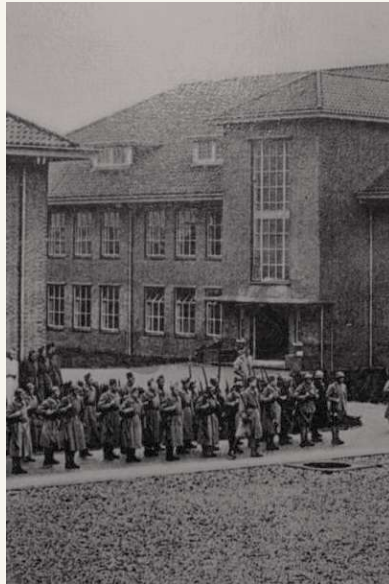


HET APPÈL



FROM REGIMENT TO RESIDENCE

JORAM OVERVELDE

COLOFON

Het Appèl - From Regiment to Residence

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AR4AH120 Adaptive Reuse of Heritage (2025/26 Q2)

ABSTRACT

This graduation report explores how Building 13 of the Kolonel Palmkazerne in Crailo can be repurposed into a contemporary civic anchor for the Kazernekwartier while extending the legibility of the barrack's inherited order and discipline. Sitting at the head of an appèlplaats, the building belongs to a military ensemble where hierarchy, routine and controlled access shaped spatial logic. The building's future, contradictively, lies within a residential, campus-like redevelopment that requires publicness, daily use and long term adaptability. The core dilemma thus becomes not whether the building should change, but how change can be made possible without discarding the order that grants the barracks its identity.

The research develops a design brief for the adaptive-reuse case of Building 13. Existing evidence such as cultural-historic reports, literature, technical inspections, building analyses and demographic readings, et cetera, is processed through a structured research-and-design methodology. Through thematic analysis, source material is translated into operational statements while iterative design testing gauges their architectural consequences. The analysis is guided by four project lenses: Program, Identity, Thresholds and Longevity.

In conclusion, Building 13 can achieve civic relevance through a layered strategy. Permanent public- and service-oriented functions anchor in the most durable parts of the building, while loose-fit uses occupy the more adaptable layers. The building's ensemble position, chimneys, cellar, silhouette and traces of the demolished wings form primary identity carriers that must remain legible. Instead of uncontrolled openness, it should be staged, allowing public encounter without erasing spatial discipline. Finally, longevity relies on distinguishing permanent carriers from adaptive infill, allowing for fabric persistence and programmatic relevance throughout time. Consequently, the historically established order is not rejected. Instead, it's rewritten into a civic sequence for everyday life in Crailo.

PREFACE

In *Mastery*, Robert Greene expresses how a person's calling regularly begins to unveil itself when they encounter limitations. Constraint does not solely diminish action - it demands a response. It demands invention, discipline and a more focussed form of attention. This same principle, to me, applies to the former kitchen building of the Kolonel Palmkazerne.

Building 13 does not present a clean slate. It offers an inherited fabric shaped by use, neglect, demolition and memory. Its remaining cellar, chimneys, masonry core and most importantly, its ensemble position carry value, yet they simultaneously impose limits. Those limits are not issues to be erased but rather conditions that the project has to consider.

The redevelopment of layered and historically important buildings like Building 13 from my perspective require more than mere preservation and more than complete free invention. They require a creative yet pragmatic attitude. A position that accepted the resistance of the existing structure, while using this same resistance to guide a new contemporary role. This project started from that tension. The task at hand, to me personally, was not to 'overcome' the building's limitations. It became a task of understanding what kind of future could manifest within the building's limitations.

Het Appèl

From Regiment To Residence

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My tutors, Lidy Meijers and Thijs Bennebroek, merit my sincerest gratitude for their guidance throughout the project and for continuously sharing their knowledge of the heritage and architecture domains. I am also grateful for the other teachers and experts of the Adaptive Reuse Graduation Studio for their feedback during the process.

Thank you to those who contributed knowledge, documents, discussions and access that helped me to understand the project case beyond its drawings alone.

I would like to thank my parents, my brother and my friends for their patience, encouragement and support throughout the graduation period.

Finally, I wholeheartedly appreciate my fellow students for their company on Thursdays - and the occasional event outside of the faculty - for the last 30 weeks. It was a genuine pleasure sharing the last three quarters with all of you.

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READING GUIDE

This report is the leading argument of the full graduation project. It explains how Building 13 is read, interpreted and translated into a design brief for adaptive reuse. The Repository comprises the expanded evidence consisting of source readings, interpretations, operational statements and design logs. The third document is the design booklet which contains one possible architectural answer to the brief that is developed in this research.

Numerical references refer to the bibliography and are numbered separately per chapter. Repository codes, such as L02-OS3 or D01, do not replace bibliographic references, but instead indicate where the further elaboration or operational statement is developed within the repository.

Because this report does not include a conventional appendix, the Repository is submitted as a separate companion document. The Repository functions as the project's expanded appendix to this graduation report.



Figure 01 - Building 13 before demolition of the wings (author's work)

Figure 02 - Building 13 after demolition of the wings (J. van Breemen)

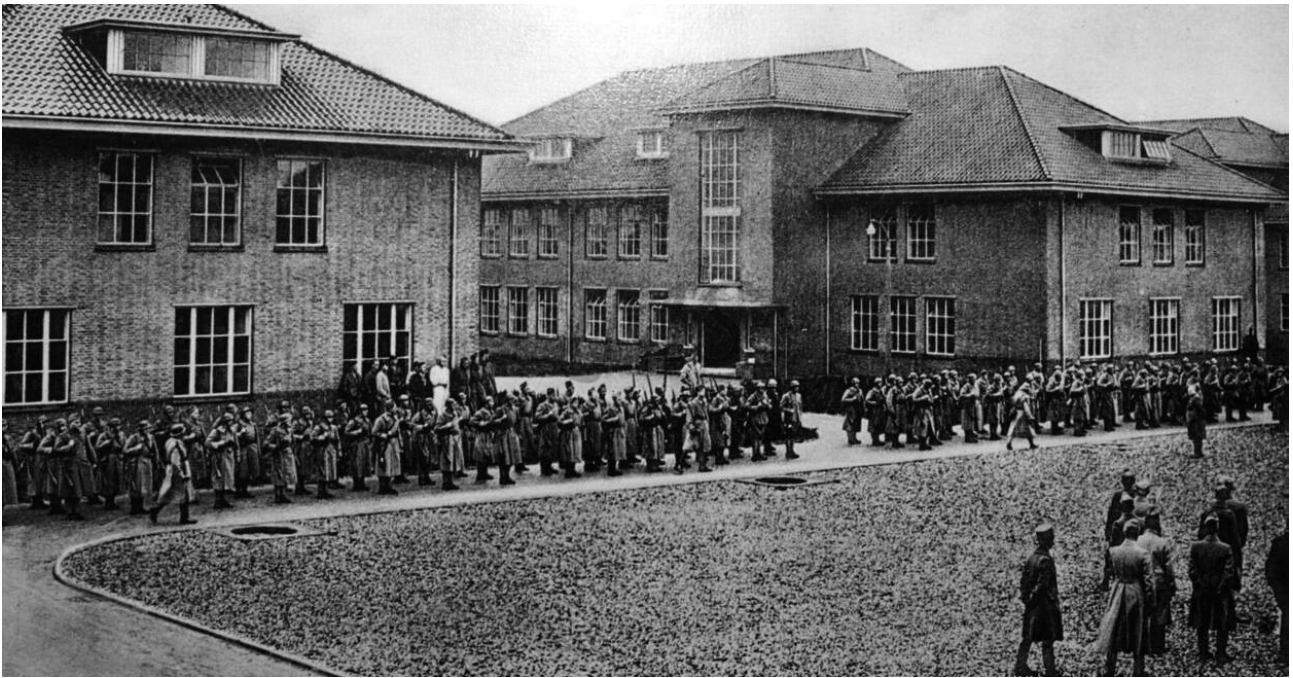
CHAPTER I

I N T R O D U C T I O N

THE BARRACKS THAT REFUSE TO STAND STILL

Before the Dutch military settled in the former heathlands of Crailo in 1938, the grounds served the New Dutch Waterline as a strategic landscape. The initial construction of the Kolonel Palmkazerne was met with local uproar from residents and the 'Vrienden van het Gooisch Natuur Reservaat', who claimed that a regiment was no suitable fit within their residential environment ¹. This resistance was consequently overruled by the Dutch Ministry of Defence by stating that the national interest outweighed local concerns. Thus, construction was initiated, as six lodging buildings were built around a central marching square which the military named the appèlplaats. Once the barracks opened their gates in 1939, this square became the center where soldiers marched, gathered and trained ². After the Second World War, Building 13 was added in 1951 ³. Its main function was a kitchen building that sat at the head of the ensemble, overlooking the square with two large chimneys, waiting to feed the machine.

The formerly closed military site was purchased in 2017 by GEM Crailo B.V. and has been planned for redevelopment into Buurtschap Crailo ⁴. This area is targeted to become a live-work-nature district in which the Kazernekwartier specifically is expected to become a campus-like mixed-use area ⁵⁻⁶. The location is already marked by repeated transformation; it happened violently and repeatedly in the past. Still the current transformation presents a new, different dilemma: The same order that once served hierarchy now becomes the very thing that must be translated to allow for a new openness. If the area is opened up irresponsibly, it also becomes at risk of being washed clean. If the area remains closed off, it will be frozen in time and stay dormant. The task therefore becomes not merely preservation, but a legible transformation that can promise the Kolonel Palmkazerne a fitting place within our future.



1.1 Problem Statement

Discipline as Arrangement

The Kazernekwartier is not a preservation project, but rather a residential, civic reoccupation. The ensemble radiates order, whereas a civic program demands permeability and invitation for social use⁷⁻⁸. Contradictively, Foucault argued that discipline does not manifest through walls only, but through arrangement, routine and legibility⁹. Repurposing the Kolonel Palmkazerne thereby is not a matter of filling old spaces with new functions. Instead, it becomes a matter of rewriting the script from a plan of disciplined routines to one that invites everyday life.

The central test case becomes Building 13. As the former kitchen building sitting at the head of the *appelplaats*, it once used to centralize daily rituals and logistics within the barracks. At present, it is set to host public life without erasing the inherited military order of the ensemble. This conflict is further sharpened by the building's layered and partially depleted condition. When a building's fabric has reached a collapsed state, the question becomes how its identity can be carried onward.

1.2 Relevance

From enclave to civic anchor

The local uproar ahead of construction in 1938 delayed the building permit for the Boost barracks ¹. Today, a little under a century later, the same soil that used to be closed off for the regular citizen is requested to host regular, everyday life once more. The discussion thereby has changed from whether the barracks should be there, to how they can belong there.

Thus, the challenge is not simply to fill an existing shell with a new program, but to reconsider how the site, and Building 13 in particular, is entered, crossed and inhabited. This means flipping a controlled, spatial enclave into a contemporary civic sequence that is capable of hosting everyday rhythms and becomes interwoven with its surroundings.

The existing plans for Crailo state ambitions for energy-positive and material-conscious development. As part of the brief, sustainability functions as a pillar for the redevelopment ⁶. Sustainability within heritage, however, can become an obstacle, when it's considered as an upgrade package. Following Stewart Brand's philosophy, the advantage emerges when buildings are understood through time. A building should be designed with service life and continuous adaptation in mind ¹⁰.

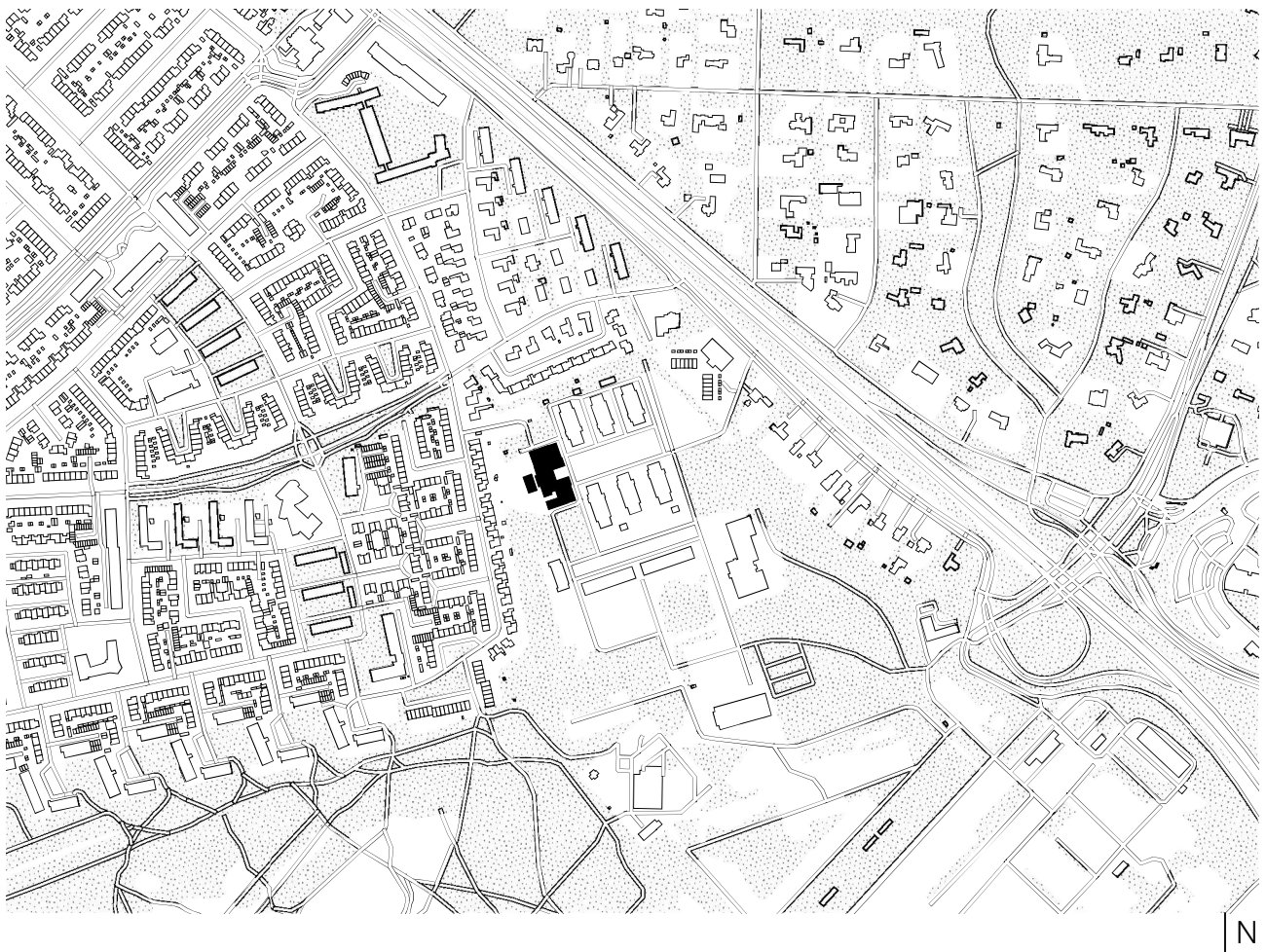


Figure 13 - Site Location scale 1:2000
(author's work)

1.3 Objective & Motivation

Rewriting the march into a walk

This graduation project aims to develop an adaptive-reuse design brief for Building 13 and its contiguous spatial surroundings. Through this brief, the former kitchen building will be repositioned as a civic anchor within the Kazernekwartier. Four main drivers lead the research.

Civic Role
Legible Transformation
Staged Thresholds
Longevity Through Layered Intervention

Together these drivers shape one compound problem. The former kitchen building sits at the head of the appèlplaats but it does not yet perform as a coherent public face; it holds value within the ensemble beyond its fabric, but its use value alone continues to be low; and even though many secondary structures have deteriorated or disappeared, a robust structural body persists. The research thereby questions how Building 13 can be repurposed as a civic anchor by translating inherited order into a legible, adaptable and public spatial proposition.



Figure 14 - Rewriting the march into a walk (author's work)

1.4 Research Questions

Framing the challenge

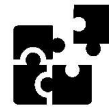
The main research question is as follows:

How can Building 13 of the Kolonel Palmkazerne be repurposed as a contemporary civic anchor for the Kazernekwartier while continuing the legibility of the barracks' inherited order and discipline?

To answer this question, the research distinguishes four subquestions, divided into the project's main themes.

Program:

What program mixture can allow Building 13 to fulfil a durable civic role within the new context of the Kazernekwartier?



Identity:

Which value carriers should be preserved, transformed or reintroduced to continue Building 13's identity?



Thresholds:

How can thresholds, circulation routes and entrances transform the closed military order into a legible public-to-private sequence?



Longevity:

How can longevity strategies guide the architectural interventions in order for Building 13 to remain useful beyond its first program?





1.5 - Scope

Drawing the line

A project that attempts to solve everything risks becoming blinded to the very problem it initially set out to confront. Scope therefore is not a limitation, but a necessary act of precision. The primary object of this project is Building 13 specifically. Its immediate surroundings are included where access, public address and arrival experience can be influenced. The appèlplaats and adjacent outdoor spaces are considered as civic thresholds rather than an independent urban masterplan.

Insofar it grants Building 13 a durable civic role, the program is included. The research defined a mixture of program and spatial use logic, but it does not mature into a fully operational business model. Existing professional value assessments, cultural-historic reports and technical reports serve the project as its evidentiary baseline. This research consequently translates them into operational conditions instead of producing a new value assessment. Sustainability is approached primarily through longevity. The main focus lies with service life, material durability and a clear distinction between permanent and flexible layers.

CHAPTER II

A P P R O A C H

READING BEFORE DRAWING

A research and design project within the realm of adaptive reuse cannot commence with shape alone. A potential pitfall is a lack of interdependence between the two disciplines, or a disconnection between findings and eventual design decisions. The method used for this project aims to organise the relationship between research and design by making decisions traceable to the evidence from which they were derived.

This report does not contain the entire design, but rather the logic that holds the design accountable. The Repository serves as the expanded archive, while the design booklet presents a conceivable architectural answer to the proposed design brief. This report thereby focuses on the translation from evidence into operational statements, which are the point where research becomes a design layer.

2.1 Method

Operationalizing Research as a Design Layer

Research and design evolve in parallel while they remain in dialogue with one another. Both processes are evidence-led. The method is structured as a three-lane workflow consisting of research, design and evidence, inspired by the swimlane diagram¹. The evidence lane is the connecting component that contains literature, analysis, existing reports and demographic data.

The Research engine converts heterogeneous evidence into operational statements. Grounded in Braun and Clarke's 'Thematic Analysis', here it is understood as a structured approach of reading source material in which continuous patterns of substance are identified, combined and framed as themes². In this project the themes do not continue to be abstract, but are instead translated into design conditions.

The Design Engine is considered as a controlled cycle rather than a linear process. This design tool is derived from PDSA methodology, a repeatable four-step process that uses a plan-do-study-act logic, with the aim to carry out change, learn from the results and seek improvements through iteration³. In this project it functions through repeated proposing, testing, studying and refining. The design engine does not remove intuition from the process but it disciplines it through repeated confrontation with evidence.

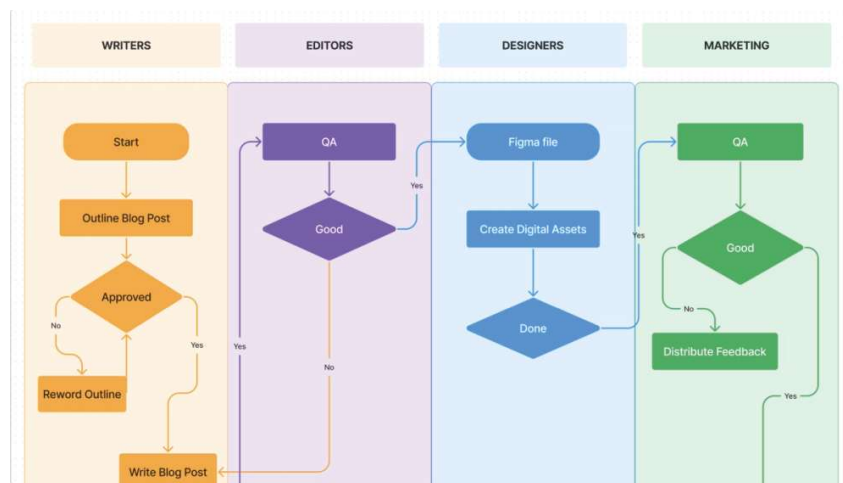


Figure 2.1 - Swimlane diagram (from figma.com)

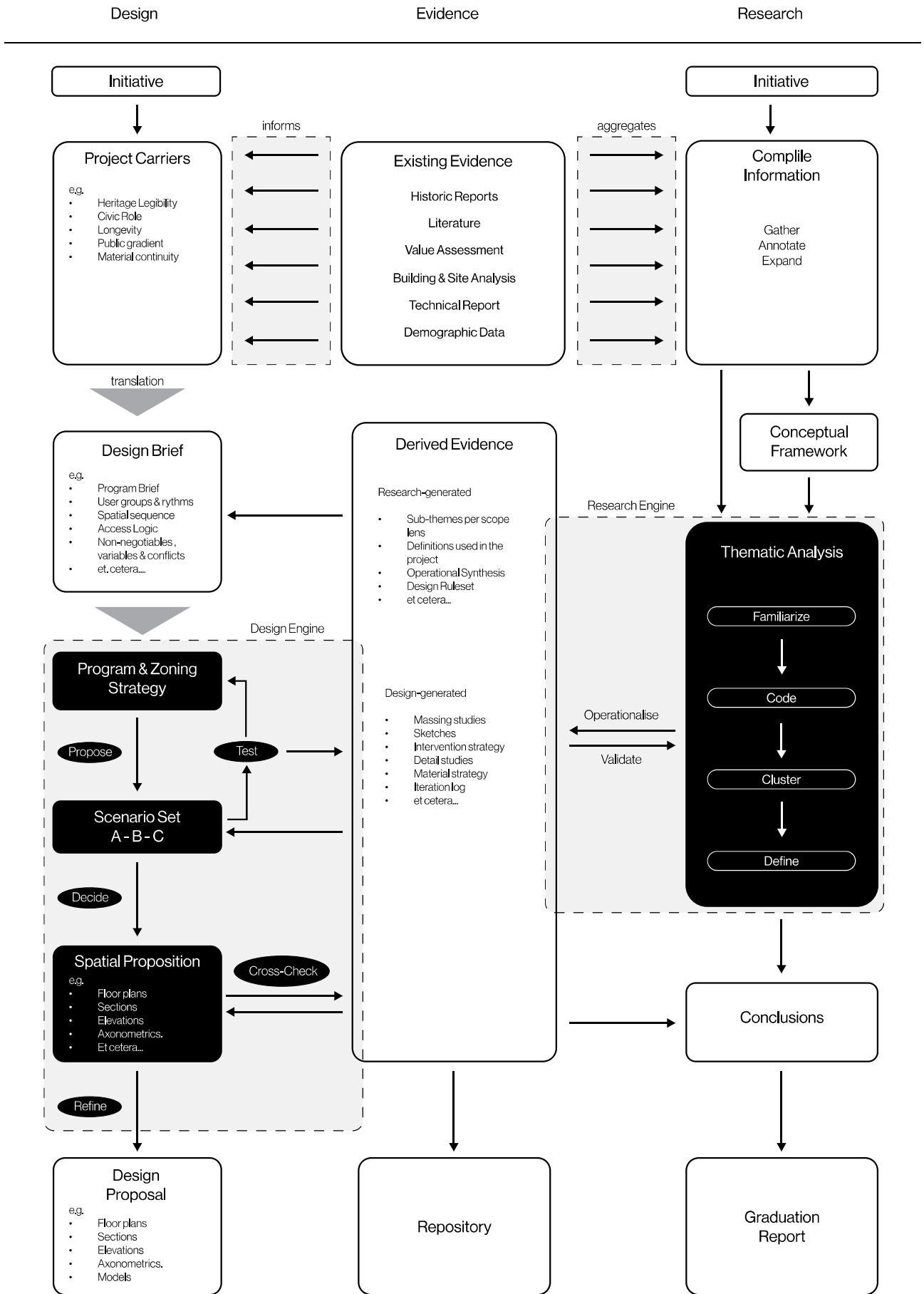


Figure 2.2 - visualization of the methods (author's work)

To provide structured planning in the run up towards the final deadline, a Gantt-chart will be implemented. This project management tool is a graphic representation of activity against time that can contribute to monitoring progress ⁴. Through this way of planning a total overview of deadlines, milestones, decision moments and other components is visible at all times across multiple phases and several different elements of the process.

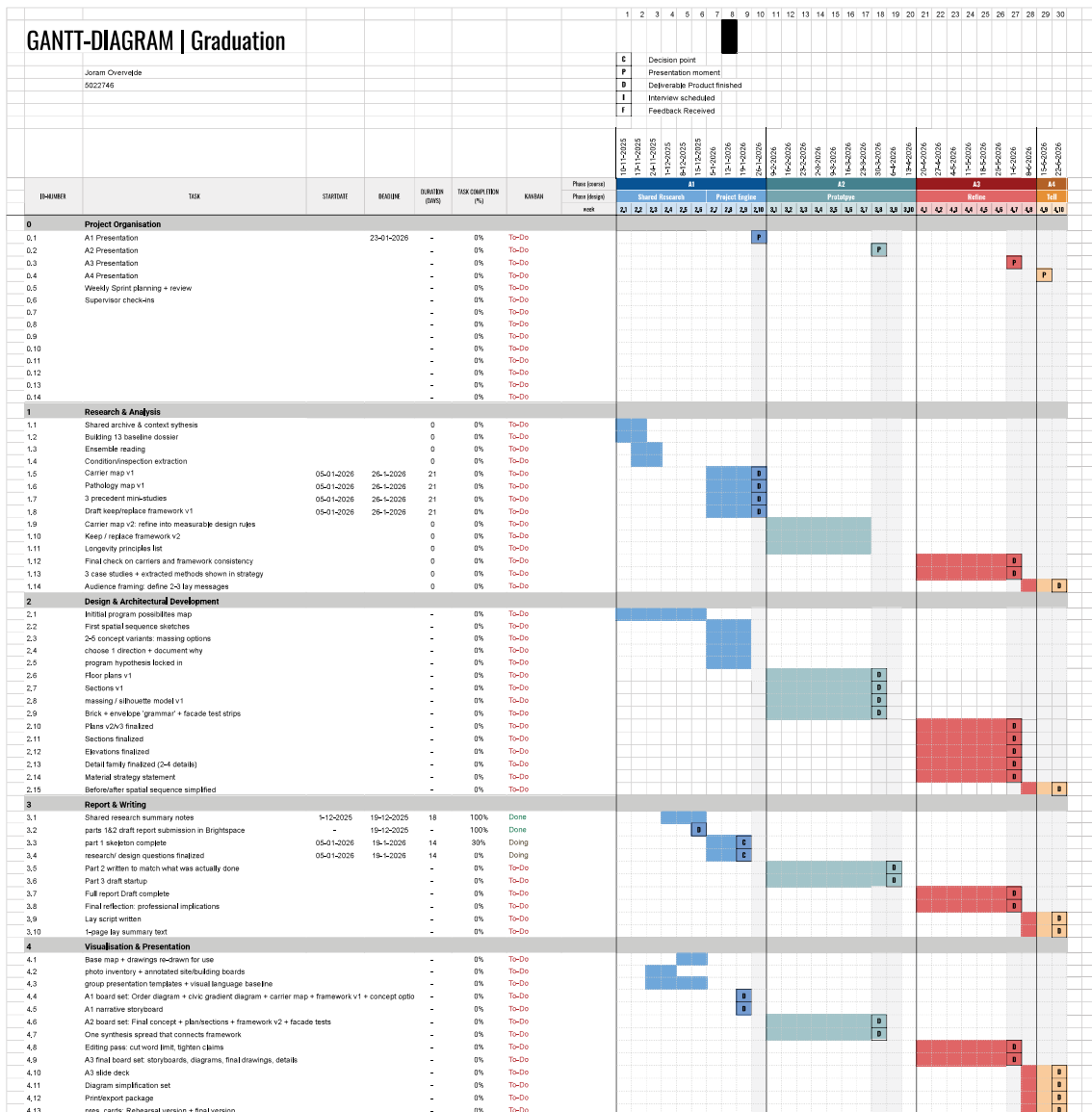


Figure 2.3 - Gantt diagram for the graduation studio (author's work)

2.2 Repository Structure

Where Evidence is Stored

The Repository functions mainly as the expanded evidence archive that backs the report. Each Literary (L) chapter follows a similar structure: Observation, Interpretation, Relating Themes, Operational Statements. These final operational statements enter the report directly, where they are used as design obligations.

Links between the report and the repository are made through a coding system:

L01 ... L05:	Literary Compendium
D01 ... D09:	Design Log
OS01 ... OS09:	Operational Statement

Codes such as "L03-OS1" allow the reader to trace a design condition back to its initial source, while the main report remains readable and straightforward.

L01:	Civilisation and its Discontents - Sigmund Freud
L02:	Cultuurhistorisch Onderzoek Buurtschap Crailo - Arcadis
L03:	Voormalige Kolonel Palmkazerne te Crailo - Crimson
L04:	Technical Inspection Report - Het Inspectiehuis
L05:	Adaptive reuse: Extending the Lives of Buildings - Liliane Wong

2.3 Operational Statements

Statements That Demand Design

Operational Statements form the bridge between the Repository and the design proposal. They serve as design conditions derived from the source material that was analyzed through the research engine. The report does not repeat full translations of source material into operational statements, but instead it asks what the operational statements require architecturally.

In chapter 3, the full set of statements is introduced. There, the four readings of Building 13 condense into an operational synthesis. That synthesis is the main result of this research. It does not define a single, fixed architectural outcome, but produces a traceable brief from which an architectural response can operate instead.

2.4 Working Definitions

Setting the Terms

A small set of terms is used as working concepts as opposed to an abstract vocabulary.

Repurpose: adapting a building to a different use through an interpretive design attitude, starting from the building's DNA, spatial logic, and time-layers while developing programs and interventions from what the existing can carry (based on Office Winhov's book *architecture repurposed*⁵).

Legibility: A condition of design where old and new remain readable by coherently integrating interventions, while keeping them distinguishable so that the building's evidence is not falsified by change and the next intervention can tie to the story without erasing it (based on Office Winhov's book *architecture repurposed*⁵).

Identity: "A multidimensional concept shapes not only by formal characteristics but also by spatial organization, cultural continuity, contextual relationships and collective memory" (from Kejanali and Haspolat 2025, abstract section⁶).

Adaptive reuse: The change of an existing building for continued use, where "the function is the most obvious change, but other alterations may be made to the building itself such as the circulation route, the orientation, the relationships between spaces; additions may be built and other areas may be demolished"⁷⁻⁸.

CHAPTER III

R E S U L T S

THE BUILDING AS A BRIEF

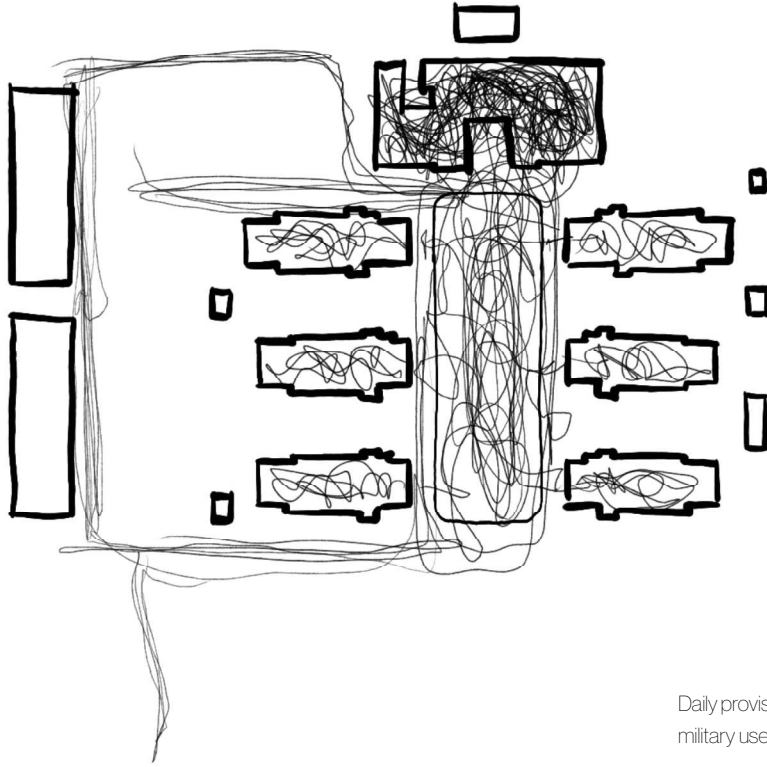
The collected evidence is translated into operational conditions for Building 13. This chapter establishes the conditions under which the former kitchen building can be repurposed as a civic anchor within the Kasernekwartier. Program, Identity, Thresholds and longevity are used as four project lenses through which the sources and the building are interpreted. These readings jointly distill into an operational synthesis that consequently shapes the design brief for an architectural proposal.

3.1 Program

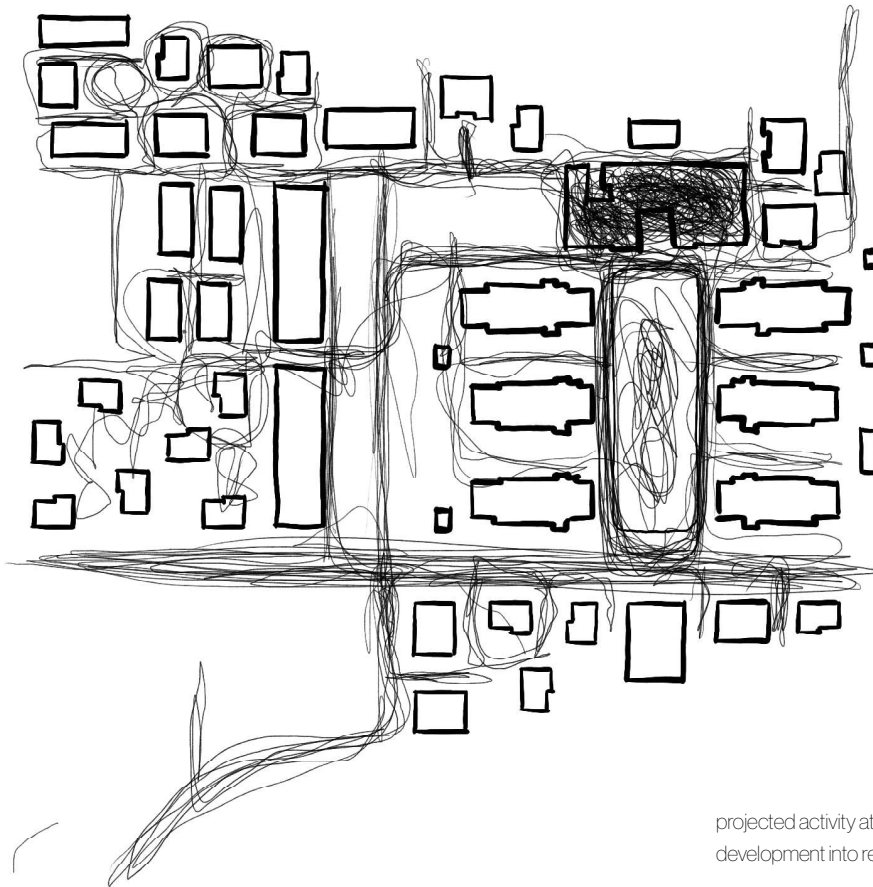
Use as the First repair

Arcadis describes the ensemble at the Palmkazerne as eminently visible yet poorly experienced as a result of the site not being publicly accessible, causing its social function to remain limited¹. Building 13 carries significant cultural value through its ensemble role, cellar and chimneys, yet contrarily, it simultaneously scores low in terms of use value and public experience. A responsible, fitting program thereby transcends occupation alone and becomes a form of repair. Visible but unused heritage can transform into a communal asset for the future neighbourhood through a new civic purpose (L02).





Daily provisioning at the Kolonel Palmkazerne during military use



projected activity at the Kolonel Palmkazerne after development into residential area

Figure 3.2 - Daily rituals in the kazernekwartier (author's work)

The projected demographic and spatial conditions of Buurtschap Crailo further narrowed (D-01) down the civic ambition. A total of 590 homes are planned for Crailo, combining a mix of social, middle and higher segments housing ². A rental-heavy condition is identified in the early phases of the Kazernekwartier, with 127 rental units compared to a rough 33 owner-occupied units ³. Additionally, a statistical reading of the surrounding municipalities Blaricum ⁴, Gooise Meeren ⁵, Hilversum ⁶ and Laren ⁷ revealed an ageing, highly educated and service-economy oriented demographic profile. These conditions together support care, wellbeing, flexible workspaces and low-threshold daily facilities. Repeated weekday use should therefore be prioritised over occasional events in the program proposal.



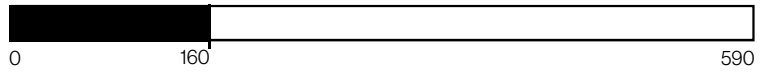
KAZERNEKWARTIER HOMES

160

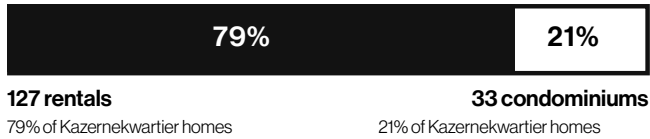
of 590 planned Crailo Homes

27%

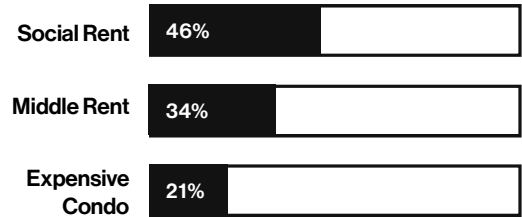
of the full Crailo housing plan



TENURE



HOUSING MIX



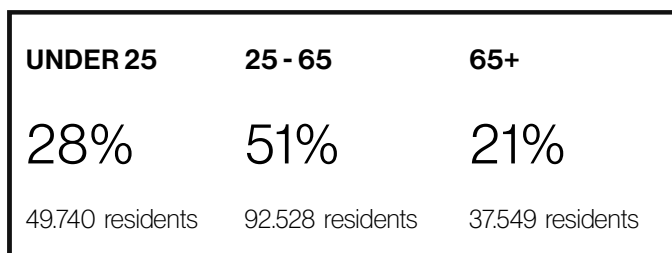
180.293

TOTAL RESIDENTS IN THE SURROUNDING MUNICIPALITIES

POPULATION BY MUNICIPALITY



AGE PROFILE



EDUCATION PROFILE

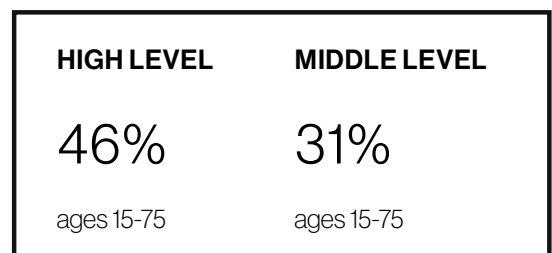
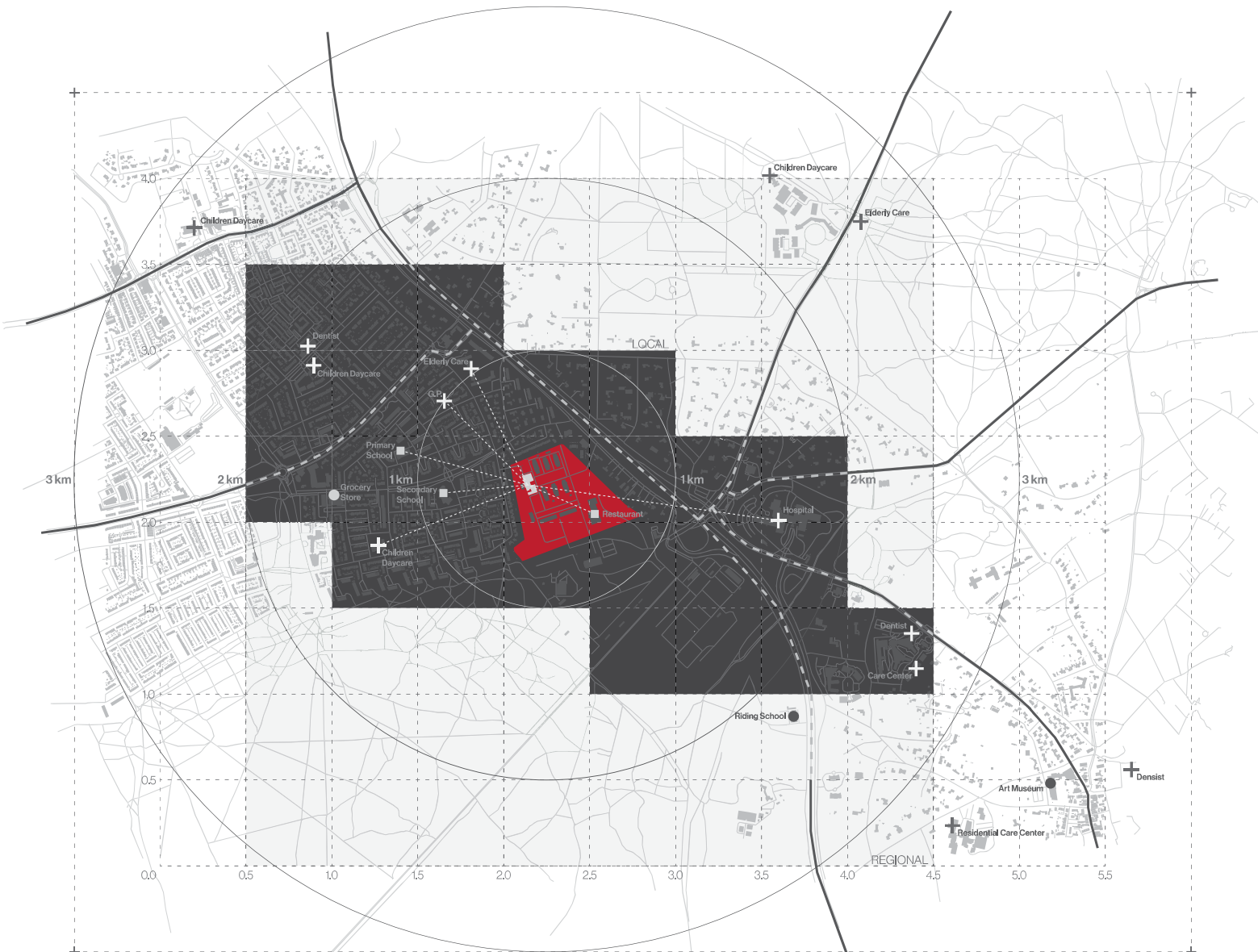


Figure 34 - Crailo and surrounding's statistics (author's work; based on Buurtschap Crailo & Allecijfers.nl)

A new program proposal for Building 13 must also position itself towards nearby public buildings to avoid program cannibalism. De Groene Afslag provides the area with a restaurant, venues for meetings and events, a hotel and educational functions ⁸. The planned entrance building of the site will incorporate a supermarket, horeca facilities and parking logistics ⁹. Building 13's specificity would be weakened if it repeats nearby functions. The former kitchen building can instead re-establish its former centralising role by supporting daily ritual through a local care, work and service-oriented infrastructure.



Before Square Meters:
Building 13 was never a neutral container. As the former kitchen and bathhouse, it supported daily routine within the barracks through feeding, supplying and organizing military life.

The three program lanes (fig. 3.6) should be read not so much as separate departments and more as three ways in which Building 13 can serve daily life for Crailo at present: by supporting, by gathering and by accommodating change. This diagram allows the program to move from user demands to program response before it becomes a matter of floor area.

Building 13, as described by Crimson (L03), was a central provisioning structure consisting of a large kitchen, a bathhouse on the ground floor and a central boiler room in the cellar that served that barracks as a large service cluster 10. The new program can continue this logic in a contemporary civic form, establishing a programmatic direction revolving around recurring use within the building and collective support for the larger ensemble.

The final reading of the program starts to suggest a two-layer strategy (D-01). Functions such as commons, logistics, care and technical infrastructure are expected to continue their relevance over time whereas other functions, including co-working, private offices and small-scale service units, are more likely to change with future requirements. The final design brief must therefore resolve the programmatic tension of how Building 13 can support everyday civic life while staying adaptable.

	Civic Service Spine	Daily Commons	Productive Lease Layer
TARGET GROUP	Residents of kazernekwartier, elderly residents, families, daily visitors.	Residents, workers, visitors, students, parents, children.	Local entrepreneurs, freelancers, small care providers, remote workers, start-ups.
USER DEMANDS	Reliable everyday services, health support, logistics, convenience	Informal meeting, waiting, sitting, studying, eating, arriving, orienting	Affordable workspaces, temporary rooms, shared facilities, low-threshold visibility, ability to grow or leave
SPATIAL DEMAND	Accessible and servicable spaces with clear routes and limited dependency on changing trends	Open and socially inviting spaces that connect to the appèlplaats and entrance sequence	Flexible economic layer that allows for change over time without compromising the building's identity carriers.
PROGRAM RESPONSE	Primary Care Cluster, Hybrid Sports Facility, Parcel & Returns Hub, Waste & Logistics, Technical & Building Services	Commons Café, Multi-Use Civic Room, Quiet Study	Co-Working, Private Offices & Studio's, Short-Lease Service Units.

Figure 36 - Three lanes of civic reoccupation (author's work)

PROGRAM BRIEF

Fixed Program	amount	average area (m2)	gross area (m2)		amount	average area (m2)	gross area (m2)	
Commons Café					Hybrid Sports Facility			
living room seating	1	160	160		Strength & Cardio floor	1	200	200
bar / counter	1	25	25		Pilates & Group studio	1	80	80
kitchen & Back of house	1	55	55		reception	1	20	20
Storage & cooling	1	30	30		changing rooms & lockers	2	25	50
Toilets & cloakroom	1	40	40		showers + toilets	2	15	30
Subtotal			310		Storage & Laundry	1	12	12
Parcel & Returns Hub					Waste & Logistics			
Parcel Locker Wall zone	1	40	40		Waste sorting room	1	60	60
Service Counter	1	15	15		Bulky waste	1	20	20
Loading area	1	12	12		cleaning storage	1	10	10
Staff / storage	1	35	35		service access	1	30	30
Secure staging	1	18	18		Subtotal			120
Subtotal			120		Technical & Building Services			
Primary Care Cluster					Plant room (HVAC / heat)			
Reception + Waiting Room	1	40	40		Electrical / IT Room	1	40	40
GP Consultation room	2	24	48		Water management Room	1	25	25
GP Treatment Room	2	20	20		Meter Room	1	20	20
Sterilisation / lab	1	18	18		Maintenance workshop	1	25	25
Physio treatment rooms	1	20	20		Subtotal			250
Rehabilitation / exercise room	1	40	40					
Staff / admin office	1	30	30					
Clean / soiled storage	3	10	30					
Toilets (public)	1	8	8					
Toilets (Staff)	1	8	8					
Subtotal			244					

Loose-Fit Program

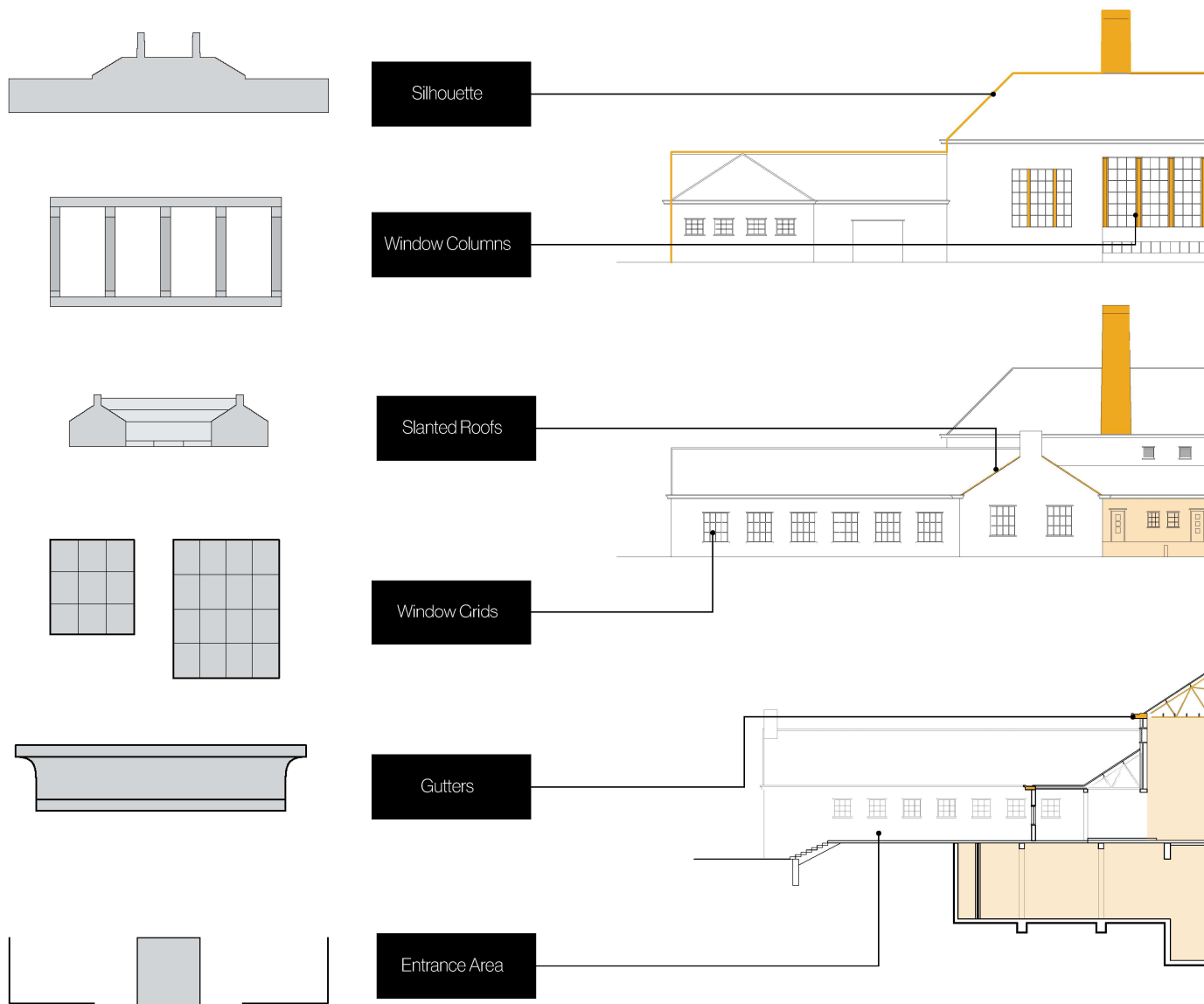
	amount	average area (m2)	gross area (m2)
Multi-Use Civic Room			
Main Room	1	200	160
Storage	1	25	25
AV / control	1	10	55
backstage / prep	1	15	30
toilets & cloak spill	1	30	40
Subtotal			280
Quiet Study			
Quiet reading / work room	1	55	55
Study booths	5	3	15
Small storage	1	10	10
Subtotal			80
Co-Working			
Open Cowork commons	11	220	220
workstations	15	6	90
Meeting rooms (small)	2	14	28
Meeting room (medium)	1	20	20
phone booths	4	2	8
pantry & print room	1	20	20
lockers & storage	1	12	12
toilets	1	24	24
focus room	1	8	8
internal circulation buffer	1	40	40
Subtotal			470

	amount	average area (m2)	gross area (m2)
Private Offices & Studio's			
Private Offices	10	20	200
Studio Rooms	6	22	132
Shared meeting Room	1	24	24
Shared Kitchenette	1	20	20
Toilets	1	24	24
Storage	1	20	20
Internal Corridors	1	160	160
Subtotal			580
Short-lease Service Units			
Service Units	8	35	280
shared toilet	1	20	20
back-of-house-storage	1	25	25
internal buffer	1	35	35
Subtotal			360

3.2 Identity

The Carriers That Speak

The intrinsic value is unevenly distributed across the building itself. The boiler house and chimneys are underscored by Arcadis (L02) as carriers of high cultural-historical value¹, while Crimson (L03) adds the west-facing facade as a crucially recognisable architectural element¹⁰. These elements should be benchmarked as primary identity anchors that dictate how the building can preserve public legibility after transformation.



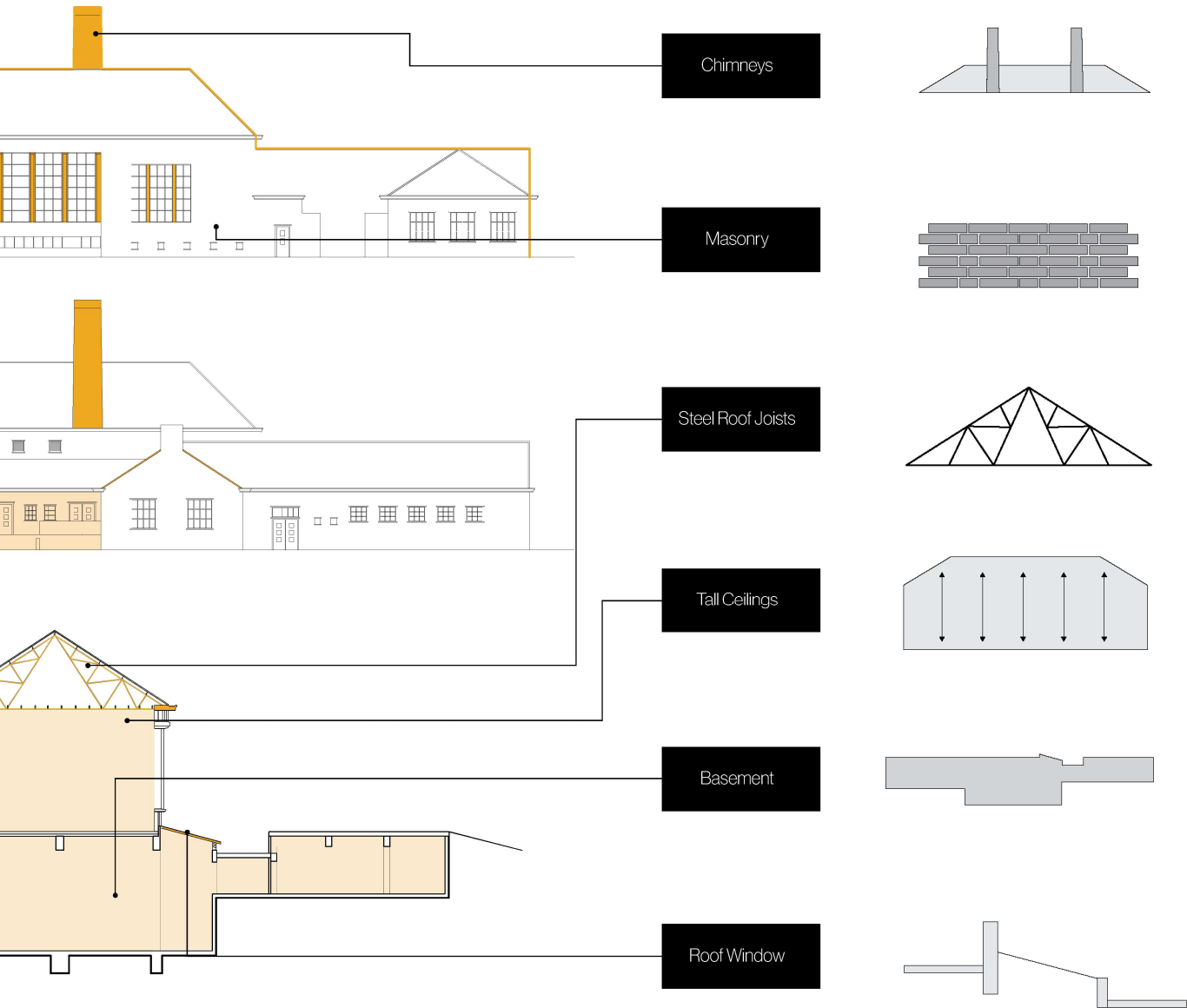
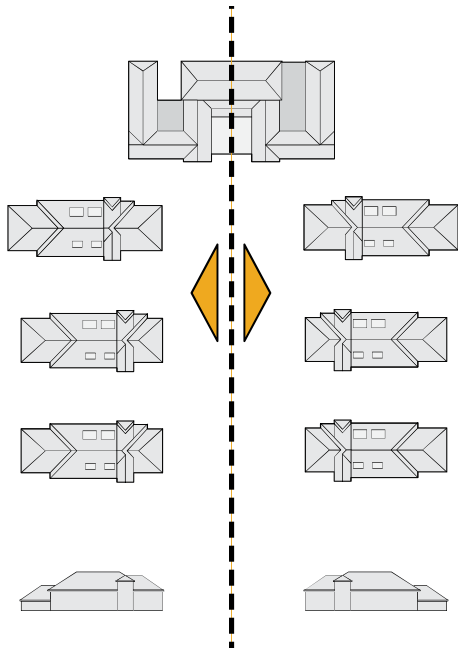
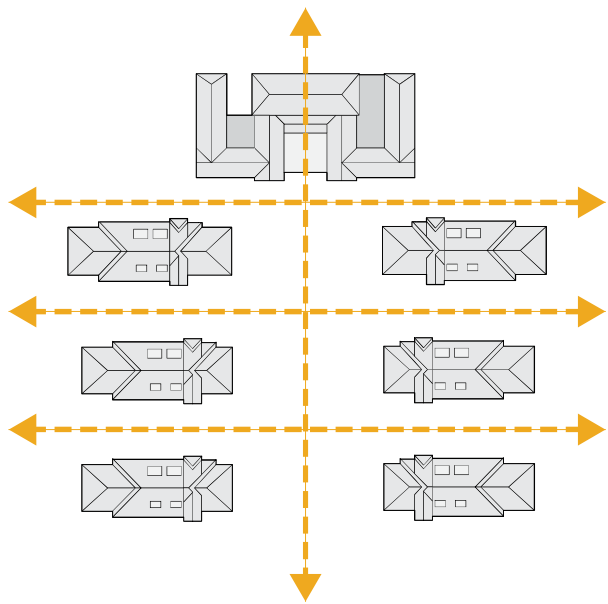


Figure 39 - One of building 13's chimneys (author's work)
 Figure 310 - Building 13's cellar (author's work)

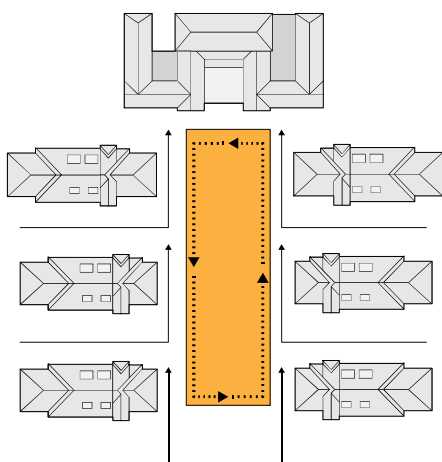
Both sources claim that the true value of the building lies within the ensemble role. The building's position at the head of the appèlplaats, the towering chimneys and its silhouette establish authority within the barracks' composition. Identity cannot be diminished to conservation alone since the building's role as the head of the ensemble is a value carrier within itself.



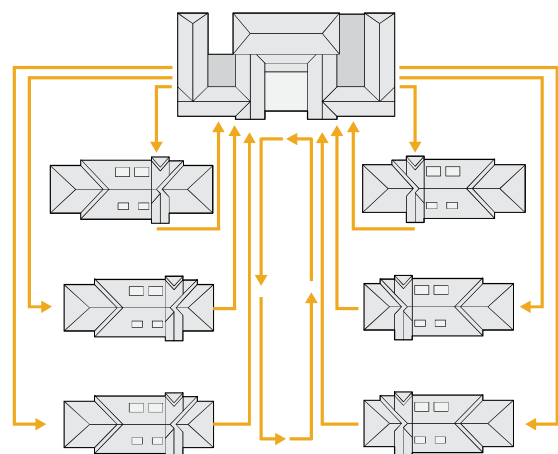
Symmetry



Axial Position



Head of appèlplaats



Centralized Route

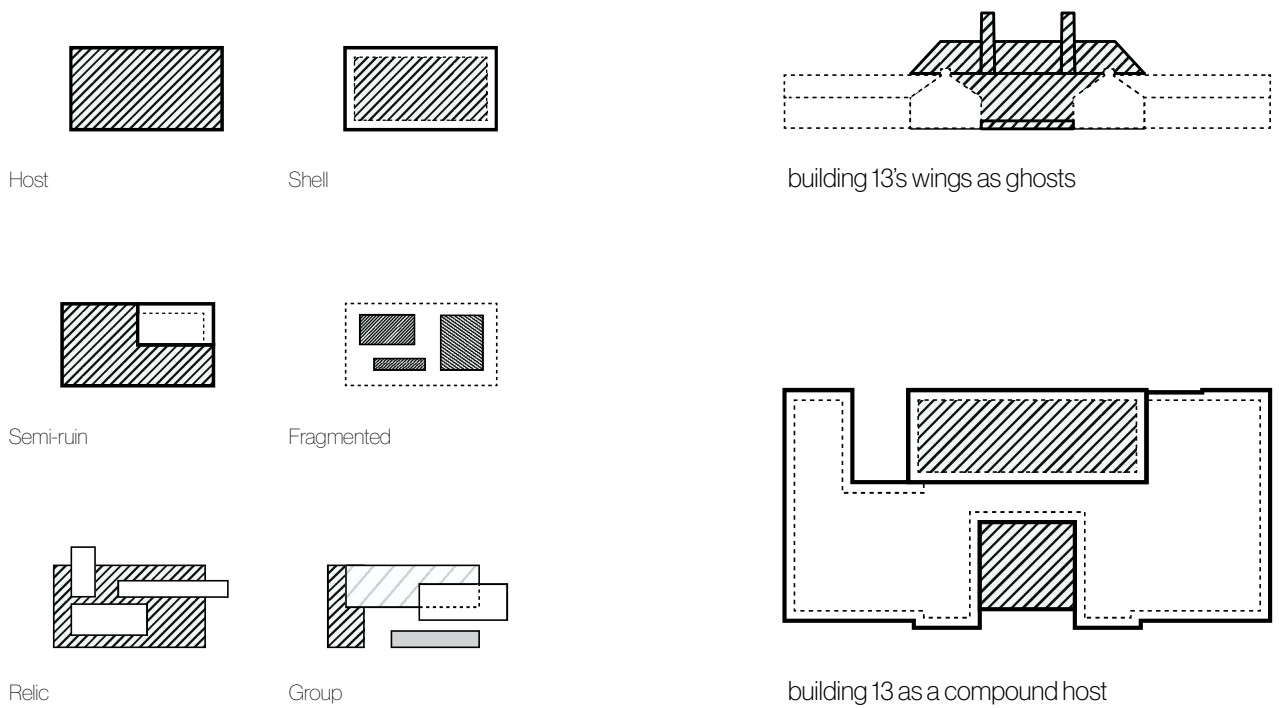
Similarly, Building 13 comes with an architectural contradiction. The west-facing facade, which faces away from the ensemble, acts much more like a front than the east facade facing the appelplaats does (L03). Consequently a conflict between the monumental west-facing facade and the building's civic obligation towards the ensemble arises. As the seal of the appelplaats, Building 13 cannot treat the lodging buildings and the appelplaats as a back door.

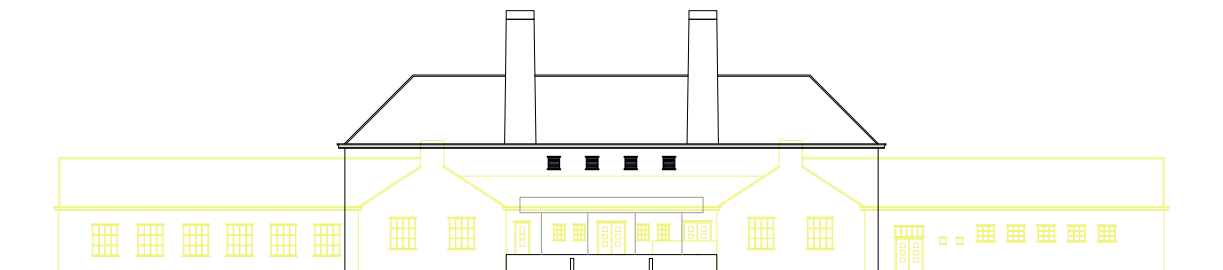
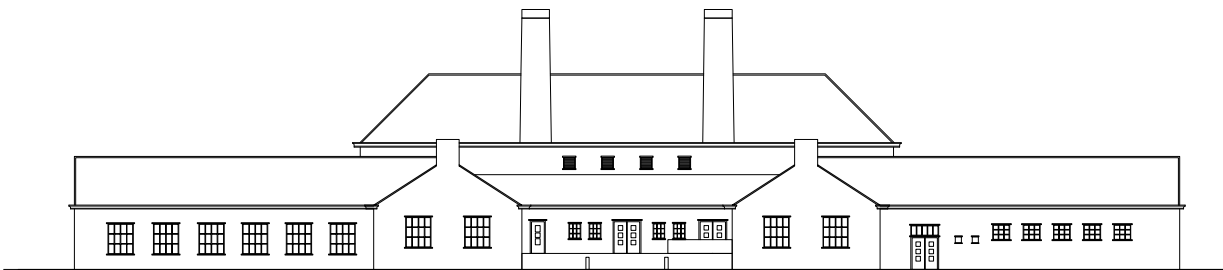


Figure 312 - top: Building 13's east facade (author's work)

Figure 313 - bottom: Building 13's west facade (author's work)

To clarify hierarchy, selective transformation is required. Crimson (L03) imagines that a transformation with new-built extensions is possible, only if the tangible elements that protect legibility are retained ¹⁰. In "Adaptive Reuse: Extending the Lives of Buildings" (L05), Liliane Wong establishes buildings as host structures and distinguishes between shell, semi-ruin, fragmented, relic, and group host conditions ¹¹. Building 13 is not a singular host condition, but should rather be interpreted as a compound of these host conditions. The demolished wings remain active as ghosts through expectations of symmetry, thresholds, shape and centrality without resorting to mimicry (L05).





Black: Retained fabric
Yellow: Removed fabric

Figure 3.15 - top: Building 13 after demolition of the later extensions (by A. Brinkerink)
Figure 3.16 - bottom: Building 13's front facade before/after demolition (Author's work)

3.3 Thresholds

Staging Openness

Historically, the site was inaccessible to the public causing its value to be visible but poorly experienced (L02) ¹. In Building 13's case, access becomes a way to activate heritage, starting not with the building's entrance, but with its attitude towards the appèlplaats.

Crimson (L03) identifies a distinct contradiction between the building's expression and its location within the ensemble ¹⁰. The east facade seals the appèlplaats, yet it behaves more like a logistic back facade than a civic front. Despite its axial position at the end of the marching square, the building does not yet receive the public realm that it faces. The east facade therefore becomes a threshold dilemma before it can be treated as a facade dilemma.

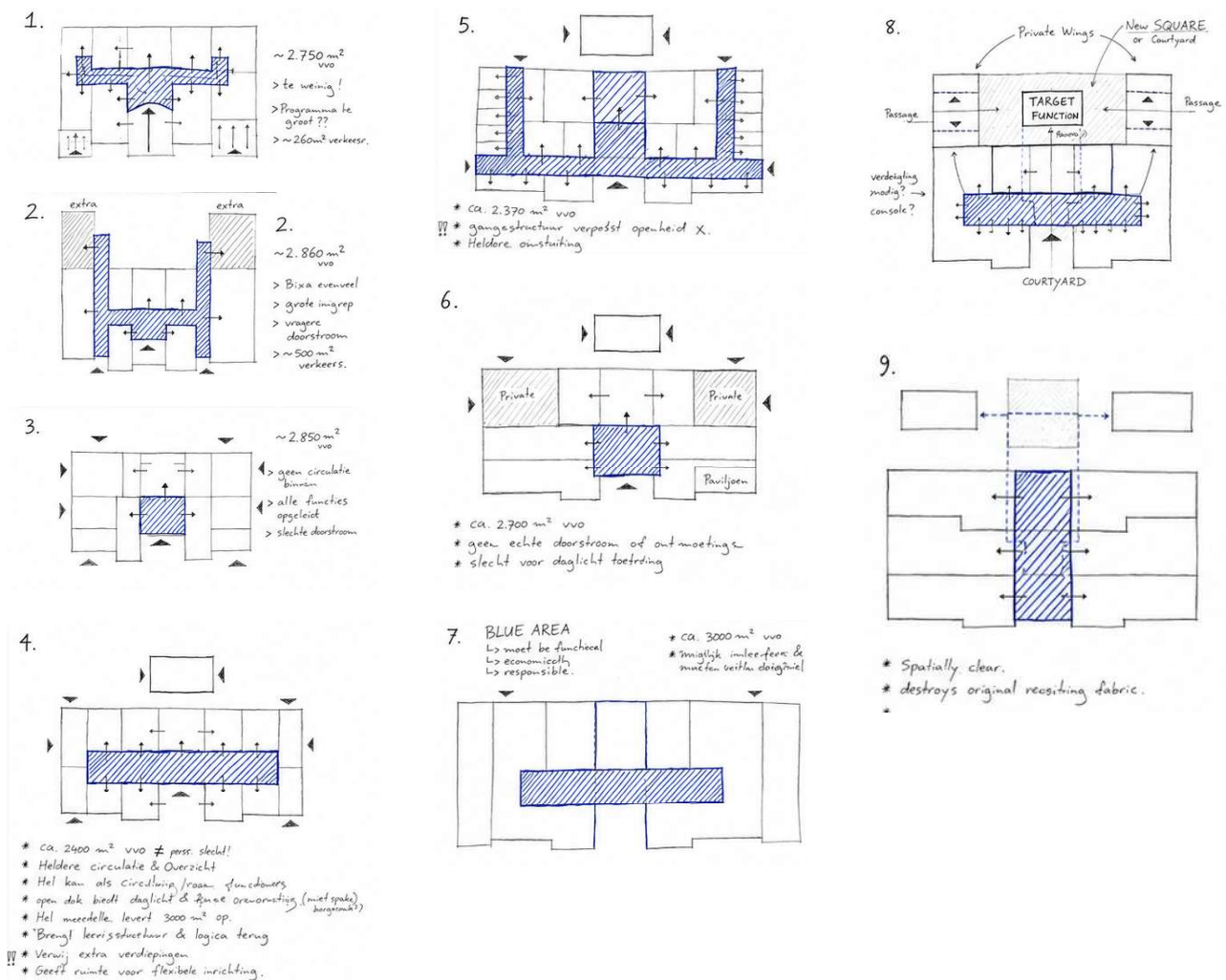


Figure 3.17 - Entrance sequence ideation for Building 13 (author's work)

A civic front does not insist on a complete dissolution of the facade since total transparency would weaken the inherited order that characterizes the ensemble. Instead of maximum openness, the right aim would be legible openness. Freud's examination of civilization as a system of boundaries, routines and protections ¹², can be architecturally rewritten into a demand for calibrated publicness (L01). The built environment does not only host behaviour and routine, but it also scripts it.

Commons, care, work, study and private areas each hold different demands for intensity. Public functions should face the public realm directly, whereas more quiet and sensitive functions require a buffer zone before entering or complete retreat. Circulation must instill overlap and recognition without constant exposure being forced on users.

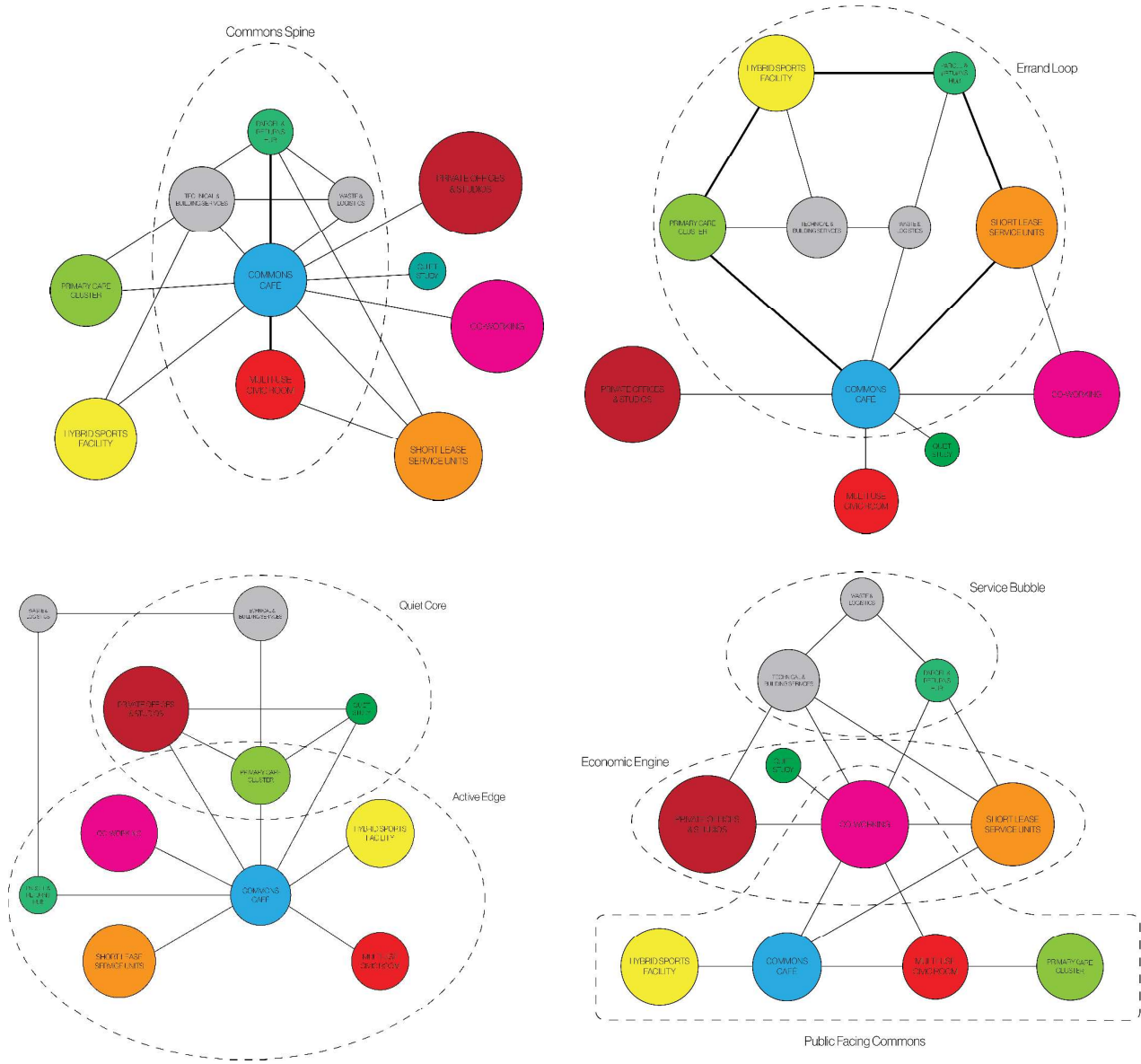


Figure 3:18 - Bubble diagrams for the program (author's work)

3.4 Longevity

The Long-Life Host

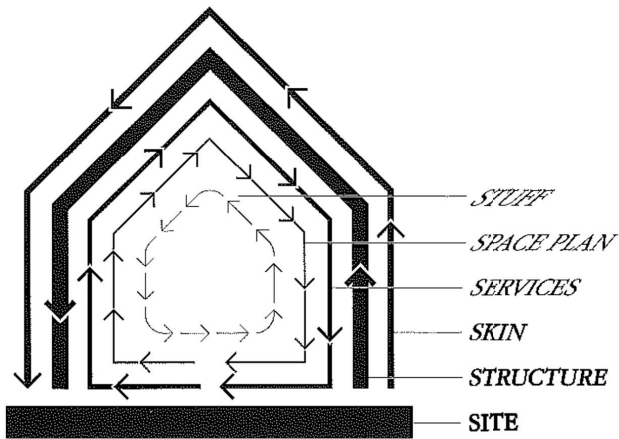
Longevity starts with the elements of the building that already persisted. Het Inspectiehuis (L04) describes not a total collapse of the building, but an uneven degree of depletion¹³. Lighter and shorter-life elements including installations, coatings, drainage details and steel window frames, signal a failing material state, while the surviving casco, cellar and chimneys show little to no signs of degradation. Building 13 should therefore not be read as a ruin in its totality, but rather as a hierarchy of lifespans.



The preserved structure can be interpreted as infrastructural memory. The monolithic reinforced concrete cellar, the chimneys and the retained 1951 masonry core carry continuity exactly because they have persisted over time (L03) ¹⁰. These elements do not simply survive as fabric, but they continue to signal the building's service origins.



Figure 3.20 - Collection Building 13's long-life carriers (author's work)



SHEARING LAYERS OF CHANGE. Because of the different rates of change of its components, a building is always tearing itself apart.



Stuff



Space Plan



Services



Structure



Skin



Site

Figure 3.21 - top: Shearing Layers of a Building (source: medium)

Figure 3.22 - bottom: Brand's shearing layers in Building 13 (author's work)

A long-life building does not make every element permanent. Buildings should be treated as time, Brand argues, because different layers of the building change at different rates ¹⁴. In his 1994 book "How buildings learn: What happens after they're built", Brand refers to Frank Duffy's shearing layers: A set of architectural layers that change at different rates, from the almost permanent site and structure to faster changing services, space plan and stuff. This distinction is paramount for adaptive reuse. When all elements are designed as permanent, future adaptation becomes more troublesome, whereas when all elements are treated as disposable, identity becomes easily dissolved. Therefore, longevity relies on a clear distinction between permanence and adaptability in both the building's fabric as in its program.

To further sharpen this approach, Wong's concept of absolute value can be utilized (L05). Reuse should be judged through the combined effect of what is preserved, removed and added ¹¹. This insists that interventions are justified only if the totality of the building becomes more clear, more useful and more adaptable.

3.5 Operational Synthesis

The Brief written by the Building

This is where the operational statements get introduced. The four readings of the project now compact into an operational register with their relevant themes.

The Program reading underscored that Building 13 requires functions that repair public relevance. The Identity reading revealed a hierarchy of carriers, deficiencies and contradictions. The Thresholds reading illustrated that openness must be staged instead of overdrawn. The Longevity reading provided that sustainability can be approached through service life and layered change. Combined, these readings produce the operational register.

L01-OS1	Thresholds Program	The civic edge should be provided with an intensity buffer, while calmer refuges should be placed deeper in the building, so intensity has a counterweight architecturally.
L01-OS2	Circulation	Circulation is to be designed as a social algorithm, by creating curated friction points for encounters and withdrawal through bypass routes, so mixing is not coercive, but optional instead.
L01-OS3	Thresholds	The building's openness should be a gradient. A public, shared, semi-private, private sequence should be designed that scripts social behaviour through thresholds instead of rules.
L01-OS4	Circulation	Incompatible flows should be separated through a clear entrance hierarchy to prevent openness from becoming adverse.

L02-OS1	Program Identity	Massing, entrances and the civic program must underline building 13's ensemble role by treating the former kitchen building as the 'head' of the barracks terrain.
L02-OS2	Identity	Instill primary historical value carriers as non-negotiable heritage fabric and make at least one of these carriers publicly legible.
L02-OS3	Thresholds	Convert heritage that is visible but not experienced into a sequence of thresholds for access to become part of the design proposition.
L02-OS4	Longevity	Retain primary spatial value carriers (e.g. chimneys, boiler-house and ensemble logic) and design interiors to be reconfigurable to keep the building relevant across redevelopment phases.
L02-OS5	Identity	Demolish the less authentic, strongly altered and technically depleted fabric to safeguard the primary value carriers and design the new massing and sections to make the retained layers readable.

L03-OS1	Thresholds Identity	Rework the appellaats-facing facade as a public front, whilst retaining building 13's role as the ensemble's seal.
L03-OS2	Identity	Retain the west-facing facade as a crucial element even if contiguous volumes are altered.
L03-OS3	Identity	Use the later extensions as a design bandwidth by translating them into new volumes that revitalizes legibility and improves civic discourse.
L03-OS4	Identity	New massing must be inspired by Boost logic, but must have a contemporary translation.
L03-OS5	Program	Public functions must be located at the plinth to condone building 13's status as a civic anchor within the ensemble.
L03-OS6	Longevity	The cellar complex should be retained as a legible layer of infrastructure instead of leftover space for installations.
<hr/>		
L04-OS1	Longevity	Take the surviving casco as a primary design anchor and attach new additions without competing with it.
L04-OS2	Longevity	Clearly distinguish between 'carriers' and 'infill' through design by making permanent elements heavy, legible and enduring, while the adaptable must be lighter, replaceable and convenient to modify.
L04-OS3	Longevity	Treat remaining metal window systems as technically compromised.
L04-OS4	Longevity	Design large scale interventions with a clear lifespan hierarchy in mind.
<hr/>		
L05-OS1	Identity	Read building 13 as a compound host, and respond with specific architectural interventions for the different host conditions.
L05-OS2	Identity	The demolished wings must be treated as ghosts, advising massing, proportion and spatial hierarchy without becoming a mimicked reconstruction.
L05-OS3	Longevity	New structural systems must align with the host's order and bay logic, or remain clearly legible as a secondary system.
L05-OS4	Identity	Interventions must be distinguishable from the old while direct imitation must be avoided.
L05-OS5	Overall	All interventions must increase the project's absolute value.

The operational register becomes useful when the statements are arranged into a hierarchy of non-negotiables, freedoms and tensions.

Some conditions serve as non-negotiables since they return across multiple readings of the project.

NON-NEGOTIABLES

- Building 13 must re-accommodate a civic relationship with the appèlplaats;
- The building's plinth must host public or semi-public use;
- The cellar, chimneys, west-facing facade and surviving casco must remain legible as primary value carriers;
- The demolished wings must guide the new massing, but must not become a complete reconstruction.

Other operational statements indicate a field of design freedom instead of fixed answers. This leaves headspace for massing studies, rhythm, program distribution and material expression.

The exact distribution of the program;

VARIABLES

- The degree of openness within the east facade bordering the appèlplaats;
- Entrance expression;
- The new wing's rhythm;
- The degree to which the cellar is exposed;
- Material expression of the new additions;
- The split between fixed and loose-fit programs.

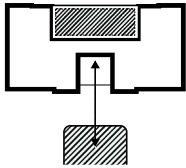
The most pivotal design matter appears where different valid directions lock horns. These tensions are not weaknesses but indicate points where the design must become precise.

CONFLICTS

- Openness should not erase the inherited sense of discipline of the ensemble;
- Preservation must not prevent the building from becoming publicly accessible;
- The ghost of the demolished wings must return without becoming a literal imitation;
- Heavy long-life carriers must not obstruct the lighter adaptable infill.

The four readings and operational statements now condense into a design brief. This brief is not a list of wishes, but the architectural consequence of the research engine.

Through this brief, the research question can be answered. Not by claiming one final design solution, but by demonstrating how the evidence has been translated into a traceable brief for architectural decisionmaking.



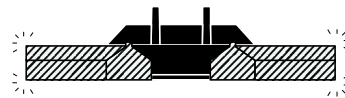
Return the Building to the Square: The appèlplaats facing facade must become a civic front rather than an enduring edge.



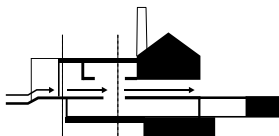
Activate the plinth through daily use: Public and Semi-public functions should give the building repeated relevance over a full weekday.



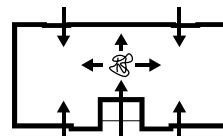
Reveal the primary carriers: The cellar, west-facing facade, preserved casco and ensemble role must remain legible in the new architectural expression.



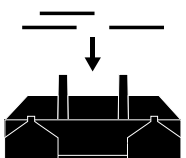
Reveal the lost wings while avoiding mimicry: The demolished wings should inform massing, proportion and hierarchy without becoming a reconstruction.



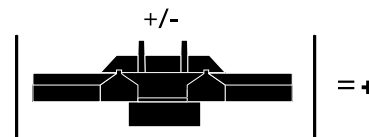
Stage publicness as a sequence: The building should transition from a public edge into shared interiors, semi-private programs and more quiet retreats.



Allow encounter without coercion: routes should allow possible overlap between routes while preserving bypass separation and withdrawal.



Separate permanent carriers from adaptive infill: Heavy and long-life elements must carry identity, while simultaneously lighter layers remain replaceable and adjustable.



Increase the building's absolute value: New-built parts must improve civic legibility, adaptability and coherence.

Figure 323 - Building 13s Design Brief (authors work)

CHAPTER IV

C O N C L U S I O N

WHAT REFUSES TO END

This research commenced from a contradiction where Building 13 was part of a closed-off former military ensemble whose value is found in order, discipline and legibility while its future is dependent on becoming accessible, public and fruitful within a new civic neighbourhood. The question was not whether the building should change, but rather how change could manifest without eliminating the spatial logic that gives the building its meaning.

The operational synthesis in chapter 3 provided an answer to this problem, not as a final design solution, but through a traceable brief for architectural decision-making. Existing evidence - consisting of professional value assessments, cultural-historic reports, technical reports and other relevant sources - was translated into conditions for design.

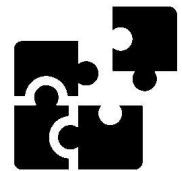
4.1 Answer to the Research Question

To answer the main research question “How can Building 13 of the Kolonel Palmkazerne be repurposed as a contemporary civic anchor for the Kazernekwartier while continuing the legibility of the barracks’ inherited order and discipline?”, the subquestions are answered first.

Program

What program mixture can allow Building 13 to fulfil a durable civic role within the new context of the Kazernekwartier?

The research indicates that the program should be chosen as a response to the building’s specific deficits. The former kitchen building is visible and culturally valuable, but is weak in its public experience and use value. The answer to this subquestion becomes that the new program must repair use value. Access should make the building experienced instead of merely visible, public functions should activate the plinth and interiors should remain reconfigurable across future redevelopments. Thus, the program mixture is not a fixed list of rooms, but a layered civic infrastructure. Where the kitchen building once served the regiment, it can now serve the neighbourhood.



Identity

Which value carriers should be preserved, transformed or reintroduced to continue Building 13’s identity?

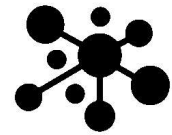
In chapter 3.2 the argument was made that identity is not evenly distributed across the building. The cellar, chimneys, west-facing facade, surviving casco, the ghosts of the demolished wings and most importantly its ensemble role are Building 13’s primary identity carriers. These primary carriers must remain legible while depleted or absent layers can be transformed or reinterpreted. The demolished wings should guide massing and proportion without imitation. Building 13’s identity can be continued through a legible transformation that preserves its primary identity carriers while allowing more bold interventions that underscore its role as the head of the ensemble.



Thresholds

How can thresholds, circulation routes and entrances transform the closed military order into a legible public-to-private sequence?

For Building 13 and its contiguous surroundings, access becomes a heritage strategy. Since the site was closed for the majority of its existence, making Building 13 more accessible becomes a way of making cultural value publicly visible. This publicness must be staged. The building should sequence gradients of public, semi-public, semi-private and private spaces, while simultaneously circulation must allow for encounter without coercion. The appèlplaats-facing facade must convert into a civic front, strengthening the building's role as the head of the ensemble. Thus, the closed military order can be pivoted toward orientation, access and public-to-private sequence.



Longevity

How can longevity strategies guide the architectural interventions in order for Building 13 to remain useful beyond its first program?

The research reads Building 13 as a hierarchy of lifespans. The surviving casco becomes a primary design anchor while long-life carriers and infill layers are clearly distinguished. More permanent layers should be heavy and enduring while adaptable layers must be lighter, replaceable and smoothly modifiable. Sustainability therefore is approached from the perspective of service life, where additions are justified when they increase the building's coherence, usefulness and adaptability over time.



The four readings are intrinsically connected. They emerged from the Thematic Analysis method used in the Research Engine, where recurring patterns in the evidence were grouped into program, identity, thresholds and longevity. The Program reading provides Building 13 with public relevance, while the identity reading prevents it from becoming a generic public facility. The Identity reading established primary carriers such as the cellar, chimneys, west-facing facade, surviving casco, ensemble role and lost wings. These carriers can only become meaningfully experienced if they are made accessible through staged thresholds and daily use. The Longevity reading ties all the readings together by distinguishing what must endure from what is allowed to change. Durable carriers contribute to continuity, while simultaneously, adaptable infill allows the building to remain useful over time.

Building 13 can be repurposed as a contemporary civic anchor of the Kazernekwartier when its inherited order is translated instead of erased. This suggests that the building should not be treated as an empty shell or ruin that must be filled with an aimless typology, but should instead be treated as a layered host whose position, fabric, absences and surroundings define the conditions for its reuse.

This translation depends on four connected operations. The program must re-establish civic relevance. This can be achieved by shifting the building's former provisioning role within the regiment, into a providing role for the neighbourhood. The primary identity carriers - the cellar, chimneys, west-facing facade, surviving casco, ensemble role and lost wings - must remain legible as anchors of continuity. Thresholds must transform controlled access into staged openness which provides public use, encounter and retreat without losing spatial hierarchy. Longevity strategies must distinguish between long-life carriers and adaptable infill in order for the building to change without losing its identity.

The final answer therefore is not one single architectural design, but a traceable brief. Building 13 becomes civic only when its inherited order is morphed into everyday public use while its primary value carriers remain or become legible and its layers continue to be adaptable for future changes. Through the proposed design brief, the barracks' discipline can be rewritten as a continuous framework for civic life within the Kazernekwartier.



Figure 4.1 - top: Building 13 redesign close up (base image by BPD; author's model inserted with help of AI)

Figure 4.2 - bottom: Building 13 redesign far away (base image by BPD; author's model inserted with help of AI)

4.2 Academic contribution

Adaptive reuse strongly depends on interpretation. Decisionmaking about preservation, demolition, addition or transformation are frequently made through design judgement, while the reasoning behind those decisions can remain implicit. This project attempts to make that reasoning explicit through the repository, research engine and operational statements. The method allows source material to be read, interpreted and translated into a design brief before the architectural proposal is made. The academic contribution of this project therefore lies primarily in the method. The report demonstrates a traceable way of translating heritage evidence into operational conditions.

A second contribution is the attitude towards the program. Instead of selecting a building typology first and forcing it into the existing structure, the research allowed the location to define what program the building should host. For a civic, public building with a diverse user base, this is a significant responsibility. Program for adaptive reuse projects should not only emerge from personal preference, image or ambition, but from its users, rhythms, gaps and histories already present in the area.

4.3 Limits of the Method

The operational statements are grounded in evidence, but they persist as largely interpretive. Their value lies not with neutrality, but with traceability. Another person could read the sources differently and produce a dissimilar brief.

This report does not claim to replace a full heritage value assessment. Existing professional reports are used as evidentiary foundation, but this research translated their findings into design conditions, as opposed to a new assessment. This applies to technical and sustainable matters as well. Longevity is used as a design framework, but the report does not include more conventional sustainability strategies, which of course must be considered as with any project in the built environment.

Lastly, the method risks flattening complexity into statements. The operational statements are favorable since they clarify design decisions, however they can also make unresolved conflicts appear more stable than they are. For that reason the register is not presented as a checklist set in stone. It is followed by non-negotiables, variables and tensions, creating room for discernment even after the brief. Through design the brief can be tested on where it still demands additional architectural judgement.

4.4 Reflection

This project altered my understanding of adaptive reuse from an act of expressive translation into an act of listening. At the start of the project it was tempting to choose a fitting typology or a convincing architectural direction. Instead, I decided to let the location dictate the direction, and let the project evolve into what the research instructed it to.

The question for me shifted from “what do I want this building to be?” into “What does this place need and what is the responsible thing to do within this building’s context?”. To me that’s architectural responsibility.

This report concludes with a brief, not with a finished building. A redesign for Building 13, however, was part of the total assignment. This redesign should be viewed as one architectural answer to the operational synthesis and the design brief in this report. The report contains the argument that makes the design proposal accountable.

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DATA MANAGEMENT CHECKLIST

Instruction

This checklist is relevant for all graduation projects of the Master AUBS. The form is intended to highlight common aspects of graduation projects that require particular attention with regard to planning the research and data management. Relevant information and supplementary sources regarding each question are provided below each question.

With this checklist, the faculty wants to avoid that students unexpectedly find themselves in complex and stressful situations, in which ethical or privacy matters and/or other laws and regulations become an issue. In projects involving humans, certain types of data processing increase the risks to the human participants: planning such projects requires additional evaluations and advice from university staff before ethical approval can be received and the project can begin. In the case of a graduation project, obtaining additional advice or permits may delay the project with an extra education period or semester. To avoid this, it is recommended that students set up a graduation project with a low level of risk. Therefore, all students have to check their risk, by completing this checklist before their A1.

The first section of the checklist (A) should be completed by all students, together with their supervisor, during the planning of the graduation project, before the A1. It does not need to be submitted to anyone for review or approval. Please consider questions 1 to 3 carefully in relation to the intended graduation project, and answer with 'yes' or 'no'.

The second section of the checklist (B) should only be completed if the graduation project involves working with data from human participants. In that case, the student and their supervisor must apply for and receive ethical approval from the [Human Research Ethics Committee](#) (HREC) before the project can begin (see the paragraph 'Explanation and follow-up' after the questions). The student can submit the application to the HREC, but the supervisor is responsible for making sure that the project is compliant with relevant privacy regulations and ethical policies.

Section A. General considerations	yes	no
<p>1. Is the graduation project conducted as part of an internship (at a company), or as part of a research project at TU Delft?</p> <p>If a student's graduation project is conducted at a company or as part of a research project at the university, questions of data ownership and intellectual property rights need to be addressed in a written graduation or internship agreement before the project begins. Students and their supervisor should consult the Intellectual Property Rights of Students webpage. Additional information can also be found in the Extended Personal Research Data Workflow.</p>		✓
<p>2. Does the project involve conducting (part of) the research outside the Netherlands?</p> <p>Students who intend to travel abroad (even to other EU countries) for study, exchange, research, internship, or graduation project purposes need to follow the Travel Safety Protocol. This includes attending a mandatory Travel Safety Training Session: see the Disclaimer.</p>		✓
<p>3. Will the research involve processing data from humans, such as running a survey, conducting interviews or workshops, collecting data through social media or internet forums, or re-using existing datasets about humans provided by a third party? (If 'yes', see follow-up questions 4 to 13 in Checklist B.)</p> <p>Students who work with data from human participants must complete the next section and apply for and receive ethical approval from the Human Research Ethics Committee (HREC) before conducting the research.</p>		✓

Section B. Extended risk factors (only if question 3 has been answered with 'yes'.)	yes	no
<p>4. Will the project involve participants who may be considered vulnerable, such as the elderly, refugees or asylum seekers, ethnic minorities, patients, or people with disabilities?</p> <p>Participants who may suffer very adverse consequences (for instance, due to discrimination) if their personal data became publicly available can be considered vulnerable.</p>		✓
<p>5. Will the project involve participants who cannot themselves give informed consent for taking part in the project, but for whom consent must be obtained from a legal guardian?</p> <p>Participants who cannot give informed consent can include, for instance, children or participants with intellectual disabilities, mental disorders, or dementia. Such participants are also considered vulnerable in the context of the General Data Protection Regulation (GDPR).</p>		✓
<p>6. Will the project involve processing any of the special categories of personal data below?</p> <ul style="list-style-type: none"> - Race - Ethnicity - Criminal offence data - Political opinion - Union membership - Religious or philosophical beliefs - Sex life and/or sexual orientation - Health data (including measurements such as heart rate) - Biometric or genetic data (including fingerprints, iris scanning, facial recognition) <p>The General Data Protection Regulation (GDPR) defines a stricter rules for processing special categories of personal data. If it is necessary to process these data in a project, it is it is important to provide additional safeguards.</p>		✓
<p>7. Will the project involve processing personal data that could be considered sensitive, such as the ones listed below?</p> <ul style="list-style-type: none"> - Information about a person's income, debts, or other payments - Information about a person's (un-)employment status - Information about a person's performance at school or work - Information about relationship problems or (gambling) addiction - Information about poverty, domestic violence, or youth welfare/social work involvement <p>Some types of personal data are considered sensitive, because they can have a high impact on the privacy of the data subject if other persons gain access to these data. Sensitive personal data should only be processed if necessary: in such cases, additional safeguards need to be put in place.</p>		✓
<p>8. Will the project involve processing video-recordings, or photographs of participants?</p> <p>TU Delft considers photographic and video-materials of research participants to be sensitive personal data. If such data need to be processed, additional safeguards must be put in place.</p>		✓

Section B. Extended risk factors (only if question 3 has been answered with 'yes'.)	yes	no
<p>9. Will the project involve sharing or transferring personal data between multiple partners or collaborating organisations involved, such as between TU Delft and an internship company?</p> <p>According to privacy law, sharing personal data between organisations requires a privacy agreement to be in place: setting this up takes time, and requires support from additional university staff. Furthermore, personal data sharing can potentially expose research participants to different types of risks: these risks must be considered in the ethical application.</p>		✓
<p>10. Will the project involve deception, or covert observation of participants?</p> <p>In some types of research, obtaining informed consent for processing participants' personal data is not an option: for instance, if the research involves deception, or the research is covert (conducted without participants knowing about it). In such situations, the steps to mitigate risks to participants are important, and an alternative legal basis for processing the participant's data needs to be established with the help of additional support staff.</p>		✓
<p>11. Will the project involve working with social media data?</p> <p>Social media data are personal data, but since it is usually not possible to ask for informed consent for processing social media data, another legal basis for processing the participant's data needs to be established. Processing of social media data also involves legal considerations related to terms of use of data from third-party platforms: therefore, research with social media data requires expert support on privacy, ethics, and legal matters.</p>		✓
<p>12. Will the project involve using learning algorithms or other AI to analyse, combine, or otherwise process data from participants?</p> <p>The use of AI in research involves many considerations in terms of data protection, ethics, security, and intellectual property: for more information, see TU Delft's Instructions for use of Generative AI.</p>		✓
<p>13. Will the project involve participants who are based in a country or countries outside of the EU?</p> <p>Students affiliated with TU Delft must comply with Dutch and EU regulations of personal data processing (GDPR). Furthermore, the student and their supervisor must make sure that the research complies with local (privacy) legislations of any foreign destinations. Additional support from an external (local) expert may be required.</p>		✓

Explanation and follow-up

If you have answered 'no' to all questions 4 to 13, your project is likely to be considered low or minimal-risk: see the paragraph 'Projects with minimal or low-risk' on the next page.

If you have answered 'yes' to one or more of the questions 4 to 13, your research likely involves extended or high risks to participants, according to the [General Data Protection Regulation](#) (GDPR) and TU Delft's privacy and ethical policies: for information regarding such projects, see the paragraph 'Projects with extended or high-risk' on the next pages.

01 - Report

02 - Repository

03 - Design Booklet

Het Appèl

From Regiment to Residence

Joram Overvelde

5022746

AR4AH120 Adaptive Reuse of Heritage (2025/26 Q2)