbour had been used for the accommodation of convalescents, a further indication of the shortage of space for hospital patients [11]. This, however, was irreparably damaged in a storm, and had been sunk by the 30th January 1697 [12].

By the 13th November 1697 a new hospital in the gardens was already under construction. This was required because "the old one stood on a very unhealthy place, and was altogether too small" [13]. By the 24th October 1699 it had been sufficiently completed for all the patients to be moved out of the old hospital, which was by now "in a very dilapidated condition". It would be repaired, however, and used for other purposes [14].

This appears to have been done by the 24th March 1700, when "the old hospital standing outside the Fort" was described as being used again for "the Company's marine stores" [15]. The building was mentioned for the last time on the 12th October 1705, when it was decided to erect a boathouse "facing the old hospital" [16]. By this time a new equipage warehouse had already been erected, but the hospital probably still formed part of the shipping yard.

Kolbe (1713) mistakenly described this structure as the original hospital erected by Van Riebeeck [17], as did Mentzel (1741). The latter entry is of interest, however, as it reveals that the water-front hospital, now used as a timber store, was still in existence in the 1730s, when Mentzel arrived at the Cape [18].

The hospital on the water-front is clearly annotated on Wittebol's plan of the town and gardens dating from c1679 [Fig 96, Caption P]. It is shown as a square structure, on the eastern side of the lower end of the Heerengracht. E V Stade's 1710 view of the

town from the roadstead also shows a building in this position [Fig 97]. It is depicted with a hipped roof and a single triangular gable in the centre. The facade is symmetrical with two windows on either side of the central bay, which is set slightly forward and contains the entrance door which is accentuated by the central gable.

Of the buildings of the Company described so far, this is the most similar to the Cape Dutch farmhouses of the later 18th century. Given its early date of 1676 and its relative simplicity in comparison with the triple-gabled buildings erected later, it could well have provided a precedent to be followed. However, its hipped roofs would be replaced by gabled ends in the houses of the freeburghers.

7.5.6 THE HOSPITAL IN THE GARDENS

The fifth hospital at the Cape was erected at the upper end of the Heerengracht, on a subdivision of the Company's garden. It was on the north-western side of the street, facing the site of the as yet unbuilt church.

Although there is no record of the commissioning of this building in the Resolutions of the Council of Policy, it appears that the decision to erect a new hospital had already been made by the 9th May 1695, when the Directors were first informed of "the smallness of the (existing) building and the necessity for another" [1].

Permission to proceed was requested from Middelburg on the 1st August 1696 [2], but there is no indication that this was ever received. Nevertheless, "the Council" decided on the 3rd May 1697 to commence with the project, as outlined in another letter to the authorities in Middleburg dated the 30th June [3]. A "model" of the new hospital was also sent on the same date to the Chambers of Delft, Rotterdam, Hoorn, and Enckhuysen, to the Select Committee of the Seventeen, and to Advocate Pieter van Dam [4]. This was almost certainly the dimensioned plan of the hospital [Fig 98], which will be described below [5].

The hospital was already under construction by the 13th November 1697 [6], when it was mentioned in a progress report to Batavia that it was hoped "to have it ready before the arrival of the return fleet" [7]. This deadline would not be achieved, however, as it was mentioned in letters to Amsterdam of the 24th January and of the 8th and 9th

March 1698 that it would take another four or five months to complete [8].

The second of these letters described the hospital as being "in the form of a cross, 284 feet long and 34 feet broad", with an upper floor similar to the one beneath. Built predominantly of local materials, the only costs apart from labour had been for the iron and glass required [9]. The loft or "upper floor" was only built later, however, and the dimensions agree neither with the original plan nor with Valentyn's description outlined below.

Simon van der Stel also mentioned, in his instructions to his successor Wilhem Adriaen, that the hospital should be enclosed with a hedge or a wall, guarded by a porter. This would prevent the patients from having access to snacks ("snoeperijen") and strong drink brought in from outside [10].

The hospital was almost finished on the 18th March 1699, as related in a letter to Amsterdam [11], and it was noted in the Journal on the 24th October that it was sufficiently complete for all the patients to be transferred from the old hospital [12]. A further letter to Amsterdam dated the 1st March 1700 confirmed that the hospital was now operational, the floors, ceilings and beds having been installed prior to the admission of the patients [13].

It is instructive that there is no mention in the Resolutions of the decision to build the new hospital erected on the authority of Simon van der Stel. This type of omission is not uncommon during the period of both Van der Stels, who appear to have made a number of major decisions on architectural matters without consulting the Council of Policy [14].

Despite the absence of verbal records, a plan of the new hospital [Fig 98] was received in Holland in 1697, as mentioned above. This showed a cross-shaped building with four annexes, surrounded by two successive boundary ditches. These are unlikely to have been representations of boundary walls in elevation, as the gateway is shown above the outer ditch, and the decision to erect a boundary wall was made only in 1710.

The outer ditch is shown with a single gateway to the north-east of the eastern corner, whereas the entrance in the wall erected in 1710 was opposite the church, in the middle

of the south-eastern side. The inner ditch is depicted with three bridges, on the south-eastern, south-western and north-western sides.

The hospital itself is shown as a long cross-shaped building with a main wing, 288 Rhineland feet in length, intersected centrally by a shorter wing which was 120 feet long. Both arms of the cross were 30 feet wide [15]. Doorways with pointed arches are shown at the ends of each of the four wings, but no internal supports or subdivisions are indicated on the plan.

The four annexes, however, are drawn in greater detail. They are all shown as reached by passageways from the main block, and are aligned with the ends of both the long and short wings of the hospital. Their plans are all identical, apart from minor differences in the positions of doorways. They consist of two pairs of rooms symmetrically located on either side of the corridors, the first 12 feet long and 20 feet wide, and the second 20 feet square. These were followed on the inner sides by a further two rooms, the first 12 feet square and the second 12 feet by 20 feet. These internal arrangements are clearly Palladian in their proportions [16], suggesting that the designer of the hospital had a thorough knowledge of late Renaissance architectural theory [17].

All of the internal doors are shown as centrally positioned, and the corridors of all four annexes had arched doorways leading to the garden. Communication was from room to room, despite the presence of the passageways. The smaller rooms flanking these could only be reached through the square rooms beyond them, with the exception of the annexe in the northern corner, where direct access was possible.

The design for the new hospital thus constitutes another example of the sophistication of the Company's buildings, exemplars which the freeburghers later attempted to emulate when building their town houses and farmhouses. None of the latter, however, concerned themselves to the same extent with the rigours of Palladian proportioning.

The hospital was briefly described by Bogaert in 1702 as being directly across from the church (still under construction), with the following inscription on its principal gable, written by the Visiting Commissioner Daniel Heinsius in 1700:-

"Excipit Hospitio fractos, morbisque, viisque
Haec domus, & medicam larga ministrat opem
Belga, tuum nomen, populus fatale domandis
Horreat, & leges Africa terra tuas" [18].

To return to the realities of the administration of the hospital, it was noted on the 8th June 1707 that a number of the patients were escaping at night in order to go out on the town [19]. It was therefore decided that the insides of all the windows would be provided with burglar bars, and all the doors would be locked at night. Buckets would be provided for the patients to relieve themselves [20], as the toilet was outside.

By the 11th June 1709 a large area of the Company's hospital had still not been provided with a loft. A shortage of timber had prevented this from being carried out before, but a consignment of sufficient teak ("jatij") planking brought from Batavia was now available in a ship in harbour. It was therefore decided that the whole hospital would be provided with a loft, a task requiring between 800 and 900 planks. The loft would not only be useful for accommodating more patients and protecting them from draughts, but would also strengthen the structure and prevent it from cracking [21].

The Governor-General of Netherlands India, Joan van Hoorn, gave instructions on the 4th February 1710 for the hospital to be inspected. The Commissioners' report [22], which was discussed on the 10th February, contained the following points:-

The number of patients in the hospital was never less than 200, and sometimes increased to as many as 400 or 500, all of whom were from Europe [23]. At present there were 225, all except ten or twelve of whom were suitably provided with bedding. However, only those with venereal diseases were isolated from the others. The rest were given beds in positions irrespective of their illnesses, with the result that an unacceptable stench from those with dysentery and diarrhoea pervaded the whole hospital. It was therefore suggested that a wall should be built across one of the wings of the hospital, preferably the one facing the Company's garden, to create a separate room for these patients and prevent the others from being infected.

Urgent repairs were needed to the house of the chief surgeon, located in one of the four flat-roofed annexes. Its roof was in such bad condition that props were needed to

prevent it from collapsing. These repairs should be commenced as the first priority.

The toilet block ("gemakhuijs") was located on the public thoroughfare, a good three Rhineland roods from the hospital. This was not only inconvenient, but also gave the patients the opportunity of visiting one of the nearby taverns, to the detriment of their further recovery. The entire grounds of the hospital should therefore be enclosed with a boundary wall, the only gateway to which would face the church across the road. The wall should be seven or eight feet high, and constructed of stone or baked brick, and the toilet block should be moved to a position closer to the hospital, inside the wall. Moreover, oaks or other trees should be planted within the hospital grounds, in order to freshen the air. Following discussion of the Commissioners' report, the Council accepted its recommendations. It was therefore resolved to proceed with the suggested building works and with the planting of the trees [24].

After a further inspection of the hospital [25], the following recommendations were made on the 17th February 1710:-

As far as the boundary wall was concerned, it was suggested that this should not be located on the inner edge of the canal surrounding the hospital. This would leave only ten feet between the wall and the ends of the four wings of the building, limiting the amount of open space around the hospital and depriving it of sunlight. It was therefore decided that the wall would be built on the outside of the canal, which would be filled with earth to eliminate the frogs and mud crabs [26] that were living there. These were not only a health hazard, but were also undermining the banks of the canal, and would have the same effect on the projected wall in years to come.

Another well would be sunk in one of the corners of the hospital grounds to ensure a constant water supply, with a brick trough next to it for the patients to use for washing their clothes, similar to the one behind the kitchen for the use of the cook. The best location for the toilet block was in the north-western corner of the grounds. This would be provided with an underground brick vault ("verwulft") large enough to accommodate the sewage, which could be cleaned out periodically in the winter to prevent excessive stench.

It was also confirmed that the separate ward for patients with obnoxious stomach

complaints would be located in the wing facing the Company's garden. It would extend as far as the fifth pillar, as shown on a plan (no longer extant) prepared by the lieutenant, thereby providing room for forty or fifty patients.

The above recommendations were all approved, with instructions that work was to be commenced without delay. It was also resolved that a lockable isolation ward should be provided for those patients who were mentally insane [27].

The hospital is first shown in relation to the town in Valentyn's plan dating from c1699 [Fig 49], where it is incorrectly annotated as the church. It appears as an elongated cross on the western side of the Heerengracht, but its relationship with the (dotted) church and slave lodge across the street is inaccurately depicted. The hospital extends only as far as the upper end of the church site, and their centre-lines do not coincide.

An engraving (Cape Archives: M1/334, omitted here) based on Valentyn's plan is even more inaccurate, showing the hospital plot extending down as far as Thuijnstraat, with another plot separating it from the garden at its upper end. A third plan, dating from 1749 [Fig 51], is particularly inaccurate in depicting the hospital as an equal-armed cross which only occupies the lower half of its plot, but the site as a whole is correctly shown.

The 1753 plan of the town [Fig 78], prepared by the sworn surveyor Wentzel and copied by his counterpart Wernich in 1791, is far more useful and interesting. The centre-line of the hospital site corresponds with that of the church across the street, and its upper end extends correctly as far as the middle of the short side of the slave lodge.

The hospital itself is depicted as an elongated cross-shaped building within its boundary wall, corresponding in most respects with the 1697 plan of its interior arrangements [Fig 98]. There is one major difference, however, which is that the four annexes are no longer depicted as "outriggers" to the main structure, but are placed in the re-entrant angles of the four arms of the cross.

Whether they were built in these positions from the outset, as a variation on the 1697 plan, or whether they were relocated at a later date, cannot be established. What is interesting is that, together with the arm of the cross facing the church, they are almost

exactly the width of the latter. The church itself was given flat-roofed annexes in its re-entrant corners in 1779, which resulted for a short period, before the hospital was demolished, in two equivalent architectural compositions facing each other axially across the Heerengracht.

The hospital is shown in three dimensions on both of E V Stade's illustrations of the town, dating from 1710 [Figs 99 & 100]. The cross-shaped building is set back from the Heerengracht and reached through an arched entrance. This gateway is a freestanding structure (as shown in the 1697 plan, albeit in a different position) and there is no indication of a boundary wall, suggesting that the hospital was still enclosed by no more than a ditch [28].

The main building appears on both drawings with a pitched roof terminated by parapet gables. Those facing the shore and the street appear to be bell-shaped, like those of the church, but the shape of the one facing the gardens cannot be determined. The view from the anchorage shows a chimney in a position corresponding with one of the four annexes. None of these, however, can be seen in the view from the Fiscal's garden house.

The hospital is shown quite low in relation to the church, but this might have been artistic licence in order to exaggerate the importance of the religious building. Stade certainly used this convention for the church at Stellenbosch [Fig 188], but the hospital was probably not as high as the church in reality, given Valentyn's description of its "lowness" outlined later.

Kolbe (1713) provides a detailed description of the hospital, particularly of its interior arrangements. Sited directly across from the church and next to the garden, it was a handsome structure in the form of a cross with impressively long wings. The longer wing was lined on both sides with continuous beds of planks, allowing over 100 patients to lie next to each other on each side. These planks rested on cross-beams supported on posts, and were not horizontal but were higher against the walls, where the patients' heads rested.

The cross-wing was used for terminally ill patients and those with broken limbs, in order to separate them from the others. They were provided with individual beds,

allowing the attendants better access to the patients than in the main ward. This wing could accommodate 60 patients [29].

Down each of the wings of the cross, and set in three feet from the ends of the beds, were a large number of square piers. These supported arches which in turn gave intermediate support to the roof beams. The piers and arches were whitewashed, as was the exterior of the hospital. The longer wing had 48 glazed windows, 24 of them on the Heerengracht side and the other half facing the Lion Mountain (ie 12 on either side of the cross-wing and its flanking annexes). These were four feet high and proportionally wide, and contained four opening sections ("vleugels"). The windows were also provided with iron bars to prevent the patients from escaping at night.

In addition to the wards already described, there were also four flat-roofed dwellings at the intersection of the wings of the cross. The one to the left of the entrance was occupied by the "Ziekenvader". It consisted of a pleasant "voorkamer" with views towards the church and the gardens, a large kitchen (which was also used for the preparation of herbs), and another room for storing his furniture and possessions.

The dwelling to the right belonged to the "Oppermeester" or chief surgeon. It also had a large "voorkamer" with views of the church, the town and a corner of the harbour. The other two rooms were his study or workshop ("werkplaats"), and a room for storing his belongings.

To the left of the entrance facing the Lion Mountain was the dwelling of the "Ziekenmoeder" [30], with similar accommodation to the two houses already mentioned. On the right-hand side was the cook's house, with a neat "voorkamertje", a large and spacious kitchen, and another room for his own use. This suggests that the locations of the kitchen and "voorkamer" shown in the reconstruction of the house of the "Ziekenvader" [Fig 102] were reversed in the case of the cook's house, thereby providing him with a larger kitchen.

There were also other rooms within the hospital, alongside the cross-wing and opening off it. Two of these were on the side leading towards the Lion Mountain. That on the right-hand was used only for amputations, an operation once witnessed by Kolbe and described in graphic detail [31]. The one to the left was used as lodgings for the two or

three "Ondermeesters" who looked after the patients. Another room was on the "right-hand" side of the wing facing the Company's garden. This had no windows, and was used as a prison for drunkards and madmen ("dolle menschen"). Finally, a room next to the kitchen of the "Ziekenvader" served as an isolation ward for patients with venereal diseases [32].

Kolbe also mentioned that only half of the hospital had been provided with a loft, on account of a shortage of planks. This was used to accommodate patients in emergencies, and otherwise as a store where herbs were dried. The part which had not yet been ceiled was used as a timber store [33].

Outside the main entrance to the hospital [34], at a distance of eighteen feet, was another gateway which gave on to the canal beyond. Kolbe's description, like Stade's drawing, thus appears to predate the erection of the boundary wall. However, the sides of the canal had already been planted with Amaqua trees, on the authority of Governor van Assenburgh, and oak trees had also been planted within the hospital grounds [35].

Valentyn (1714) was more precise about the architectural form of the hospital, and also described some of the alterations and additions commissioned in 1710. The hospital was a handsome building directly across the street from the church, with a gable very similar in form [36]. It was also whitewashed, in accordance with Cape practice. The facade was 160 or 170 paces wide, and was surrounded by a stone wall 200 paces long and 115 paces wide. In the middle of this wall, which was four to four and a half feet high, was a gateway which led on axis to the main entrance to the building [37].

Inside the entrance were eleven low brick arches flanking the central hall [38], under which one proceeded to an inner aisle ("galdery") on either side, containing beds for the patients. The entrance hall was 80 feet long, but was rather low and damp, resulting in an unpleasant odour. There was a similar hall ("galdery") at right angles to the entrance wing, which also had whitewashed arches. This, however, was 100 paces long, and also contained another room towards the mountain for patients with dysentery, built in accordance with the instructions of General van Hoorn given in 1710 [39].

Mentzel (1741), who was continually critical of Kolbe's work, stated that the latter's

account of the hospital was inadequate, and included an extensively annotated plan in his own description of the Cape. This drawing, however, does not correlate with the 1753 survey undertaken by Wentzel [Fig 78], with which it is roughly contemporary, and has therefore been omitted from the evaluation of the evidence presented below [40].

There is no discrepancy between Kolbe's and Valentyn's accounts of the hospital, which complement each other. Both agree that it was cross-shaped, and that each of the four wings was triple-aisled, with arcades supporting the roof. However, both disagree with the visual evidence provided by the 1697 plan [Fig 98] and the 1753 survey [Fig 78], Kolbe in terms of planning and Valentyn in terms of dimensions. These two drawings, moreover, differ from each other with regard to the length and width of the wings. The 1697 plan gives a width of 30 feet and lengths of 120 feet by 288 feet, whereas the scale of the 1753 survey reveals a width of 36 feet, with lengths of 150 feet by 300 feet.

The earlier plan was clearly too extravagant with regard to the design of its four annexes, which required an excessive amount of external walling, and were relocated in the re-entrant angles of the main wings. It is therefore unlikely that the width of these wings would have been increased from 30 to 36 feet. Kolbe's statement that the piers were only three feet away from the ends of the beds also suggests a planning module of ten feet, assuming that the three aisles of the wings were of equal width.

Valentyn's paced dimensions of the boundary wall and of the length of the facade correspond closely with the proportions of those on Wentzel's survey of 1753 [41]. The only notable discrepancy between the two lies in Valentyn's statement that the cross-wing was 80 feet long. This is hardly more than half of the 150 feet shown by Wentzel, but might only have been referring to the usable portions of this wing, before and after the crossing. If this were the case, it would confirm Valentyn's statement that it contained eleven arches (three for the crossing and four on either side).

Valentyn also described the facade as being between 160 and 170 paces long. The lower of these figures corresponds exactly with the length of the building given in the 1697 plan, ie 288 feet long [42]. It seems, therefore, that the two wings of the cross

were built largely in accordance with the original plan, apart from the reduction in length of the shorter wing from 120 feet to 110 feet. An odd number was necessary in order to accommodate the crossing, and the site was too small for an enlargement to 130 feet, let alone the 150 feet shown by Wentzel.

Kolbe disagrees with the 1753 plan in stating that the prison was on the right-hand side of the southern wing facing the gardens. No such projection is shown on Wentzel's plan, however, and it is more likely that this was in the eastern wing facing the church, opposite to the VD ward on the other side. This raises the possibility that the square portions of the annexes shown as "outriggers" in the 1697 drawing were moved to the re-entrant angles of the cross without alteration. Since Kolbe describes all four of them as having only three rooms, the fourth could have been the room opening off the cross-wing, as shown in the reconstructed plans and interior axonometric [Figs 101 & 102].

These are composite drawings based on the dimensions of the 1697 plan, as confirmed by Kolbe and Valentyn, but with the subsidiary accommodation following the outline of the 1753 survey. Kolbe's 24 windows in each long facade are also accommodated if one takes the two on either side of the cross-wing into account [43].

The hospital as erected appears to have dispensed with the subtleties of the Palladian proportioning evident in the first design [44]. The necessity for arcades supporting the roof, which are not shown on the original plan, required a modular system based on a subdivision of the width of the wings. Nevertheless, the building as initially designed and as executed, reveals a sophistication not seen previously at the Cape, which was almost certainly influential in the proportioning of the residence at Vergelegen. The Vergelegen out-buildings, moreover, followed the triple-aisled arrangement established by the new hospital.

7.5.7 SLAVE LODGES

The early lodgings for slaves in the Fort, in the gardener's house, in the huts or "pedackjes" built next to it, and in the Castle, have already been described [1]. However, two buildings for the specific accommodation of slaves were also erected in the 17th century [2].

The intention of building a permanent slave lodge was first raised on the 21st November 1663, in a letter to the Seventeen. The slaves were to be moved from the Fort to a row of huts which would be built next to the new gardener's house as a temporary measure, until a "proper slave lodge" had been erected [3]. A building answering this description had probably been erected by the 19th April 1665, when it was mentioned that the eighty slaves of the Company had been lodged in "a building in the Company's garden, close to the house of the chief gardener", owing to a shortage of space in the hornwork of the Fort [4].

The slave lodge, which was described as being "very small and much decayed", had been repaired by the 23rd December 1669 [5], and was "completely rebuilt" by the 22nd January 1670 [6]. This building, which was described as the "old slave lodge" on the 22nd December 1677 [7], was destroyed by fire on the 19th August 1679, but by this time its successor was already sufficiently complete to have been partially occupied [8].

There is no indication in the verbal or visual records of the form, construction or siting of this first slave lodge, except that it was located close to the gardener's house. It could not have been on the site of the later building, as this was almost complete when the earlier one was destroyed by fire, an observation first made by Geyser [9].

The second building was first mentioned on the 22nd February 1679, when it was decided that work should be recommenced on the erection of a new slave lodge in a subdivision of the Company's garden, a project dating from the time of Governor Isbrand Goske (1672-1676). Although a design had been prepared, and stone foundations had already been laid the previous year during the Governorship of Johan Bax (1676-1678), construction had been postponed because of more urgent military works. The project could be delayed no longer, however, as the old slave lodge was now in a such a state of imminent collapse that it was not worth repairing.

It was therefore resolved that work on the new slave lodge would be commenced at once, but in accordance with a new design. This would be only two-thirds the size of the original plan (and therefore only two-thirds as costly), but would provide the same amount of accommodation. Although it would be one foot wider, thereby allowing beds

on both sides instead of only on the one side, it would not have the lean-to annexe proposed in the first plan. The roof would be tiled, in order to minimize the risk of fire [10].

The new slave lodge was mentioned again on the 27th April 1679, when it was resolved that all the undamaged bricks from the old Governor's residence in the otherwise demolished Fort would be used for its construction, in order to reduce costs [11]. Permission to proceed with the project was given on the 2nd May by the Visiting Commissioner Dirk Blom [12]. This building had evidently been largely completed by the 28th July, when it was mentioned that the slaves temporarily housed in a warehouse in the Castle had been transferred to their new quarters [13]. These lodgings had been finally completed by the 27th March 1680, as related in a letter of that date to the Seventeen [14].

This slave lodge was inspected by the Visiting Commissioner van Rheede on the 21st June 1685, and was found to be in an appalling state. The roof leaked and the sick were treated no better than animals. Men, women, sons and daughters, white and black (sic), all lived together without any privacy (Author's translation of Boeseken, Note 15, below).

Van Rheede therefore gave instructions for the lodge to be divided into three separate spaces. One was for the slaves who had chosen to live as man and wife (although marriage was prohibited); the second was for small girls and "unmarried" young women; and the third was for small boys and "unmarried" young men. A school was to be opened in the lodge for children younger than twelve years of age, and adult slaves were to be permitted to attend the school two half-days a week [15]. A committee was set up to implement this policy, and a location for "een school" (sic) was chosen, as were the teachers for the boys and the girls. It was also mentioned in the Journal that the necessary alterations to the slave lodge had been carried out by the 15th July [16].

Van Rheede was also critical of the location of the slave lodge, which he believed was sited too close to the Castle and could serve as an enemy stronghold [17]. His suggestion that it be removed to another location was, needless to say, not followed. It should be reiterated here that the siting of the Castle in relation to the town was

determined by Isbrand Goske, an experienced military engineer who had been brought out to the Cape specifically for this purpose.

The building is first shown in outline on the c1679 plan of the town and gardens [Fig 45]. It is depicted as rectangular and communicating with the Company's garden on two sides. The other sides opened on to two streets, the north-eastern one facing the cemetery wall surrounding the church, and the south-eastern one, Steenstraat, separating it from the plot which contained the parsonage at the other end [18].

Although the numbers of the Company's slaves do not appear in the muster rolls, they were referred to by visitors to the Cape. The first of these was Tachard, who noted in 1685 that five hundred slaves were living in the Company's slave lodge [19], a figure repeated by Bogaert in 1702 [20]. Six hundred Company's slaves were mentioned in Wilhem Adriaen van der Stel's "Korte Deductie" of 1708 [21], and the "Contra-Deductie" of Tas and Van der Heiden in 1712 [22]. Kolbe in 1713 [23] and Valentyn in 1714 [24] also stated that there were about six hundred slaves accommodated in the Company's slave lodge.

The slave lodge is shown again on Valentyn's plan of the town, dating from c1699 [Fig 49], but only as a dotted outline at the lower end of the Company's garden. However, the building is also shown in three dimensions on E V Stade's 1710 view of the town from above the gardens [Fig 80] [25]. It appears as a flat-roofed rectangle [26], although the roof was tiled as mentioned on the 22nd February 1679. Kolbe was later to confirm that these tiled roofs were monopitches draining into an internal courtyard, and hidden from the exterior behind parapet walls. Whatever the actual configuration of the roof, though, the slave lodge was the first example of the flat-roofed aesthetic at the Cape. Although the buildings within the Castle also had flat roofs, they were not freestanding.

Kolbe (1713) described the slave lodge as double-storeyed, but the lower floor was scarcely high enough for a man to stand upright, and the upper floor consisted merely of rooms "onder 't dak". From the outside, the building appeared to have a flat roof, as only the tall outer wall could be seen. However, this wall supported the upper ends of the timbers of a lean-to roof.

On the side of the street facing the church were the dwellings of the chief gardener and his assistant, behind which was the school for the slave girls. On the other side, facing the garden, was a large room for the storage of seed. This was next to the school for the slave boys. The rest of the building, on both storeys, was given over to the accommodation of the 600-odd slaves, built around a long rectangular court. These spaces, however, were not divided into individual rooms, but resembled a barrack. Those slaves who had produced families therefore found it necessary to erect partitions of cloth in order to provide a modicum of privacy [27].

Kolbe described the lodge in more detail in Volume II of his "Beschryving". It was a large building almost twice as long as it was wide, with a large rectangular court in the middle, which was used by the slaves for cooking and other purposes. There were two entrances, one across from the church and one next to the gate leading to the Company's garden. From the outside the building appeared to be fairly high, but the roof inside was so low that it could almost be reached by a man's outstretched hand.

His description of the interior accommodation differs slightly from that given in Volume I. The chief gardener had attractive apartments facing towards the garden, comprising two rooms flanking the entrance, the one on the right being slightly smaller that that to the left. Above these were the less comfortable lodgings of the assistant gardener, located directly under the roof. Both gardeners shared a common kitchen, behind which and facing the rectangular court, was the house of the overseer of the slaves [28]. On the lower side, across from the church, was the school for the slave girls, and next to it a store for provisions. The school for the slave boys was located across the court, in the upper side along the garden.

The whole of the side facing the church, as well as those facing towards the hospital and the town (sic - the garden, surely), were used for the beds of the slaves. These were made of doubled planks ("dubbelde bed planken") similar to those in the hospital, and beds were also located in the loft above [29]. There was also a prison in the corner facing the garden and the hospital, where disorderly or disobedient slaves were locked up until they had been sentenced. If the sentence did not involve the death penalty, they would be bound to a pole erected in the rectangular court and severely flogged. The other slaves were all compelled to attend these floggings, which were meant to deter

further such breaches of discipline [30].

Kolbe's description of the roofing of the slave lodge is useful in revealing that it was not flat-roofed, as described by other authors who probably only viewed the building from the outside and relied on verbal descriptions for its interior accommodation. However, his two accounts of the accommodation within the slave lodge contradict each other. He states in Volume I that the "gardener's house" faced the church, with only a seed store (and possibly the boys' school) on the garden side, but in Volume II this house is described as facing the garden. The positions of the boys' and girls' schools could conceivably correspond, but the common kitchen, the overseer's house, the provisions store and the prison are omitted in Volume I.

There is some correspondence between the later description and Kolbe's plan of the slave lodge [Fig 103]. This drawing, however, is patently incorrect, as the building is shown extending across the full width of the gardens, with a gardener's house at one end and the church at the other. It is unlikely that such a highly paid official as the chief gardener would have lived in the same complex as his slave labourers, particularly in a building with such limited head-room. Moreover, the church is known to have been sited to the north-east of the slave lodge instead of adjoining it on the north-western side. In addition, the courtyard depicted on plan is too small in relation to the building as a whole, and does not correspond with Kolbe's verbal description of its 1:2 proportion. It is more likely that the building contained a long courtyard surrounded on all sides by a single row of rooms, as shown in Wildt's plan prior to Thibault's conversion of the building into a Supreme Court in 1812 [Fig 104].

Kolbe's verbal and visual descriptions are therefore useful only in establishing the range of functions contained within the slave lodge, but cannot be considered to be a reliable record of its planning arrangements. They are, however, the only detailed accounts surviving from the period.

Valentyn (1714) did not describe the interior at all, and was mistaken in believing that the building was single-storeyed and flat-roofed. However, he did provide external dimensions, the slave lodge being 77 paces long and 46 deep, and the walls having a height of 30 feet [31]. He also mentioned that the six hundred slaves were under the

authority of "een Mandoor en een Ondermandoor". These overseers were likely to have been the occupants of the so-called gardeners' lodgings described by Kolbe [32].

Beeckman (1714) had nothing new to add other than that the slave women were frequently visited by the Dutch sailors, a practice which was "conniv'd at by the Government" [33]. This promiscuity was confirmed by Mentzel (1741), who explained that the natural increase in the slave population was to the advantage of the Company, as it was thereby spared the expense of importing new slaves from elsewhere [34].

Although there are a number of descriptions of the second slave lodge, these are inconsistent and often contradictory. A reconciliation of this evidence has therefore not been possible, as it was in the case of the church and the hospital. Since no firm reconstruction is possible, none has been attempted.

7.6 THE GARDENS AND TABLE VALLEY

7.6.1 THE COMPANY'S GARDEN

The initial laying out of the Company's garden during the period of Jan van Riebeeck, its entrenchment for protection against flooding, the erection of a palisade and thorn-hedge around its perimeter to keep out intruders, and the first two gardener's houses, have already been described. Its central importance with regard to the development of the town has also been outlined [1].

After the Van Riebeeck period, the garden was first mentioned on the 12th December 1662, when its gate and sentry-box were blown down in a storm [2]. These had been rebuilt by the 21st November 1663, as mentioned in a letter to the Seventeen, but were relocated six roods further into the gardens on account of unsuitable soil conditions. Another two buildings were also under construction on either side of the gate, one of them for the storage of vegetables prior to shipment, and the other as a dwelling for the gardener and his family. These were to be low in height with lean-to roofs on one and a half brick walls, with a depth of two roods. It was also noted that a row of huts ("pedackjes") should be built next to the gardener's house for the accommodation of slaves, until such time as a permanent slave lodge could be erected [3].

The new gardener's house had been completed by the 15th April 1664, as noted in a letter to the Seventeen. It was also mentioned that the old one was being used as temporary accommodation for the sick while the new hospital in the hornwork was being erected [4]. The new gate and the huts ("pedacken") at the entrance to the garden were also mentioned on the 26th August 1665, when it was noted that they would have to be demolished if the new Castle were built around the old Fort, as was first suggested [5]. This did not occur, but the hedge surrounding the garden was seriously damaged in a storm on the 29th October 1665 [6]. It appears to have been replaced in part by a wall, as some of the sailors were apprehended climbing over it on the 8th November 1669 [7].

A kitchen in the Company's garden was first mentioned on the 29th June 1671, when it was accidentally set alight by the slaves working there, but the fire was extinguished before much damage had been done [8]. A new building for storing the garden tools was also under construction on the 13th March 1674. This was "almost in the middle" of the garden, and was described as "a proper little garden house". This was almost certainly the precursor of the Company's guest house described later, which was sited half-way along the south-eastern wall of the gardens [9].

Georg Meister described the enclosure around the Company's garden in 1677 as being "protected around with thick quickset hedges, beside which a wall a rood high and a moat half a rood wide were under construction while I was there, on the side of the so-called Devil's Peak, which will in time be continued all around..." [10].

It was noted on the 22nd February 1679 that the chief gardener's house was in a dilapidated condition, as were the vegetable store and the annexed seed lofts. These would have to be relocated in any case, as they stood on the projected site for the new slave lodge [11]. A start had also been made by the 27th April on building a wall of baked bricks around the Company's garden. This would replace the hedge ("drooge heijningen") which had previously been erected to prevent theft, and would avoid the necessity for costly annual maintenance. It was now resolved that work would be recommenced on the project, which had been delayed by other more urgent works, and that it was to be completed within two years. The wall would extend 52½ roods from the new slave lodge towards Table Valley and 36 roods towards the Lion Mountain. In

order to reduce the cost, the other two sides of the garden were to be planted with trees and thick thorn-hedges [12].

An adverse report was received on the 7th May 1679 that part of the new wall around the garden had collapsed as a result of heavy rains. It was therefore decided that its replacement would be plastered with a mixture of lime and clay [13]. Another decision regarding the enclosing of the Company's garden was made on the 9th March 1680. It had already been resolved that the garden would be only partially surrounded by a brick wall, the remainder consisting of a dry hedge of thorns, in order to avoid the expense of preparing such a large number of bricks. Because a dry hedge would require annual maintenance, however, it was decided to plant a live thorn-hedge instead [14].

There are no further official entries on the garden, but a number of descriptions were given in travellers' accounts, many of them exhaustive with regard to the number and variety of its plants.

For most of the visitors to the Cape, the Company's garden was its most impressive feature. Valentyn [15] and Tachard [16] both commented favourably upon it on their first acquaintance in 1685. The Chevalier de Forbin, moreover, stated in the same year that "the Dutch have a Garden there, which is without dispute one of the largest and most beautiful in the world. It is surrounded by walls" [17]. Ovington mentioned in 1689 that the trees were "Curiously Prun'd" and the "Hedges Trim'd with such exactness, that no one irregular Excrescence appears" [18]. Dampier stated in 1691 that it was surrounded by a high stone wall, and that the paths inside were defined by well-pruned hedges, nine or ten feet high [19]. Langhansz provided another favourable account in 1694: "It is about 1,000 roods [sic: read "yards"] long and 300 wide, surrounded by a wall a pike-length high... The avenues are made of fine laurel-hedges a pike-length high and 2 ells thick, which are continually trimmed by the slaves working there... Herr [Simon] von Stell, who was Governor when I was there, had also made various grottos and fountains, which however were not yet completed" [20].

Erle was less complimentary in 1696, commenting that the "large and spacious" garden of the Company "might be made exceeding fine, if the Dutch would take the Pains, but it is now very much out of order" [21]. Leguat concurred with this assessment in his

account of 1698: "I did not find it so Magnificent, as I have seen it describ'd" [22]. This suggests that the deterioration of the garden, attributed below to Wilhem Adriaen van der Stel, had already begun during the Governorship of his father Simon.

Bogaert mentioned in 1702 that different parts of the garden were reserved for plants from Asia, Africa, America and Europe, and noted how beneficial it was for the sailors to walk through its paths after their long voyages from Holland and Batavia [23]. Valentyn also mentioned in 1705 that he visited the garden "now and again to take my pleasure" [24]. Maxwell recorded in 1708, however, that the garden had become neglected during Wilhem Adriaen van der Stel's period in office, in comparison with his father's time [25].

Kolbe (1713) described the garden as containing a large house for the entertainment of the Governor, as well as a dwelling for the gardeners and a spacious lodge for the slaves [26]. There were a number of pleasant paths giving shade from the sun and protection from the wind. The central avenue was the widest, with a breadth of 24 feet and lined by double rows of laurel trees. It was flanked by two narrower avenues, one on either side, and there were also three paths extending the full "width" of the garden, each of them eighteen feet wide. The others had a width of only five feet, and were interrupted by the hedges around the garden enclosures. Further relaxation was provided by the water-furrows, the largest of which ran down the middle of the garden and had been canalised with walls of brickwork. This was done by Simon van der Stel, who had used it as a bath in the summer [27].

Kolbe also mentioned that the twelve-foot high wall, which had been intended to surround the garden, extended only as far as half of one of its sides. This was built along the front of the garden, extending from the slave lodge towards the Lion Mountain. The rest of the garden was secured by a six-foot wide moat, further protected with a hedge of trees [28].

Beeckman (1714) agreed with Kolbe in mentioning that the garden was "surrounded partly with a Wall, and partly with a Ditch". He also concurred with Maxwell in stating that the "many very beautiful Walks, and several Banks and Canals... have indeed been lately neglected, and are much run to Ruin" [29].

Valentyn, however, described the garden after his last visit to the Cape in 1714 as "one of the finest creations to be mentioned here at the Table Bay" [30]. It was entered through a large gateway [31], flanked by two pilasters supporting an entablature or pediment ("frontispies") inscribed with the letters "G VOC 1679". To the right of the entrance portal was the small house of the under-gardener [32]. The garden was nineteen morgen in extent and, according to Valentyn's measurements, was 1115 paces long and 293 wide [33].

Inside the garden were three large pathways leading towards Table Mountain. The central one was 15 paces broad between the trees which flanked it on either side, with other smaller paths beyond them, one and a half paces wide, giving a total width of 18 paces. The path on the eastern side was also 18 paces wide, but that on the western side had a width of only 16 paces, comprising an avenue of eight paces flanked by oak trees, with smaller paths four paces wide on either side [34]. Beyond the trees flanking the pathways were tall "hedges" of laurel, poplar and other trees. These were 23 or 24 feet high, and protected the plants from the strong winds in Table Valley. Within these enclosures were further subdivisions formed by lower hedges seven or eight feet in height, each containing its own particular kind of plant, whether flowers, herbs, vegetables, fruit trees or medicinal trees, all planted in neat rows [35].

Benches on which one could sit in private, shaded by foliage, were provided for the convenience of visitors along the paths and next to the water channels. Indeed, Valentyn remarked that one could never tire of the pleasures of the garden, as there was always something new to be discovered [36]. He did mention, however, that there had been official criticism of the extravagance of the garden, as seen in the memorandum of the Visiting Commissioner Simons submitted to Governor Louis van Assenburgh in 1708, which he quotes. Simons found it incomprehensible that 72 slaves were employed there, given that the vegetables produced were not worth a tenth of the cost of their labour [37].

The first precise depiction of the Company's garden subsequent to the 1660 cavalier perspective [Fig 42] is Wittebol's c1679 plan of the town and gardens [Fig 45], which even shows the trees along the central avenue. This reveals a symmetrical if irregular division of the lower plots, but those at the upper end were still asymmetrically

subdivided. By this time its lower end had already been encroached upon by the sites of the church and the slave lodge, although the hospital across the street had not yet been contemplated.

Valentyn's plan of c1699 [Fig 49] shows the front of the garden cut back to the line of the present Wale Street, and its internal subdivisions now appear to be entirely symmetrical. This formality is in marked contrast to the comparative disorder of the surrounding gardens of the freeburghers. Little had changed by 1753, when Wentzel produced his survey of the town [Fig 52]. Apart from a greater subdivision into smaller plots, the only marked difference was the addition of an enclosure for wild animals ("Dier Garden") at the upper end on the eastern side [38]. This plan corresponds almost exactly with Josephus Jones' detailed drawing of c1790, except that the menagerie above the gardens was now balanced by an aviary on the other side [Fig 105].

Kolbe's plan of the gardens [Fig 103] is unfortunately misleading, particularly regarding the position of the entrance, the location and length of the slave lodge, and the size of the guest house. It cannot be considered an accurate representation, and will therefore not be analysed further.

The formality and orderliness of the Company's garden was thus established from the beginning and gradually refined during the period of this thesis and beyond. Given its popularity amongst the burghers as well as visitors to the Cape, it is not unlikely that it had an influence on the largely orthogonal layouts of the majority of freeburgher's farms later in the 18th century [39].

7.6.2 THE COMPANY'S GUEST HOUSE IN THE GARDENS

The Company's guest house in the gardens, later to be called "het Gouverneurs Huys in de Compagnies Tuyn" at the end of the 18th century, "Government House" in the 19th century, and now known as "Tuynhuys", dates originally from 1674.

Its beginnings were of a practical nature, as revealed by an entry in the Journal on the 13th March that the Governor Isbrand Goske had erected a building for the storage of garden tools, using slave labour and materials taken from dismantled buildings. This structure, however, was described as "a proper little garden house", located "almost in

the middle" of the garden [1].

Given that no buildings appear in the centre of the gardens on any of the surviving drawings, it is likely that a location in the middle of the eastern wall was being referred to. This would coincide with the site of the present "Tuynhuys". Indeed, a small rectangular building is shown in this position on the c1679 plan of the town and gardens [Fig 106], although it is not annotated [2]. This building was thus almost certainly the "speelhuijsje" in the Company's garden first mentioned on the 26th April 1679, when it was decided that it would be used for the accommodation of visiting dignitaries [3].

The garden pavilion was described by three of the six French Jesuit astronomers who stopped at the Cape in 1685, while en route to Siam. They were given accommodation there, and were also permitted to use it as an observatory. The Chevalier de Forbin described it briefly as "a magnificent pavilion built in the Garden of the East-India Company" [4], but Francois-Timoleon de Choisy was more forthcoming: "I shall sleep ashore in the pavilion of the Jesuits, in the centre of one of the loveliest gardens of the world... Their lodging is between two terraces, where there is plenty of room for their largest telescopes" [5].

Guy Tachard was more explicit in his detailed description of the "Summer-house" ("Pavillon") [6]: "About the middle of the (garden) Wall, on that side which looks to the Fort ("Fortresse"), there is a little Banqueting-House ("Pavillon") where no body lives; the lower Story of it consists of a Porch ("vestibule") open ("perce") to the Garden and the Fort, with two little Halls ("salons") on each side; over that there is a Pavilion ("cabinet") open every way ("ouvert te toutes parts"), betwixt two Tarasses paved with Brick, and railed about; the one looking towards the North, and the other to the South. This Pavilion seemed to be purposely made for our Design" [7].

Tachard's description clearly reveals a symmetrical plan with a central space flanked by rooms on either side, unless he meant two little halls, "one on either side". If, however, his words are taken at face value, the guest house would constitute the earliest example at the Cape of a building with a transverse plan. This type, which is characterized by a central hall ("Porch" or "vestibule") extending the full depth of the building, with more than one room on either side, became the characteristic of the "dubbelhuisen" of the

late 17th and early 18th centuries. These were adapted in the later 18th century, when the front and back rooms on either side of the hall were separated by inserting the small side-courts seen in the H-plan houses.

If, on the other hand, Tachard's meaning was that there was only one "salon" on either side of the "vestibule", the "speelhuijsje" could still have been the prototype of the "three-roomed cell", the basic element considered by most writers to be the inspiration for the "evolutionary development" of the Cape Dutch house. None of these writers, however, has linked the formality of the Cape Dutch plan to precedents provided by official buildings erected during the proto-Cape Dutch period.

It is more likely, though, that Tachard's intention was to describe a central hall with two rooms "on each side" (to use the words of his translator), one behind the other. Such a plan could have been inspired by examples in "Architectura Moderna", as was possibly also the case with the "dubbelhuisen" in the town [8].

Pearse describes the central space as "a vestibule with doorways on the sides facing the Castle and the Garden" [9], but there is no reference to doors in the contemporary translation of Tachard or in the French original. This could suggest that the central space was not enclosed at the front or the back, but only above and on the sides. This is not unlikely, as a building erected initially for the storage of garden implements could have required a large roofed space in the centre, giving sheltered access to the rooms on either side, but open at its ends to accommodate larger items of equipment. A structure with such an arrangement can also be seen in Stade's drawing of Stellenbosch, dating from 1710 [10].

The upper storey is of no less interest, as the "pavilion" was built over the open space in the centre, with terraces above the solid rooms on either side. This pavilion was probably the banqueting room as it offered views on all sides and communicated with the terraces to the north and south. Its roof seems to have been supported only on piers, as it was described as being open on all sides. The contrast between solid and void in this early structure must have been striking, but was never attempted in the subsequent Cape Dutch buildings of the later 18th century [11].

The "observatory" is depicted in an engraving in Tachard's account [Fig 107], but is

inaccurate in many respects. Captioned incorrectly as "Le Fort des Hollandois au Cap de Bonne Esperance", it is shown on the coast where the Santhoop redoubt was sited. The battered walls, curving outwards towards the ground, and the high-level windows suggest a military structure, as does the small arched doorway. However, the open balustrade above the machicolated cornice, and the upper room with its large openings, through one of which a telescope projects, are clearly not those of a defensive redoubt.

The drawing does agree in general outline with that described in Tachard's text, particularly with regard to the central opening and the "pavilion" above with terraces on either side. Moreover, although the three windows along the side seem to contradict his description of two "salons" on each side of the "vestibule", the rendering of the central one differs from those on either side, suggesting that it might have been a blind window. The balustrades on the upper level, however, should not have continued across the front, and the roof with its upswept corners is clearly of eastern derivation. This suggests that the engraver was working entirely from verbal descriptions, based largely on Tachard's experiences in the East, which he interpreted inaccurately in the case of this Cape example.

When Tachard visited the Cape again on his return voyage in March 1686, he was informed by "Governour" Simon van der Stel that the "Observatory" had been "pulled down to be built again with greater Magnificence", but this "was not yet finished" [12].

This information is suspect, as it is contradicted by Tachard's account of 1687, when he visited the Cape again on his way to the East: "His greeting (Simon van der Stel's) was most friendly, and, having learnt that I had brought fourteen Jesuit mathematicians, all holding royal patents like the first six, he said that the pavilion where we had previously lodged could not conveniently accommodate so many persons, so that he would place at our disposal a large country-house he owned [13], about a league from the Cape, with a very pleasant garden, where we should find everything we needed for the recovery of our health, and a place suitable for making astronomical observations. We thanked him very gratefully for his kindness, but explained that the shortness of our stay at the Cape... made it impossible for us to lodge so far away; and that, since he had so obligingly offered us the observatory which he had given us in our former voyage, we would occupy it again. As we found that nothing had been changed, I have

nothing to add to the description I have already given of it" [14].

Since Tachard and his companions occupied "the pavilion where we had previously lodged" (his account of Van der Stel's words), and that "nothing had been changed", the building standing in 1685 had clearly not been demolished in the interim and rebuilt with "greater Magnificence". It could be that Van der Stel was dissimulating in his statement of 1686 that the guest house had already been demolished, and that this was merely the intention. It appears from Valentyn's description below that Commissioner van Rheede commissioned its rebuilding and, significantly, it was Van Rheede and not Van der Stel who had given the Jesuits permission to use the building in 1685.

Indeed, the exposure of the house to the elements revealed in Tachard's following entry corresponds more closely with the first guest house than with the second one, which will be described later: "Father du Chatz owed his illness to the fact that he spent one part of the night making observations, and the other part resting a little, during the cold and rainy season, on the staircase of a house which was exposed on all sides to a malignant atmosphere" [15].

Valentyn mentioned that the "Speelhuysje" at the end of the garden, which he had seen in 1685, was "all ruined and gone" on his return in 1695. This, he stated, had been built on the orders of Visiting Commissioner van Rheede, and had offered a particularly good view of the roadstead [16]. Valentyn is incorrect in his attribution of this building to Van Rheede, who is more likely to have commissioned its successor [17]. He is also mistaken in his location of it in his account of the Cape in 1714. Here he described the earlier structure as being a "brick summer-house" at "the higher end of the central path", and expressed surprise that it had been removed [18].

However, no such building erected above the Company's garden appears on surviving plans, and it is likely that Valentyn had confused its position, writing as he was thirty years after having seen it. The "unusually enjoyable view of the harbour" that it offered, as described by Valentyn, would also have been obtained from the north terrace of the building he had seen in 1685 [19]. It is possible, therefore, that Valentyn was mistaken about the absence of the "summer-house" in 1695, and he does not mention its "replacement" at all in the account of his 1705 visit. It is more likely that

the original building was still standing in 1699, when it was mentioned on the 1st March in a letter to Amsterdam that the "dilapidated garden-house" was to be repaired [20]. A building erected after 1695 would hardly have already become dilapidated by 1699.

It appears that these repairs were already being undertaken in June 1699. A Journal entry of the 20th states that the Governor was visited in the garden by the English Ambassador Norris and the officers of his fleet. "After having discoursed some time there in a tent, they left about noon..." [21]. It is unlikely that an Ambassador would have been received in a tent in the middle of winter if the guest house were available. This suggests that the repairs were substantial and had rendered the building temporarily uninhabitable. These repairs seem to have been completed by the 15th December 1699, when Matthew Lowth described a banquet held in the garden by the Governor as "avery Splendid Dinner not less then 100 dishes" [22]. It is unlikely that such an elaborate banquet would have been cooked out of doors and served in a tent, suggesting that the guest house had been rebuilt by this time.

The unavailability of the guest house in June reveals that the repairs involved more than plastering and painting. This is confirmed by Kolbe's description of a building significantly altered from that in Tachard's account. However, there is a correspondence between their planning arrangements. It could be that the first building was merely subjected to alterations and additions, but given its state of dilapidation it is more likely that it was rebuilt from its foundations [23].

The rebuilt "Garden House" was recorded again as being used for entertainment purposes on the 5th November 1705, when the Governor received the officers of the burgher militia after a general parade [24]. It was also mentioned on the 31st March 1706, in a letter to Amsterdam, that the visiting astronomer Pieter Kolbe had been given lodgings in the garden house [25].

Like his predecessor Tachard with regard to the earlier building, Kolbe provided a detailed account of the new structure. He described it briefly in Volume I as a "Lust-huis" with large and attractive rooms, and a suitably large kitchen built alongside [26].

A further and more detailed description, however, is provided in Volume II of Kolbe's

"Beschryving". The house was only 18 feet deep ("breedt"), but was 40 feet wide ("diep of lang") [27]. It contained a broad "voorhuis", which was almost square, with doors leading inwards to the garden on the one side and outwards on the other. On either side of this hall was a large and handsome room, provided with a floor of square tiles, and furnished with a large table and chairs.

Above the staircase was a similar "voorhuis", with two rooms at the sides ("twee kamers ter zyden"). Kolbe had his lodgings in one of them, on the right-hand side, but also had access to the other one whenever it was not being occupied by the Governor or his wife ("Gemalinne").

The room on the left-hand side, which faced the town and the harbour, contained all kinds of stuffed wild animals [28], which could be viewed by interested persons ("liefhebbers") for a small gratuity ("een geringe erkentelykheid") [29].

The above two paragraphs (which follow Kolbe's paragraph breaks) are slightly ambiguous. Read separately they could suggest that the Governor's room and Kolbe's room were both to the right of the "voorhuis", with the "natural history museum" and perhaps the stair hall to the left. This would correspond with the two rooms on either side of the "vestibule" on the ground floor of the first guest house described by Tachard. It would also explain why Kolbe could only use the other room when the Governor and his wife were not present, as there is no obvious reason why he should have been excluded while they were looking at the animals.

If, however, the "natural history museum" comprised small straw representations of animals rather than full-size stuffed beasts (see Note 28), this room could also have doubled as the Governor's bedchamber for occasions when he needed to spend the night in the guest house. This would suggest an arrangement of only one room on either side of the "voorhuis", corresponding with the arrangement on the ground floor.

The latter suggestion of a plan only one room in depth is supported by Kolbe's statement that a loft was built over these two upper rooms, and used for the storage of seeds, dried herbs and garden implements. This was supported in the centre by the two "dikke middelmuuren", which separated the "voorhuis" and the rooms flanking it, and extended upwards as far as the floor of the loft, thus providing the main structural

support.

The siting of the house exposed it to the south-east gales, and Kolbe admitted that when the creaking of the beams became too ominous, he would seek shelter either under the doors leading through the inner walls into the "voorhuis", or else under the vaulted ("verwulfd") staircase [30]. Behind the house, towards the mountain, was a large kitchen with a number of fireplaces ("furnuissen"), a table and a long counter, where meals were prepared for the Governor when he visited the building. Beyond this was a small square building which served as a privy ("heimelyk gemak") [31].

Beeckman (1714) mentioned only that the garden house was used to keep a collection of stuffed wild beasts [32], an observation also made by Valentyn in the same year [33]. These comments could have been based on hearsay or derived from a misinterpretation of Kolbe, however, as Beeckman had nothing else to say about the building, and Valentyn's account does not appear to have been based on close personal observation, as will be seen below.

Valentyn's description of the house corresponds with Kolbe's in most respects. He also mentions the entrance hall with doors leading to the garden in front and the street behind, flanked by a room on either side, with similar rooms above [34]. He differs, however, in describing Kolbe's "breedt voorhuis, 't welke byna vierkant is" (see Note 29, above), as a "smalle trant" or narrow entrance passage [35]. The fact that Valentyn gave no dimensions for the guest house is instructive in this regard, given the care with which he recorded those of the church, the hospital, Constantia and, to a lesser extent, the slave lodge and Vergelegen. Moreover, he also states that the upper floor had "a flat roof on which one could stroll" [36], thus clearly contradicting Kolbe's explicit reference to a loft above the second storey [37].

It is likely, therefore, that Valentyn's invitations to official receptions in the guest house did not extend beyond his visit of 1685. This would explain his belief that the building had been demolished by 1695, about which he was probably misinformed by Simon van der Stel (who appears to have similarly misinformed Tachard in 1686). His absence of any mention of it in 1705 could be similarly explained, particularly since he was entertained by Wilhem Adriaen van der Stel at Vergelegen during this visit.

Moreover, it is unlikely that he ever saw the rebuilt guest house, given his confusion about the roof. He could have misread the probable two windows on either side of the central door (as shown in Tachard's inaccurate engraving of the first version) as lighting his two wide halls on either side of a narrow passage. However, he could not have been correct in his description of the roof, which is unlikely to have been flat. Moreover, his ambulatory for distinguished visitors would hardly have been reached through a seed loft.

It appears, therefore, that Valentyn was describing the first guest house, but correcting his original notes by adding Kolbe's account of the rooms on the upper level. In this respect he is useful, as he agrees with Tachard in the fact that there were two rooms on either side of the central hall on the ground floor of this earlier building [38]. Given that Kolbe lived in the guest house for a number of years, his account must be regarded as the most authoritative.

These correspondences and discrepancies reveal the difficulty of establishing the precise form of this building prior to its first major alterations in the 1750s. Nevertheless, the evidence does present a number of possibilities, all of which could have had an influence on architectural developments in the 18th century. Kolbe and Valentyn agree in describing the guest house as having a symmetrical plan, where the entrance hall extends from front to back and gives access to rooms on either side. This is not that dissimilar from the earlier house, except that here the hall is no longer open at the front and the back.

Where it differs from its predecessor is that the "dubbelhuis" plan may have been repeated on the upper floor. This would have been similar to the town houses of Blesius and Hüsing already described. It is therefore also tempting to speculate that it had a similar facade treatment to that of Hüsing's house (nothing firm is known of the facade of Blesius' house) and of Simon van der Stel's Constantia. The loft described by Kolbe must have had one or more light sources, and a triple-gabled arrangement on a hipped roof similar to the three houses mentioned above is not that unlikely. Kolbe mentions, moreover, that the inner walls constituted the major structural members, which would thereby have given extra support to centre gables on the street and garden facades.

The major discrepancy concerns the dimensions of the plan of the guest house. Kolbe describes the central hall as 18 feet deep and almost square, whereas Valentyn called it a narrow passage. Given an overall dimension of 40 feet, Kolbe's lateral rooms would have been only 11 feet wide, giving a limited frontage to the garden. Kolbe's plan of the garden confuses the issue even further: taking the width of the hall as 18 feet, the flanking wings are each 46 feet long as scaled off his plan [Fig 103].

Both descriptions, moreover, are contradicted by Pearse's drawing of Government House, which assumes that the guest house was incorporated in the later building, and attempts to identify the original structure [39]. This drawing is based on a 19th century plan, the original of which is in the Public Record Office at Kew, London. It gives dimensions of roughly 21 feet square for the hall (supporting Kolbe and contradicting Valentyn) and 24 by 21 feet for the lateral rooms, thereby giving a total width of 69 feet (contradicting Kolbe but supporting Valentyn in terms of the lateral rooms being wider than the hall) [40]. Kolbe's description, however, does correspond with Valentyn's detailed account of Constantia and with the archaeological evidence revealed at Nieuwland, which also had wider entrance halls or "voorhuisen" than the rooms on either side. It is also probable that this was the case at Rustenburg [41].

While the complete absence of visual records precludes the possibility of an architectural reconstruction of the rebuilt guest house, the analysis of the verbal evidence outlined above does present a possible configuration:-

The house was double-storeyed with a room on either side of a central hall on both levels, with the staircase either located within the hall or, less probably, within or adjoining one of the rooms. The loft above was probably covered by the hipped roof characteristic of the period, and was possibly elaborated by the triple gables seen elsewhere in the town, precedent for which had already been established by Simon van der Stel's Constantia.

7.6.3 PRIVATE GARDENS AND HOUSES IN TABLE VALLEY

It was first suggested on the 28th April 1655, in a letter to Holland, that the married officials of the Company should be given small gardens in Table Valley. This would

allow them to become more self-sufficient and reduce the expense incurred in feeding them from the Commander's table [1]. By the 1st October small private plots outside the Company's gardens had already been provisionally granted to these officials. These were the first lands given out to private individuals at the Cape [2], and had already been indicated on M1/22, a map of the Fort and gardens dating from 1654 [Fig 38].

A letter indicating the Company's approval was sent from Haerlem on the 30th October 1655 [3], and the first private gardens were officially granted on the 1st May 1656 [4]. These, however, were disallowed by the Visiting Commissioner Rijckloff van Goens on the 16th April 1657, on account of the practice having "been found injurious to the Company... especially as it was done without order". Any officials who wished to own gardens would now have to take their discharge and become freeburghers [5].

This is a significant entry in view of later developments, particularly with regard to the period of Wilhem Adriaen van der Stel. Although ignoring the permission received from Haerlem, Van Goens' reasoning was sound in this respect. This was that the burghers who had recently been given their freedom would not be able to compete on equal terms with farmers who had their official salaries to fall back on.

The severity of Van Goens' prohibition was alleviated on the 18th March 1658 by the next Visiting Commissioner, Joan Cuneus, who approached the problem in a more reasonable manner. The Company's officials would again be permitted to own private gardens, as long as they were small enough to be cultivated only after working hours, and provided that they did not sell any of their produce but used it only for their own households. These plots would revert to the Company upon the departure of their owners [6].

By this time garden plots had also been granted to freeburghers. The first mention of the enclosure of these gardens was on the 26th July 1658, when measures were taken to prevent the Company's and freeburghers' lands from being damaged by stray pigs, land for pig breeding having first been granted to the sergeant's wife in 1657. All pigs had to wear a triangular collar which would prevent them from getting through the hedges, and all the freeburghers were ordered to enclose their gardens securely. This was the first of many instances where the freeburghers had to be instructed to build fences

around their properties [7].

The freeburghers did not carry out these instructions, and some of the pigs were killed as a result of wearing their collars. The onus of protecting their lands was therefore put on the burghers themselves, and further orders were issued on the 30th September 1658 requiring all gardens to be enclosed with fences of thick poles, strong enough to provide an effective barrier to the pigs. These would later be inspected by the Fiscal and the constable to ensure that the orders had been fully complied with [8].

Despite the problems associated with pig breeding, it was so successful that lands for this purpose were granted to all the Company's officials on the 14th October 1658 [9]. Moreover, additional land in Table Valley was granted on the 27th August 1659 to all the town burghers living in the vicinity of the Fort (except those who had farms on the Peninsula), each of whom was required to keep at least seven pigs [10]. This decision explains the notable increase in the lands of the freeburghers seen in M2/19, the 1660 cavalier perspective of the town and gardens [Fig 42].

Permission was also received from Amsterdam on the 5th September 1659 for the Company's employees to build houses in Table Valley, as long as they did not use any of the Company's slaves or labourers for their construction. They were also to pay for the materials themselves, and were not to be given free access to the Company's stores [11]. This dispensation would be abused in later years, as seen particularly in the case of Wilhem Adriaen van der Stel and his co-officials, but also with regard to previous office-holders. The first of these instances had already concerned Jan van Riebeeck and his farm at Boscheuvel [12].

Another proposal for Table Valley was sent from Amsterdam on the 7th May 1661. This questioned "whether a portion of land might not be set aside as pasture, on which everyone might keep a few cows for his private household purposes, as is done in this country in various villages" [13]. This however was considered to be impracticable, as noted in a letter to the Seventeen dated the 9th April 1662, although no convincing reasons were provided [14].

Apart from records of the freeburghers' property transactions, there was no further mention of the lands in Table Valley until 24 years later. This was on the 1st July 1686,

when the burghers were instructed to remove their existing thorn boundary hedges and replace them with walls or palisades within the next three months [15].

On the 5th June 1687 it was noted that there was a shortage of milk and dairy products which, moreover, were only supplied by the freeburghers at exorbitant prices. It was therefore resolved that all the members of the Council of Policy and the Council of Justice, together with the minister, would be provided with twelve cows, which they would be permitted to graze in the vicinity of the Castle. A further eight cows would be given to each of the present and retired members of the Burgher Council, but they would have to use pastures beyond the confines of Table Valley [16]. Permission was also granted on the 16th December for 39 freeburghers, who had volunteered to serve as a burgher cavalry in times of war, to graze their horses in Table Valley [17]. The commonage suggested by the Seventeen in 1661 had thus become a reality, but only for a privileged few.

The freeburghers in Table Valley were instructed again on the 29th August 1704 to enclose their lands with hedges or ditches ("omheijnen, beslooten of omgraven"), to prevent them from being damaged by stray livestock [18]. This lack of initiative shown by the burghers in matters regarding their own prosperity has been noted previously, and was perhaps one of the reasons for the open contempt for them shown by Wilhem Adriaen van der Stel.

Following the dismissal of this Governor and other senior officials in 1706 for engaging in private farming, the ownership of kitchen gardens by the Company's employees was again prohibited by the Directors. However, the Visiting Commissioner Simons suggested in 1708 that they should be allowed to retain their lands as long as they were no more than an hour from the Castle, and provided that the produce was used for their own consumption alone [19]. These Company's servants were therefore instructed on the 30th January 1710 to submit plans and verbal descriptions of the gardens still in their possession to the Council of Policy, in order to regularize the matter [20]. These drawings, unfortunately, do not appear to have survived.

Kolbe [21] and Valentyn [22] both wrote in complimentary terms about the private gardens in Table Valley, but apart from one example there is no surviving record of the

buildings erected on them. The exception is Leeuwenhof, the garden house of the Fiscal Blesius, the site plan and facade of which are displayed in an out-building of its extant successor, which was built in the 1780s [Fig 108] [23].

This complex consisted of a house with a fountain in front, and two out-buildings to the side. The fountain, which is shown in E V Stade's view of the town from Leeuwenhof itself [Fig 109], is not directly in front of the house, but to the left of centre, and is supplied by an obliquely located water channel. The out-buildings, both of which are depicted with hipped roofs, are to the right of the house. One is behind and parallel to it, while the other is in front but sited at right angles, the whole complex thereby forming an orthogonal arrangement.

The house itself is another example of the triple-gabled type seen during this period at Constantia, Vergelegen and in Henning Hüsing's house in the town. Here, however, the central gable is no higher than those flanking it on either side. All three gables are triangular in form and extend upwards to the ridge height, but are raised above windows placed over the eaves in the manner of over-sized dormers. The main roof is hipped, as in the triple-gabled buildings discussed elsewhere.

In contrast to Constantia and Vergelegen, but similar to Jan van Harwaerden's inn (the first gabled residential building at the Cape), the regularity of the gables above eaves height is contradicted by their lack of correspondence with the design of the facade below. Although this appears to have been raised above the ground by a terrace, giving it a greater vertical formality, it was not symmetrically designed. There were two doorways, in a sequence from left to right of door-window-window-door-window, and none of these openings corresponded with the windows of the gables above. This lack of correspondence was compounded by the off-centre location of the square fountain-pond in front.

Leeuwenhof, therefore, was not an example of the "dubbelhuis" plan which apparently characterized the town house of its owner, the Fiscal Blesius. This provides conclusive evidence that Leeuwenhof was not the house described in such complimentary terms by Valentyn [24].

Despite the architectural inconsistency of the house as shown, this drawing is extremely

significant as constituting the third independent representation of the triple-gabled phenomenon seen in the early buildings of the Cape. The others are E V Stade's drawings of the town and Constantia, and those of Vergelegen in the "Korte Deductie" and the "Contra-Deductie".

7.6.4 THE LOOK-OUT POST ON THE LEEUWENBERG

A different kind of "structure" was the look-out post which was erected on Lion's Head, to inform the Castle of the arrival of ships. This comprised a cannon and a flagpole for signalling purposes at its summit, as well as an associated guard-house lower down at Kloof Nek. A permanent gun and flagpole had first been commissioned on the 22nd March 1673 by Isbrand Goske [1], but the guard-house does not appear at all in the VOC records. It is referred to, however, in the accounts of visitors to the Cape.

Georg Meister mentioned the cannon and flagstaff in 1677 [2], and the guard-house in 1688, although he incorrectly located the latter on Lion's Head itself: "On this Lion Hill or Head stands a little hut where 2 or 3 Dutchmen are set, and they have high up on the hill four small cannon ['Printzen-Stuckgen'] and a high mast, on which they hoist the flag when foreign ships (sic: Dutch also) arrive, and fire so often as they see ships... Up at the flagstaff is fastened a thick rope, which hangs down the rock: it is about 4 fingers thick, and with it they must haul themselves up and everything they need" [3].

Bogaert also mentioned the guard-house in his description of 1702 [4], but Kolbe was the first to note that it was located in the kloof between the Lion and Table mountains [5], as confirmed by Heydt [6] and Mentzel [7]. Kolbe also confirmed Meister's account that the soldiers stationed here had to communicate with the signal station through the medium of a rope ladder [8].

7.6.5 THE MONUMENT ON THE LEEUWENSTAERT

This structure, the earliest monument to be be erected by the Dutch at the Cape, was first mentioned by Valentyn during his visit of 1695. His children had climbed the

"Leeuwen-berg" and found an obelisk ("Graf-naald of Obeliscus") on its summit. This had been erected to commemorate the ascent of the hill by Simon van der Stel and the wife of the Governor-General of Netherlands India, Rijckloff van Goens the Younger, who had returned to Holland [1]. She was Joanna van Ommeren, as Valentyn revealed in his account of 1714, when he also described the monument as a brick pyramid with an inscription carved on "a fine black stone" [2].

Kolbe also mentioned that "on the Back of the Lion-Mountain there stands a small square Monument of Brick, erected by the Governour Simon Van der Stel, to the Memory of a Dutch Lady, who ascended this Hill with his Excellency and resided there with him a whole Year, while her Husband was gone to Holland. The Monument is between 6 and 7 Feet high: And on a smooth black Stone, in the Pedestal, is cut this Inscription in Dutch:-

"Anno 1680. heb ik N. N. Huysvrouwe van zyn Hoog Edelheit de Heer Gouverneur Generaal van Nederlands India, Ryklof van Goens, in Geselschap van d' Edele Heer Gouverneur Simon van der Stel, en andere Caabse Juffrouwen, hier op deesen Berg geweest" [3].

This monument has long since disappeared, but was evidently an attraction for visitors in the early years of the 18th century. Mentzel, however, makes no reference to it, suggesting that it was no longer extant when he arrived at the Cape in c1731.

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