

MASTER

Heritage impact assessment of H-schools in Amsterdam Slotermeer school as case study

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HERITAGE IMPACT ASSESSMENT OF H-SCHOOLS IN AMSTERDAM

SLOTERMEER SCHOOL AS CASE STUDY



Peyvand Yavari | August 2015
Master of Architecture graduation report

HERITAGE IMPACT ASSESSMENT OF H-SCHOOLS IN AMSTERDAM

SLOTERMEER SCHOOL AS CASE STUDY

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Eindhoven, August 2015

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ABSTRACT:

This report presents the results of a research on Amsterdam H-schools in New-West. H-schools are amongst the buildings with high cultural value and three of them are municipal monuments. The research has an objective to explore the cultural significance of this type of schools by text analysis of the inscription texts of the three monumental H-schools and further, assess the impact of a recent intervention on the cultural significance of Sloterveer school by implementing the suggested method of ICOMOS (ICOMOS, 2011).

From this research it is concluded that, urban design of the area and attributes regarding the urban context, like the role of the school in the urban context, has the most mentioned values in the inscription texts. Furthermore, assessing the impact of an intervention that has recently occurred in Sloterveer school showed that approximately 17% of all the attributes in Sloterveer school altered after building a new exterior addition and most of the changes happened on the attributes related with urban design of the school. This intervention has led to put a new exterior addition next to the old building and the analysis revealed that windows and generally transparent surfaces are the most important part of the building that has changed, because it has an effect on several values.

Therefore, it is recommended that heritage management parties provide a clear overview of the attributes of the cultural value in H-schools. Therefore, architects can use this overview in order to understand “what” needs to be preserved and “where” the most valuable attributes of the building is located. This overview can also help the parties in charge of heritage preservation in assessing the impact of any change on the cultural significance of the H-schools.

1 INTRODUCTION

During the WWII in the Netherlands, approximately 731 school buildings slightly damaged, while 994 severely damaged and 273 completely destroyed (Rijksdienst voor de Monumentenzorg, 2005). The population of the country heavily increased from 8.8 million in 1940 to 12.9 million in 1970 (Blom, Jansen, & Heide, 2004). Therefore, after the war the demand for schools increased sharply, partly because of the soaring birth rate and also the amount of schools that were destroyed during the war. So, there was a huge construction of schools due to the number of damaged and destroyed schools during the war and also annual replacement of obsolete schools after the war (Rijksdienst voor de Monumentenzorg, 2005). Importance of school buildings and intervention is getting more attention during the recent years; in the document that is issued by government in 2013 this statement is mentioned regarding the school building:

“Quality and functionality of school buildings play an important part in the pupils school achievements. Many schools have been in use for a long time, and are no longer equipped to meet the standards of today. The solution is not always a new build at a new location. School buildings and multifunctional educational centres are able to create added value for their users and for the local village, neighborhood or city. The design does not concern itself primarily with the built environment, but also with the public space and the green character of playgrounds. In the coming years design should support a better integration of school builds (for primary, secondary, vocational and university education) with an emphasis on re-development of existing buildings.” (Rijksoverheid, 2012)

H-schools (buildings with an H-shape floor plan consisting of parallel wings for teaching on the one hand, and general use on the other) in Amsterdam, in the district of New-West, are amongst the buildings with high cultural value. Seven out of eight H-schools in this neighborhood are considered to be Order 1 in the valuation map of General Expansion Plan of Amsterdam (Algemene Uitbreidingsplan - AUP) and the other one is considered to be Order 2, more importantly, three H-schools are municipal monuments.

Per year there are around 1000 primary schools that, in some shape or form, have to re-build or renovate their properties. In 10 to 20 percent of cases these would be new buildings; in all other cases it would be small or large scale interventions. In fact, many schools from the 1960s, 1970s and 1980s are in need of intervention – often, in relation to new and other (education related) functionality. (Van der Pol, Mol & Broekhuizen, 2012).

H-schools in New-West are built between 1952 and 1963. Five out of eight are still in a good condition; while in the others, the “H” shape is nearly unrecognizable because they are densely rebuilt (Van Eesteren Museum, 2012). For instance, Sloterveer school is a municipal monument and it has been recently undergone an intervention that has led to put a new exterior addition adjacent to the old building. In fact, interventions could influence, negatively or positively, the cultural significance of the building. So far, there is not any assessment of the impact of this intervention on the cultural values of the building.

Unfortunately in post-war areas, generally it is not clear sufficiently which cultural historic values are worth preserving and how these areas can function after a transformation (Blom, 2013a). Therefore, an assessment of the cultural significance of H-schools in Amsterdam and the impact of interventions on the cultural significance seem vital in order to keep the balance between the demand for the new needs in schools and preserving valuable attributes.

This research aims to explore the cultural significance of the H-schools by analysing the three examples of this type of school in the neighborhood; Sloterveer school, OBS Multatuli and Herman de Monstraat 1 and further, assess the impact of a recent intervention on the cultural significance of Sloterveer school.

This report starts off with an introduction about the context and general characteristics of H-schools in the second chapter. Secondly, a clear overview of valuable attributes and “where” they are located in the three H-schools are presented and the dispersion of values amongst the categories of attributes are analysed in chapter three. Finally, the impact of a recent intervention in Sloterveer school on the school’s cultural values is assessed, by exploring the magnitude of impact on the attributes that are affected by this intervention in chapter four.

1.1 PROBLEM DESCRIPTION

Per year there are around 1000 primary schools that, in some shape or form, have to re-build or renovate their properties. In 10 to 20 percent of cases these would be new buildings; in all other cases it would be small or large scale interventions. In fact, many schools from the 1960s, 1970s and 1980s are in need of intervention – often, in relation to new and other (education related) functionality. (Van der Pol, Mol & Broekhuizen, 2012).

H-schools in New-West are built between 1952 and 1963. There are eight H-schools built in the west part of Amsterdam after the WWII. Five out of eight are still in a good condition; while in the others, the “H” shape is nearly unrecognizable because they are densely rebuilt (Van Eesteren Museum, 2012). For instance, Sloterveer school is a municipal monument and it has been recently undergone an intervention that has led to put a new exterior addition adjacent to the old building. In fact, these interventions could influence, negatively or positively, the cultural significance of the building.

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In fact, schools from the 1960s are mostly in need of renovation and often this demand rises from the functional change and need for more space (Van der Pol et al., 2012). As mentioned, Sloterveer school has been recently undergone an intervention that has led to put a new exterior addition adjacent to the old building. New exterior additions to historic buildings are considered amongst the major interventions that mostly occur when there is a change in the function or a need for more spaces (Yüceer & İpekoğlu, 2012).

As interventions, in this case new exterior additions, can affect the cultural significance of the historic buildings, it is vital to assess the impact of the intervention on the attributes of the historic building (Yüceer & İpekoğlu, 2012). For this, a clear overview of valuable attributes in H-schools in general is needed, so three H-schools in New-West have been chosen that are municipal monuments and cultural significance assessment has been done in them. As a second step, in order to define the magnitude of impact on the attributes of cultural values, heritage impact assessment (HIA) has been done in Sloterveer school, a school that is recently renovated.

1.2 STATE OF THE ART

There are several approaches for evaluation of the new exterior additions to the historic buildings. (Demel, 1996; Guzmán Torres, 2009; Yüceer, 2005). Demel(1996) and Guzmán Torres(2009) discussed and examined the exterior additions in terms of architectural criteria and the identity of the historic buildings. Besides the architectural criteria, Guzmán Torres(2009) conducted a survey amongst architect and preservationists to study the elements of a successful relationship between historic buildings and new additions. Yüceer(2005) developed an assessment method that consisted of architectural analyses as well as international charters and national guidelines. The architectural analysis include environmental relation, building-lot relations, mass relations and the façade

composition of the historic building both before and after the new addition. Besides the architectural analyses, Yüceer(2005) developed an evaluation criteria that is based on the comparison between the features of the existing building and the intervention: proportions, balance, composition of plan and façade, harmony, etc.

“The evaluation sub-stage is an individual act, building per building, even if the building in study takes part of a group of buildings with similar characteristics. Each building has its own particular significance, not only because of its particular characteristics; but also because of its different environment, which influences both building and its significance perception.” (Pereira Roders, 2006). Pereira Roders developed an assessment method for significance assessment that aims to determine the effective rating of the cultural values inherent in both building and environment.

Besides the methodologies that are specifically defined for new exterior additions, ICOMOS (ICOMOS. 2011) suggested a method for assessing the magnitude of impact in buildings and sites. However, review of the researches that has been done to assess the impact of new additions, it seems there is not yet a clear and unified method for this topic.

1.3 AIM AND OBJECTIVES

The main theme of the study is to find the attributes of cultural values in order to define “what” needs to be preserved and “where” the valuable attributes are located in three examples of H-schools in New-West (Slotermeer School, OBS Multatuli and Herman de Monstraat 1), in other words cultural significance assessment of H-schools. Second theme of the research is to explore the impact of the new exterior addition to Slotermeer school on the cultural significance of the building, in other words, heritage impact assessment of the new exterior addition in the mentioned school. This research contributes to the body of knowledge on the cultural significance assessment of H-schools in Amsterdam. The publication can also help parties involved with cultural heritage management and policy makers with providing an overview of the valuable attributes in H-schools of Amsterdam.

1.4 RESEARCH QUESTION

The main research question is:

“ What is the impact of new exterior additions on the cultural significance of H-schools in New-West?”

In order to answer this question, firstly, the cultural significance of the H-schools needs to be explored, so, three examples of this type of school in the New-West that are municipal monument are selected. These H-schools have inscription texts regarding their designation as municipal monuments. As a second step, the Slotermeer school that has recently undergone an intervention that led to build a new exterior addition is analysed in order to assess the impact of intervention on its cultural attributes.

1.5 THEORETICAL FRAMEWORK

In this research, interventions are defined as the range of actions, intentional and accidental, undertaken by the surrounding environment, against a specific building or group of buildings; which will consequently influence negative or positively, its effective significance and condition (Pereira Roders, 2006). Interventions, in relation to their scale can have an impact, negatively or positively on the built environment. Pereira Roders defined seven scales for interventions: deprivation, preservation, conservation, restoration, rehabilitation, reconstruction and demolition. Clearly, deprivation is the smallest scale and demolition is the biggest scale of intervention. This research focuses on the new exterior additions, which are considered in the fifth scale of intervention, rehabilitation.

In Pereira Roders’ doctoral research, rehabilitation is described as: combine activities from the earlier and later scales of intervention; remaining what possible, subtracting merely what exceeding and adding simply what required. So the main target of rehabilitation is the building subtractions, remaining, and additions and in this research the focus is on the additions. The use of the building after rehabilitation can be the same (reuse) or different (conversion). In the case of Sloterveer school, the main use is maintained so it goes under the category of reuse.

Table 1.1: 5th scale of interventions: rehabilitation, taken from Pereira Roders (Pereira Roders, 2006)

		Intervention	description	reality	use	aim	built	impact
REHABILITATION	passive	Reuse	Combine activities from earlier and later scales of interventions, remaining what possible, subtracting merely what exceeding and adding simply what required, etc.	Subtractions Remaining additions	new use same	improve	heritage	building
	active	Conversion			new use different			

1.6 METHODOLOGY:

In order to answer the research question, as the first step, three H-schools in New West that are municipal monuments are chosen. These schools are Sloterveer school, OBS Multatuli and Herman de Monstraat 1. The texts from Bureau of Monuments and Archaeology of Amsterdam (Bureau Monumenten en Archeology - BMA) regarding their inscription as monument were translated. The following steps are described below:

Cultural significance assessment:

A significance survey (Speckens, Veldpaus, Colenbrander & Pereira Roders, 2012) is used to identify the attributes and values of the property. Basically, this survey identifies “what is heritage” and “why”. For the “what” question, the attributes are extracted from the inscription texts and for “why” question, all the identified values are classified into eight categories of primary cultural value, that are social, economic, political, historical, aesthetical, scientific, age and ecological values (Pereira Roders, 2006; Tarrafa Pereira da Silva & Pereira Roders, 2012). In all of the three texts, there are number of attributes with values that are not mentioned clearly and different readers may interpret various values (for instance, one might consider aesthetical value and the other might consider scientific value.). In order to have a clear distinction between the values that are mentioned clearly and the ones that are not, two categories are defined, ‘real values’ and ‘assumed values’. This will also allow the discussion on the reliability of the inscription texts.

After extracting all the attributes and values from the texts, the charts for real values, assumed values and total values (combination of real and assumed values) are drawn for each school (an example of a value charts is shown in Fig. 1.1).

As a next step, the attributes are classified into three main categories according to the texts from BMA regarding the schools, these categories are: *Urban context*, *Typology* and *Building elements*. Then, each category is also divided into several sub-categories to see the dispersion of the values amongst the categories and sub-categories and to explore “where” the most valuable attributes are located (an example of Urban context sub-categories is shown in Fig. 1.2). After analysing the three significance surveys for the schools, the conclusion is drawn about the cultural significance of the three H-schools.

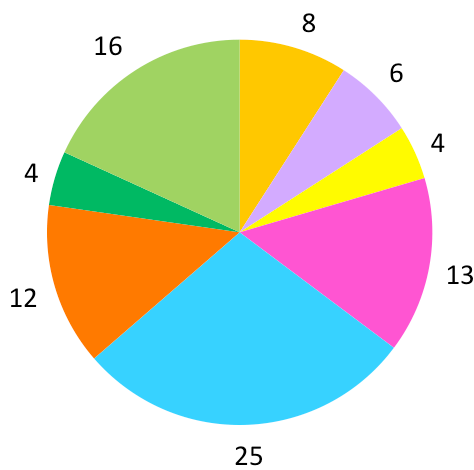


Figure 1.1: Real values - OBS Multatuli

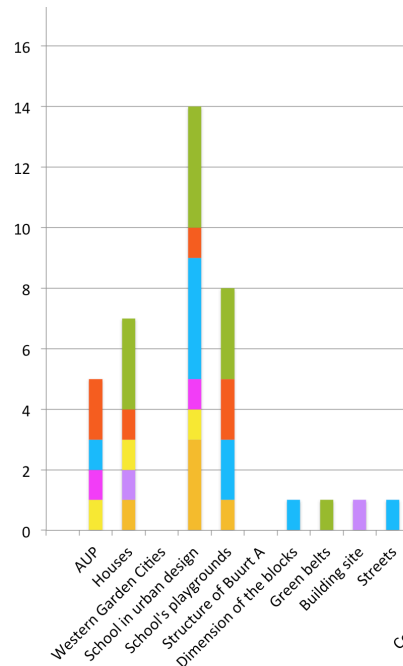


Figure 1.2: Urban context sub-categories in OBS Multatuli



Heritage impact assessment:

After the significance assessments of the H-schools and assessing the value of the heritage, heritage impact assessment is done in Sloterveer school on each attribute to see if they are influenced by the new exterior addition and if they are influenced, to what extent. In this part the method of ICOMOS (ICOMOS, 2011) is used. According to the document of ICOMOS (ICOMOS, 2011), many interventions have the potential to impact adversely on the appearance, skyline, key views and several attributes that contribute to Outstanding Universal Values (OUV). Although Sloterveer school is not a UNESCO World Heritage site, but as it is a municipal monument, it has specific attributes that are crucial to the building and need to be preserved.

According to the document of ICOMOS, there is a five-scale method for assessing the magnitude of impact: major change, moderate change, minor change, negligible change and no change.

In this method there is not a clear distinction between the different scales, therefore, in this research, a percentage is assigned to each attribute to make the assessment less subjective (Table 1.2).

Therefore, if 0% of the attribute is altered, no change is considered for the magnitude of impact; if 1%-10% of the attribute is changed negligible change for impact is considered, for 11%-30% change minor change is assigned, for 31%-70% moderate change is considered and if 71%-100% of the attribute is altered major change is assigned to the attribute.

So, for example if there is an attribute that says: "All of the classrooms have windows on two sides." And there exist 10 classrooms in the school, from which one is influenced by an intervention and its windows are blocked, it can be said that 10% of the attribute is altered; so negligible change is assigned to this attribute.

Table 1.2: Magnitude of impact

No change	Negligible change	Minor change	Moderate change	Major change
0%	1% - 10%	11% - 30%	31% - 70%	71% - 100%



Figure 1.3: Percentage assigned to each scale of impact

As a result of this step the influence of the new exterior addition on the attributes of cultural significance in Slotermeer school is analysed.

2 AMSTERDAM H-SCHOOLS: CONTEXT AND HISTORICAL BACKGROUND

2.1 NEW-WEST:

The city of Amsterdam is currently divided into 8 districts: Centre, Westport, West, New-West, South, East, North and Southeast. The population of the city is 811185, while New-West district has the highest population amongst the other districts with the number of 144002 (O+S, 2014). New-West district consists of nine neighborhood: Slotermeer West, Slotermeer Oost, Geuzenveld, Osdorp West, Nieuw-West Midden, Slotervaart Noord, Slotervaart Zuid, Sloten en Nieuw Sloten and De Aker (Fig. 2.1).

The valuation map of the Amsterdam presents the urban and architectural appreciation of all buildings from 1850-1965 for four areas of Amsterdam: centrum and historical fragments, the 19th century ring, the belt '20-'40 and the AUP areas. There is an order assigned to each property in these areas, rising from the lowest of 'Basic order' to the highest of 'Order 1'.

The Orders are as followed:

Order 1: Monuments or building with a cultural value as monument

Order 2: high cultural value

Order 3: medium-high cultural value

Basic Order: low value

Seven out of eight H-schools in New-West are considered being Order 1 and the other one is Order 2, therefore it can be stated that they have a very high cultural value.

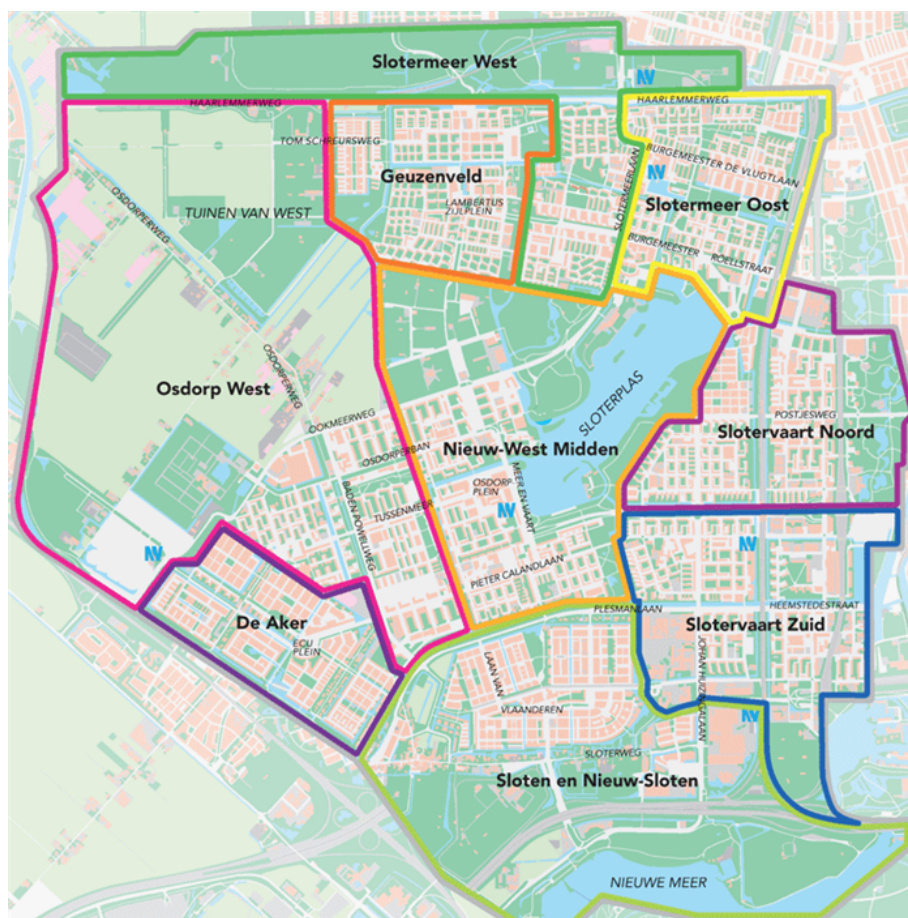


Figure 2.1: Neighbourhoods of New-West district (Source: <http://marjoleinvantrigt.nl/?p=358>)

2.1.1 GENERAL EXPANSION PLAN OF AMSTERDAM (AUP)

In 1934, Cornelis van Eesteren developed the General Expansion Plan of Amsterdam (AUP). AUP is well-known in town planning for being the first large spatial plan, founded upon scientific knowledge, which has also been put into effect (Den Boogert, 2014). AUP was an overall plan in which the final shape would be achieved around the year 2000 according to the planners (Fig. 2.2). In the AUP plan, the city should be extended at the edge of the old city (Heijdra, 2010). The final design of AUP could be distinguished in four functions in the city: living, working, relaxing and the connecting factor, traffic.



Figure 2.2: AUP, 1934 (Source: stadsarchief.amsterdam.nl)

The design provided residential areas in the vicinity of work, interspersed with green and recreational areas (Heijdra, 2010). However, the appreciation of the garden city character of the area is ambivalent according to the inhabitants. On the one hand, there is much appreciation of the green areas and much criticism of the way in which new buildings have affected them. On the other hand, there is a great discontent about preserving the green area, and the parks that are especially regarded as being unsafe (Den Boogert, 2014).

The expansion toward the west was mainly intended for domestic purposes, where rental housing for the lowest price would be achieved. This area nowadays is named New-West, with a park between the city and the new district (Heijdra, 2010). The vision of the AUP regarding the construction of residential areas corresponds with that of reformers such as Ebenezer Howard. They regarded the large industrial cities as being the source of all misery and believed that a partial return to the countryside, in the hybrid form of garden cities, would be a cure for the poor living conditions (Den Boogert, 2014).

There was a clear preference of low-rise buildings in the AUP area, but it was not possible to achieve that in the whole area of New-West. The Ringpoorbaan, built in 1993 was a railway ring, often mentioned in AUP because it is a real separation ring of the city. Outside the ring about 50-60% of the buildings were planned as low-rise and within the ring, mostly high-rise. As a whole, density within the ring is more than the density outside the ring (Heijdra, 2010).

The General Expansion Plan of Amsterdam (AUP) of van Eesteren is suggested to become a protected

view by the National Cultural Heritage Agency (Rijksdienst voor Cultureel Erfgoed, RCE), due to high concentration of post-war buildings and the special character of the Garden city district.

2.1.2 WESTERN GARDEN CITIES

The book 'Atlas van de wederopbouw Nederland 1940-1965' (Atlas of reconstruction in The Netherlands), shows thirty different post-war areas divided in three categories: Recovered reconstruction centers, post-war neighborhoods and rural areas. These areas are selected by National Cultural Heritage Agency (RCE) as post-war areas of national importance. The post-war neighborhood of Western Garden Cities (Westelijke Tuinsteden) is amongst these thirty post-war areas of national importance. On one hand, post-war neighborhoods are often regarded negatively and the image is a mono-functional, impoverished area with flats in bad condition (Blom, Jansen, & Heide, 2004), on the other hand, the post-war period is also seen as an innovative period with new materials and construction methods. There was innovation in the urban planning design such as allotment pattern, new ideas of neighborhood concept ('wijkgedachte'), and the role of traffic in the organizing principle (Blom, Jansen, & Heide, 2004).

The urban plan for the Western Garden Cities was developed between 1934 and 1958. The first pile was beaten in 1951. The construction of the whole area completed in 1965. The neighborhoods that are developed by this idea are: Slotermeer, Geuzenveld, Slotervaart, Overtoomsveveld, and Osdorp.

The Western Garden Cities of Amsterdam are located around Sloterplas and largely west of the A10, at south of Haarlemmerweg and north of recreational lake, De Nieuwe Meer. These neighborhoods are part of the expansion of the city to the west according to the General Expansion Plan (AUP). Part of the garden city Slotermeer in 2007 proclaimed as the protected municipal cityscape of Van Eesteren Museum. The neighbourhoods are designed according to an organic community work, separation of housing and traffic, a large percentage of single-family homes and lots of accessible green.

After the war, the neighborhood concept was taking shape, so that each neighborhood will have its own community center, schools, churches and playgrounds. This invites people to meet and relax. Furthermore, neighborhoods are designed so that they all have their own facilities (shops, schools, churches, health care, sports and recreation) and also they have a good connection with the city via bicycle routes, highways and public transportation. The neighborhoods are recognizable by their own allotment pattern. This variety is the quest of the Urban Development Department (Stadsontwikkeling) to study a good operation of space and variation of the open space developments.

The Western Garden Cities are designed according to the principles of the neighborhood concept and the garden cities. The green is hierarchically structured, continuous landscape, Sloterpark, park strip, green belt, court, and ending at the private garden. The park strips separate the individual garden and connect them at the same time. The old, chaotic city with poor houses gave way to light, air and space, for a healthier individual and a community-oriented development.

Besides the above mentioned characteristics of Western Garden Cities of Amsterdam, there are several ideas and characteristics that are common amongst many post-war expansion plans (Blom, Jansen, & Heide, 2004):

- 60% of dwellings are realized as single-family dwellings
- More (semi) public green in comparison with Vinex-neighborhoods
- Located nearby the centre
- Good transportations options for public transportation
- Diversity of dwellings
- Good quality-price ratio

Post-war neighbourhoods are characterized with different planning principles, but all with the neighborhood concept in mind. The neighborhood concept is an important point in the development of post-war neighbourhoods, especially because of the individualization of people. The war provided the possibility for architects and urban planners to search for new ideas on a destroyed land. Already during the war professionals were afraid that the unrestrained growth without social cohesion of cities would continue after the war. Designers discussed in this time 'the city of tomorrow', where the central theme was the neighborhood concept (Fig. 2.3, Broekhuizen, 2013). The book 'De stad der toekomst, de toekomst der stad' (The city of the future, the future of the city) of A. Bos from 1946 has influenced a lot of urban planners in The Netherlands.

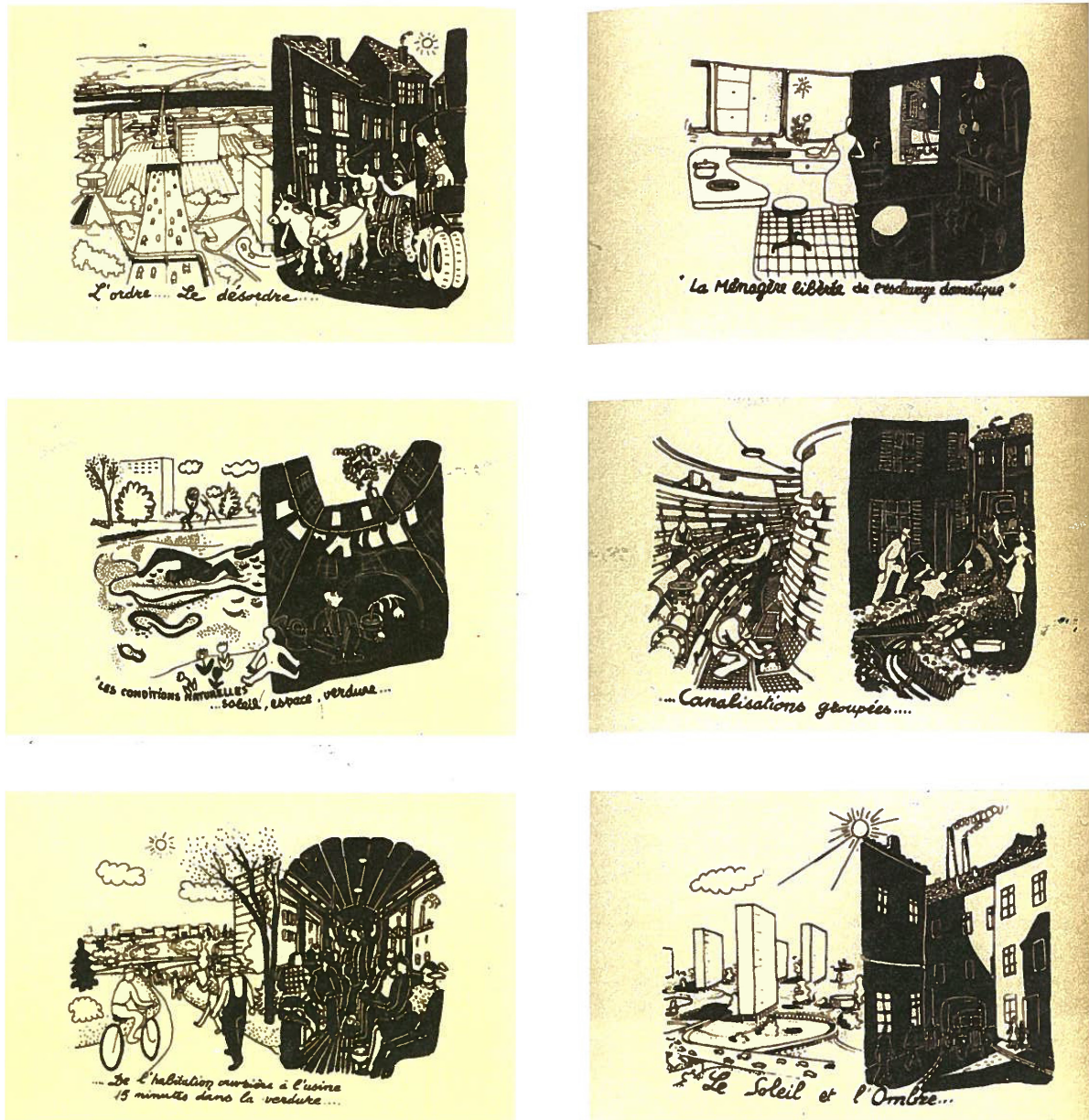


Figure 2.3: Didactic visualization of the promised life after reconstruction. By G.raid Hanning (1947) (Blom, 2013)



Figure 2.4: 'We and the neighbourhood', Picture by W.F. Geyl (1948) (Broekhuizen, 2013)

The neighborhood concept starts from a social spatial division of the city in neighbourhoods, in which every neighbourhood is built up out from quarters ('neighborhood-unit') and their own facilities. These facilities were distributed hierarchically over the neighborhood and the quarters. The facilities, such as community centres, were meant to shape the people as an individual and as part of the community (Fig. 2.4). The centres were called 'social centres' and were multifunctional, with accents on health care, education and welfare. Besides the enhancement of the social cohesion the social centres and other social facilities, such as schools, churches and stores, are bringing spatial diversity in the neighborhood (Broekhuizen, 2013).

Neighborhood concept in outline:

- Planning according to the region and city (Garden cities - Howard, Unwin, AUP Amsterdam)
- Planning from neighborhood and quartier
- Planning from the parish (the parish was seen as a natural physical size for neighborhood concept) (Malberg - Maastricht)
- Planning from the housing unit (development of a city with housing units and row houses) (Pendrecht - Rotterdam)

In general, the WWII can be marked as a change in the theory and practice of city development (Bosma, 2013). The pre-war space was determined by the closed building block. The private, common and public spaces were clearly separated through this closed block. The post-war neighbourhoods were designs about spaces surrounding buildings. It was not anymore in the first place about designing the buildings but about designing the open spaces. The buildings were now connecting the open spaces and there was a more fluent transition from private to public spaces (Blom, Jansen & Heide, 2004).

2.2 HISTORICAL BACKGROUND OF H-SCHOOLS:

In October 1948 during the Dutch Congress of Public Health Regulations (Openbare Gezondheidsregeling) visions and requirements for modern schools were formulated on the basis of new insights on educational, hygienic and architectural aspects. The focus was on the site, construction and furnishing of the school in relation to the welfare of the child (Rijksdienst voor de Monumentenzorg, 2005). The following points were mentioned during the congress for schools:

- Easily accessible and built in a quiet location
- Presence of the playgrounds, possibly in connection to the greenbelts
- Optimal orientation to the sun in relation to hygiene
- Separate schools for different types of education
- Freedom of movement in the classrooms (larger classrooms, loose furniture)
- In addition to classrooms, schools should have additional rooms for individual and group work (such as handicraft room) and rooms for group meetings (such as school hall and auditorium)

Immediately after WWII, many brick schools with corridors and a loft were built in traditionalism style. In order to get two-sided light in the classrooms in a corridor school (gangschool), the gable roof was changed into two unequal roof shields with a skylight.

Between 1945 and 1955 striving for monumentality and representativeness in the Dutch school building was reversed to a more business-like approach in which the child was the center of the design.

Amsterdam played a pioneering role with J. Leupen, chief architect of Public Works (dienst Publieke Werken). He was part of a study commission set up in 1946, which conducted a research into the new school building for Child and Community (Het nieuwe schoolgebouw voor Kind en Gemeenschap, Amsterdam 1950). In his experiments, based on the pre-war schools of the type of light and air, he tried to eliminate the corridor for the benefit of getting daylight from two sides in the classrooms, so he integrated corridors in the classroom. The two parallel windows made cross ventilation and two-sided light possible. Initially, Leupen applied this solution only in so-called demountable help schools (demontabele hulpscholen) of one story, but later he applied it also in permanent help schools with two floors.

Based on these experiments, he developed the Amsterdam H-school: a building with an H-shape floor plan consisting of parallel wings for teaching on the one hand, and general use on the other. In different varieties, he applied this organized structure for kindergarten and primary schools, in one and several floors.

Princess Beatrix School (now OBS Multatuli) (1951) is the first permanent school for primary education in Amsterdam with such an arrangement.

J.R.A. Koops of Public Works developed in Rotterdam also a school of the H-type; first in traditional construction and later converted into the Muwi system. Unlike the Amsterdam H-school, the Rotterdam version had no school hall and no functional separation between wings for teaching and general use.

2.3 DESCRIPTION OF THE THREE CASE STUDIES

There are in total eight H-schools in the AUP area. These schools are built between 1952 and 1963. Seven out of eight of are considered to be Orde 1 and hence have a high value and the other two are considered to be Orde 2.

Amongst all the H-schools, three are inscribed as municipal monument. In this significance analysis the three schools are surveyed to find the value and attributes. OBS Multatuli is the pioneer of H-schools in the area as it is built in 1952. Slotermeer School and Herman de Manstraat 1 are both built in 1954.

2.3.1 SLOTERMEER SCHOOL:

Slotermeer School is located in the district Geuzenveld / Slotermeer. It was built in 1953 by the Department of Public Works (Dienst der Publieke Werken). The school stands on a green playing field between the Burgemeester Vening Meineszlaan and Nico Snijdersstraat.

Slotermeer school stands out because it is shifted backward and positioned relative to the perimeter and it is located in the middle of a wide, child-friendly green area with playgrounds (designed in 1957 and in 1963). This H-school is made up of two parallel standing volumes: 'front building' (voorbouw) on the south side and 'rear building' (achterbouw) on the north side. Two low corridors connect these two main volumes.

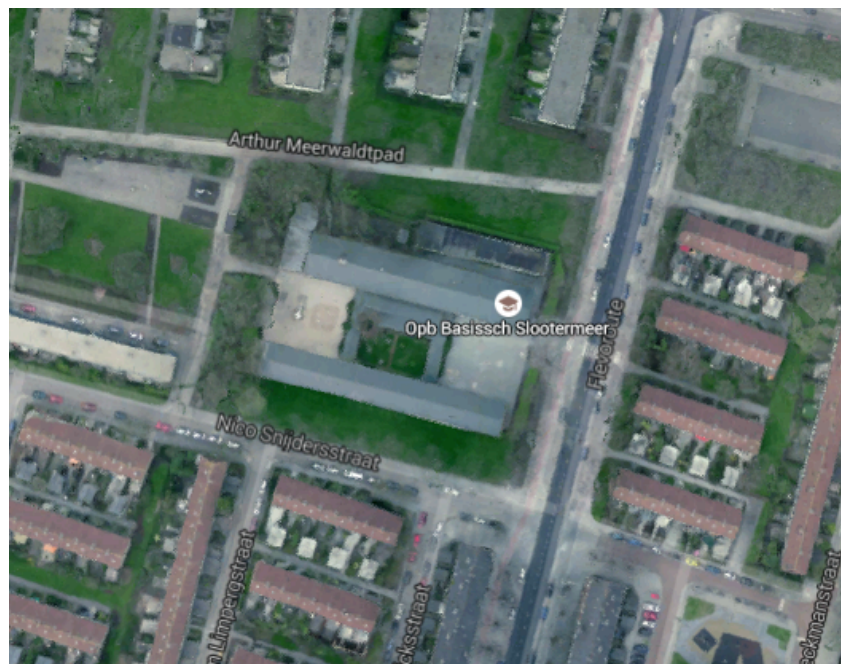


Figure 2.5: View o Slotermeer school from top

The main axes of the two buildings have an east-west direction. The front building is intended for education and consists of two floors, while the other functions are located in the rear building. The school playgrounds are in the coves of the H-shape, while the small courtyard is also located in the middle (the courtyard was originally intended as an outdoor classroom). The front building has, on the side of the school, six entrances. In continuation of the walkway is the staircase, flanked by two wardrobe rooms, which are equipped with toilets and wash troughs. On either side of the wardrobes are the classrooms. In the first floor exist in total 6 classrooms. The second floor is, except the

entrance, identical to the first floor. In the rear building there are common areas and staff rooms. On the east side there is a gymnasium with boys and girls changing rooms and two washrooms. Moreover, in the middle part of the rear building a large auditorium with a stage is located. The left connecting corridor to the west, flows into a wardrobe room, which belongs to the auditorium. There are also two other rooms located in the eastern part of the rear building, one on the north is for play and work of the children and one on the south is for handwork. These two rooms are accessible via stairs.

On the south side of the rear building there is a wide corridor, initially called 'break-hall'. This wide corridor has two entrances on both ends. There are rooms for headmaster, personnel, school servant and besides that there are two toilet rooms and a storage room.

Red brick is used in the façades of these two main volumes, and they are covered with faint grey sloping roofs.



Figure 2.6: Sloterveer school - Ground floor, SC: 1:500

- | | |
|--|---|
| ■ Auditorium | ■ Classrooms |
| ■ Playing room | ■ Gymnasium |
| ■ Handwork room | ■ Changing room |
| ■ Corridor | — — — Front building |
| | — — — Rear building |

2.3.2 OBS MULTATULI:

The independent school for primary education in the Sara Burgerhartstraat 5, originally named Prinses Beatrixschool, situated in the Bos en Lommer and was built in 1952 by the Department of Public Works. It is part of a school complex on the triangular plot between Sara Burgerhartstraat on the north side, the Wiltzanghlaan on the south side, and the Krelis Louwenstraat on the west side. This school complex consists of a kindergarden, primary school and a secondary school. The H-shape building is a primary school. These three buildings are detached and surrounded by lawns.

The school has an H-shape and it is corridor-free. Therefore, it has an optimized light inlet and air circulation. The school playgrounds are in the coves of the H-shape while the courtyard in the middle was originally intended as an outdoor classroom.

The OBS Multatuli is by the school and the district very carefully preserved and not rebuilt. The former Prinses Beatrixschool is the first of the new series Amsterdam 'permanent' school of Public Works. The school dates from 1952 architectural historical value due to the careful design in which education and urban views are expressed from this period, in its structure and design. It also reflects the innovative ideas regarding school construction in the first decades after World War II.

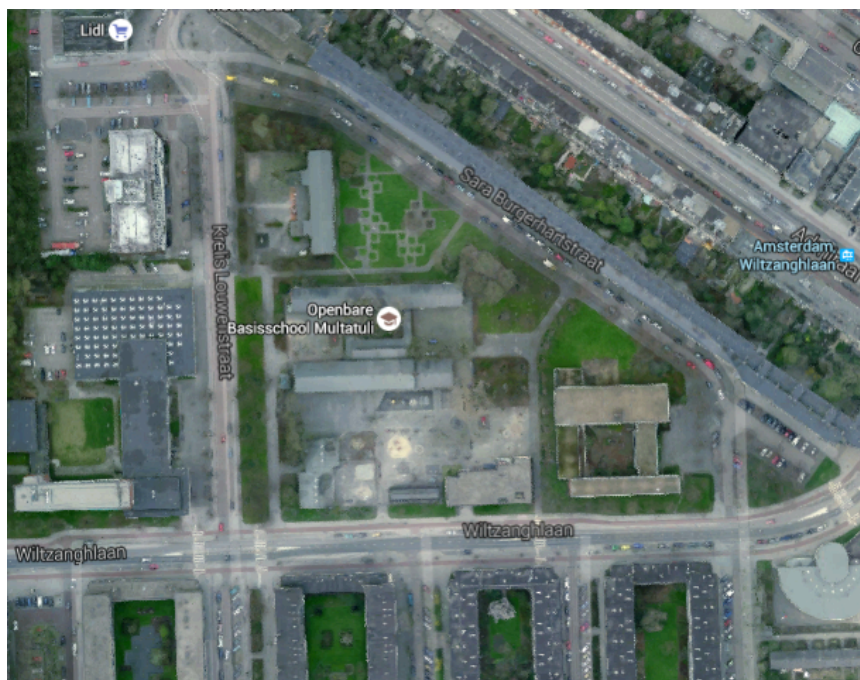


Figure 2.7: View of Sloterveer school from top



Figure 2.8: OBS Multatuli, Source: Rijksdienst voor de Monumentenzorg (2005)

2.3.3 HERMAN DE MONSTRAAT 1:

The school is part of a splendid early post-war ensemble enclosed by Burgemeester Van Tienhovengracht, de Burgemeester Cramergracht, de Burgemeester Roellstraat, and de Slotermeerlaan. Here the Urban Development department could realize all the urban ideals that were formulated after the war by the famous Congress for the Modern Movement. The school is constructed in 1954 and consists of two east-west oriented volumes, joined by two almost entirely glazed corridors. In the volume on the south, twelve classrooms are located in two floors under a gable roof. The other volume is single storey and accommodates all other functions such as gym, auditorium and lounge for the teaching staff. The floor plans are almost identical to Sloterveer school. Generally, the school represents architectural values of H-schools.

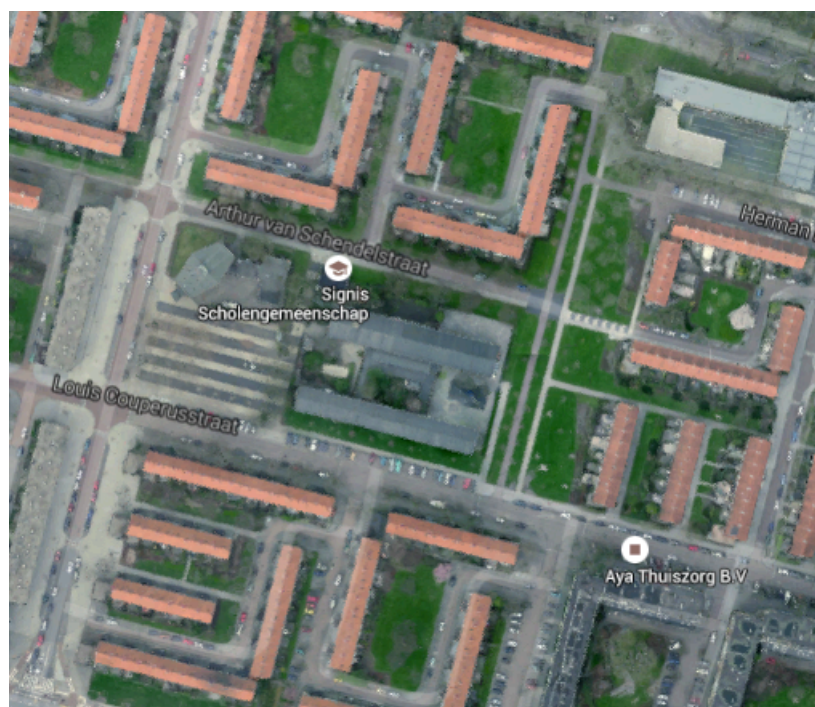


Figure 2.9: View of Herman de Monstraat 1 from top

3 CULTURAL SIGNIFICANCE ASSESSMENT:

3.1 PRIMARY VALUES ANALYSIS:

For all of the three schools, the documents of the BMA (Bureau Monumenten en Archeologie) have been analysed. These three documents have the same structure and headlines; headlines are: Urban context, Building type and building history in outline, Architectural appearance (with exterior and interior subtitles), Cultural-historical context and conclusion.

The document for Slotermeer school has 2817 words, while the document for OBS Multatuli has 3168 words and the document for Herman de Monstraat 1 has 945 words that is less than one third of the other two documents. This difference between the lengths of the texts could imply that Herman de Monstraat 1 does not offer the same amount of values (Fig. 3.1).

In all of the three documents, some attributes have the values that are not mentioned clearly, in these cases the assumption was made. But in order to have a clear distinction amongst the values that are mentioned clearly and the assumed values, values were classified in two categories of real and assumed. Clearly, the real values are more reliable than the assumed values.

In total, there are 102 values (83 real and 19 assumed) defined for Slotermeer school, 103 (88 real and 15 assumed) for OBS Multatuli and only 25 (23 real and 2 assumed) for Herman de Monstraat 1 (Fig. 3.2). Generally, as in all of the three schools, the real values are more than the assumed values, it can be concluded that the conclusions based on the values are reliable.

Slotermeer school has 45 total quotes that express a value for a specific attribute, while in OBS Multatuli there is 48 quotes and in Herman de Monstraat 1 there is only 11 quotes. Interesting fact is 27 quotes out of the 45 in Slotermeer school are exactly the same in OBS Multatuli, this means that there are more than 55% of the quotes that express similar values and attributes in both schools (Fig. 3.3).

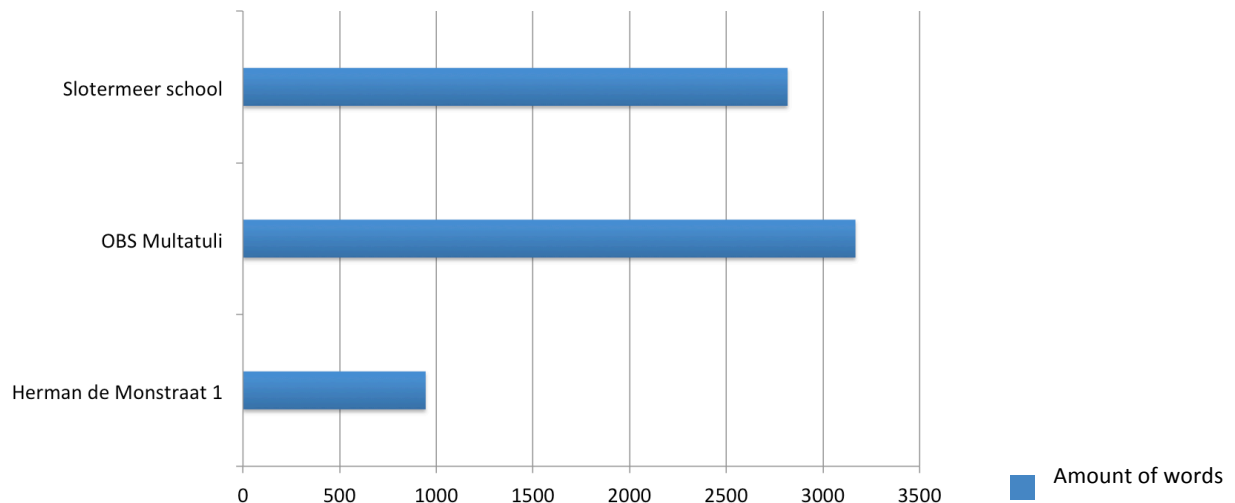


Figure 3.1: Herman de Monstraat 1 has significantly fewer amount of words amongst the three schools

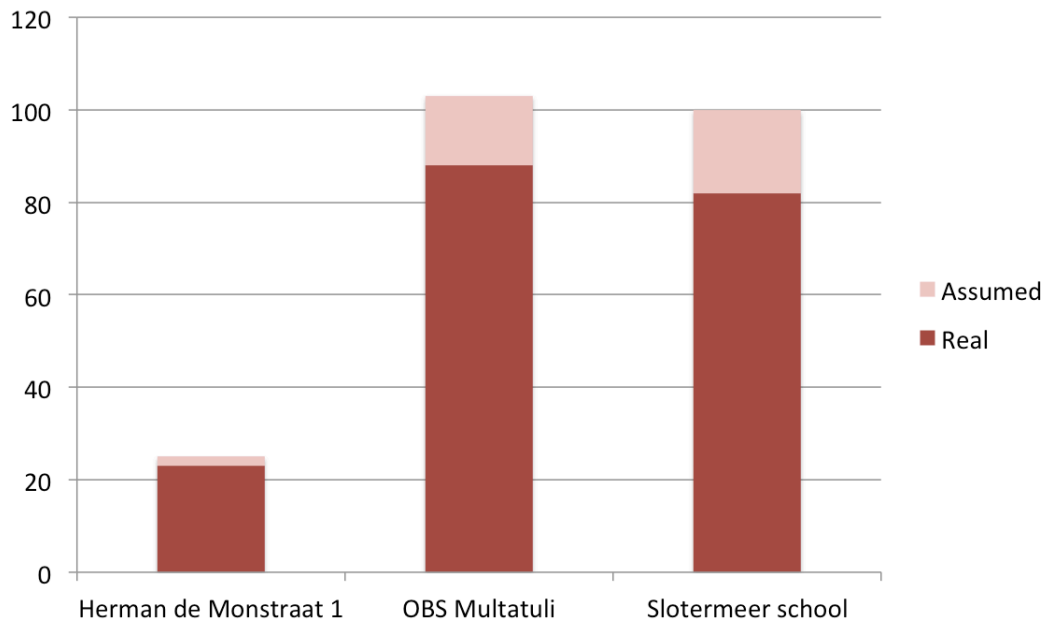


Figure 3.2: More than 80% of the values are real in all of the schools

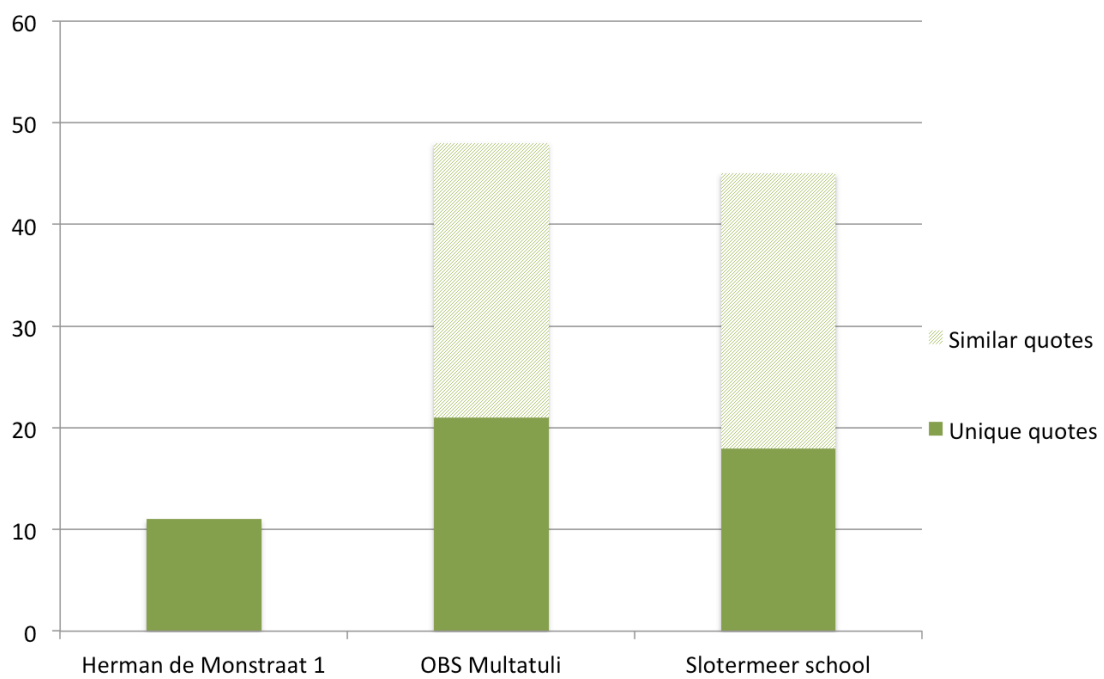


Figure 3.3: More than 55% of the quotes are the same in Slotermeer school and OBS Mutatuli

3.1.1 SLOTERMEER SCHOOL:

In the charts below the amount of primary values mentioned for Slotermeer school can be seen with the distinction between real and assumed values. The **aesthetical** values, **ecological** and **scientific** values stand on top of the most mentioned values for this school, respectively (Fig. 3.4). In this school there are 83 real values, 19 assumed values and in general there are 102 values mentioned in the inscription text for different attributes related to this school.

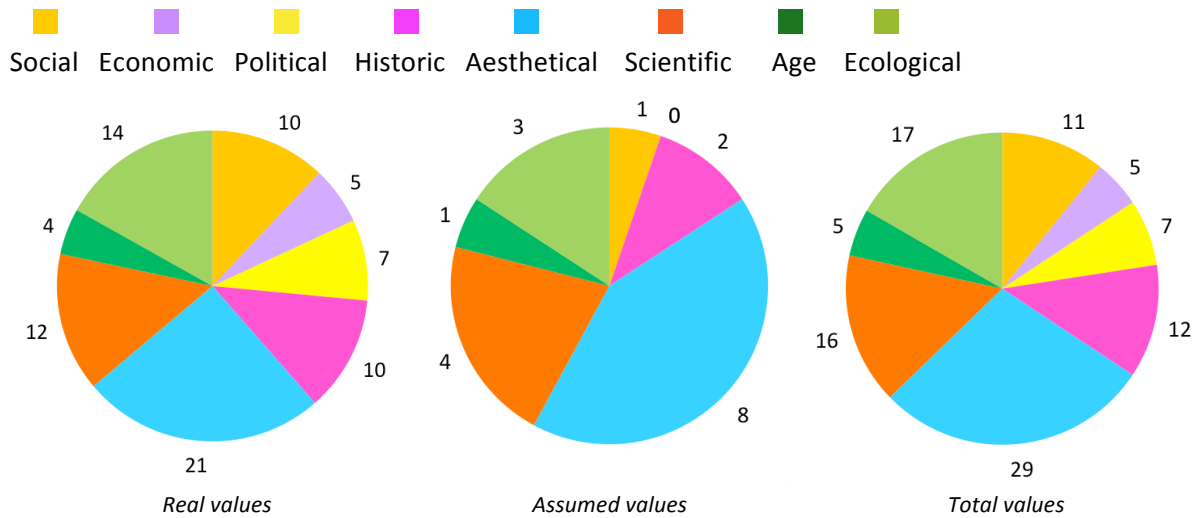


Figure 3.4: Slotermeer school values

3.1.2 OBS MULTATULI:

In OBS Multatuli, **aesthetical** values have the biggest share of the values in the school, followed by **ecological** and **scientific** values (Fig. 3.5). In this school there are 88 real values, 15 assumed values and in general there are 103 primary values assigned to the attributes in this school.

OBS Multatuli and Slotermeer school have approximately the same amount of real and assumed values, this is not unpredictable as 27 quotes out of 45 quotes that convey attributes and values are exactly the same as quotes of OBS Multatuli text.

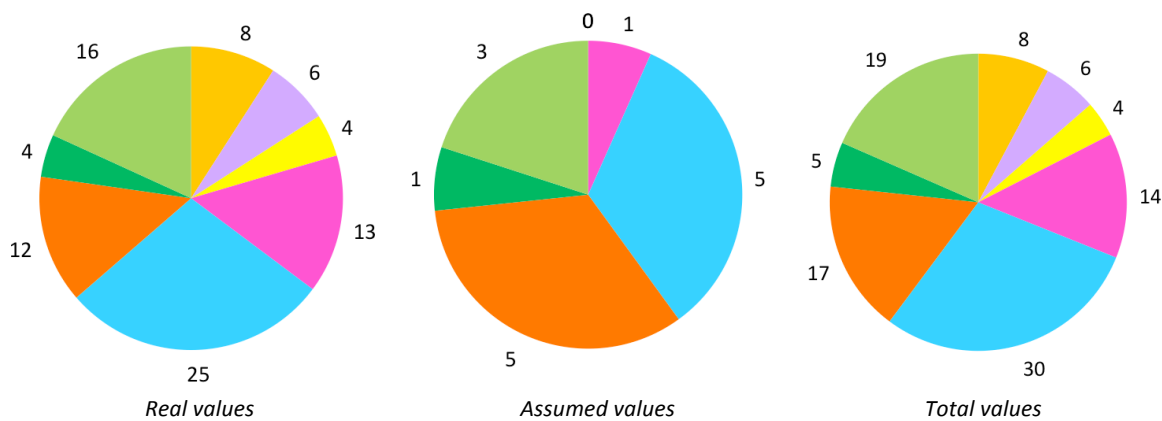


Figure 3.5: OBS Multatuli values

3.1.3 HERMAN DE MONSTRAAT 1:

For the Herman de Monstraat 1, as the text is too short (945 words), there is not many attributes and values mentioned. But amongst the mentioned primary values, **aesthetical**, **social** and **historical** values have a lion shares (Fig. 3.6). In the text regarding this school, 23 real primary values, 2 assumed values and in general 25 total values are mentioned.

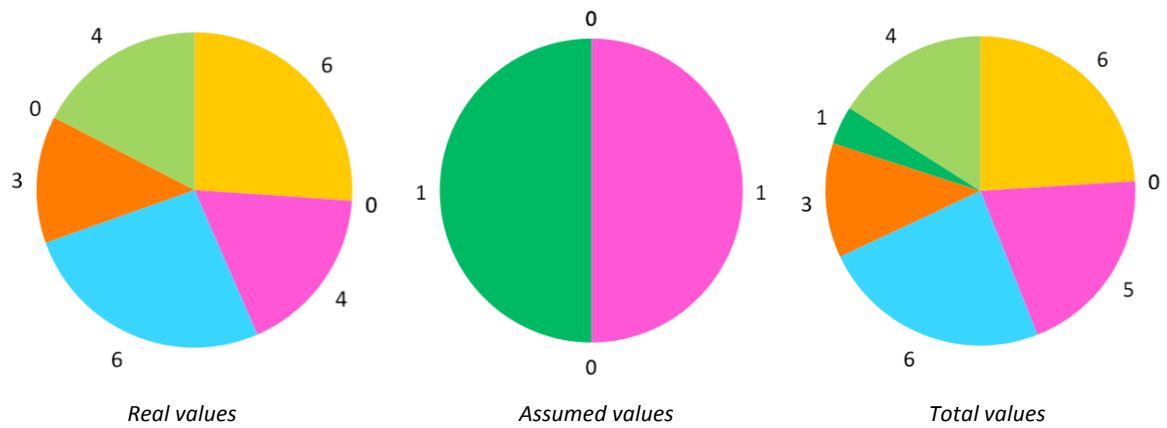


Figure 3.6: Herman de Monstraat 1 values

3.2 ATTRIBUTES CLASSIFICATION:

As mentioned in previous part, all the values that are mentioned in the inscription texts classified into eight primary values (social, economical, political, historical, aesthetical, scientific, age and ecological) and this makes the comparison between the schools possible. Similarly, classification of the attributes also helps to get an overview of “where” mentioned values are located. In order to classify all the mentioned attributes, three general categories are defined in relation to the texts; **urban context**, **typology** and **building elements**. For each category, the total numbers of primary values are counted. The first category, *urban context*, consists of 10 sub-categories. *Typology* has eight sub-categories the last category, *building elements*, consists of 12 sub-categories. There are many sub-categories that only have mentioned values in one of the texts and there is not any value mentioned for them in other schools. The description of the attributes in each category is as follows:

3.2.1 URBAN CONTEXT:

The attributes and values in this group are related to urban design of the neighborhood, in which the school is located. The sub-categories in this group are: *AUP*, *Houses*, *Western Garden Cities*, *School in the urban design*, *School’s playgrounds*, *Structure of Buurt A*, *Dimension of the blocks*, *Green belts*, *Building’s site and streets*. This category has ten sub-categories.

Table 3.1: Examples of the Urban context sub-categories

Sub-category	Quote	Category
AUP	The urban design for garden city Sloterveer is part of the General Extension of Amsterdam (AUP) in 1934 and is one of the four garden cities.	Urban design
Houses	The houses had to be affordable for workers and for the small middle class, and were situated so that the sun and air had free access to the property.	Urban design
Western Garden Cities	Ebenzer Howard in his book <i>Garden Cities</i> (1898) designed an almost independent city model in response to the poor viable industrial cities.	Urban context
School in the urban design	The schools (of AUP), which still have the character of youthful openness and cheerfulness, act as a grateful, architectural variety in the neighbourhoods.	Urban context
school’s playgrounds	The school playgrounds and playing fields had to contribute to the openness in the district.	Urban context
structure of Buurt A	The structure (of buurt A) was changed by the housing shortage after the war. The plan for low-rise north of the Burgemeester Vlugtlaan been replaced by high-rise.	Urban context
dimension of the blocks	The height and width of the blocks were coordinated.	Urban context
green belts	Erasmus Park and greenbelts along the main roads led to the green deemed necessary in the district.	Urban context
building’s site	This site (school’s site), the most northern corner in neighborhood (buurt) 5, was originally earmarked for school construction.	Urban context
streets	Sara Burgerhartstraat and Krelis Louw Street mark the turning points in urban planning. On one side are closed blocks from the 1920-1940 period with opposite row housing in the fifties.	Urban context

3.2.2 TYPOLOGY:

The values that are mentioned regarding the typology of the school are considered in this group. The sub-categories are: *Corridor-free schools*, *Function*, *Layout*, *Architectural style*, *H-schools*, *Post-war schools*, *(school’s) Structure*, *Form and detailing*. Typology category has eight sub-categories. Table below shows an example in each sub-category.

Table 3.2: Examples of the Typology sub-categories

Sub-category	Quote	Category
Corridor-free schools	The advantages of a corridor-free school are that the light-inlet and the air circulation are optimized .	Typology
Function	Originally the building was designed as a two-floor primary school with twelve classes.	Typology
Layout	The layout of the building is clear .	Typology
Architectural style	The architecture of the school is clear and simple .	Typology
H-schools	There's only preserved a small number of H-schools , and the type is increasingly rare .	Typology
Post-war schools	One of the ideals of the postwar schools was to create a corridor free school where two sides of the classroom air and light invaded .	Typology
Structure	In its structure and design reflects the structure designed by the Public Works Department on an easily recognizable way the innovative ideas regarding school construction in the first decades after World War II.	Typology
Form and detailing	It is both in form and in the detailing head remained intact preserved .	Typology

3.2.3 BUILDING ELEMENTS:

The attributes regarding different elements and spaces of the building are within this category. These attributes are divided into 12 sub-categories: *Windows, Interior, Glass walls, Classrooms, Low parapets of the classrooms, Furniture, Corridors, Theatre stage, Art works, School hall, Façade and Auditorium*.

The examples of attributes that are classified in the sub-categories of this group can be found in the table below.

Table 3.3: Examples of the Building elements sub-categories

Sub-category	Quote	Category
Windows	The windows that can open , in order to distinguish, originally painted in a contrasting colour .	Building elements
Interior	The interior is spacious, bright and entirely in its original state.	Building elements
Glass walls	The large glass walls give a transparent effect in a beautiful interplay between inside and outside.	Building elements
Classrooms	The classes have a beautiful space operation (ruimtewerking) on two sides by large windows located.	Building elements
Low parapets of the classrooms	All classrooms have low parapets , where the students are not isolated from the outside world .	Building elements
Furniture	In classes there is not long benches but loose tables and chairs , to allow different configurations in the classroom.	Building elements
Corridors	The corridors have a double function: besides the usual traffic function, they are built showcases .	Building elements
Theater stage	The theatre stage is finished with high quality wood .	Building elements
Art works	In the outdoor classroom that now serves as a school garden stands in the middle, high on a pole, a bronze (?) figure of a rooster, by an unknown artist . The rooster is a favorite subject for images in schools.	Building elements
School hall	In a broader context, the school hall as a "social centre", can play a neighborhood function and can be rented to a neighborhood association for craft nights, singing and drama rehearsals, film screenings, meetings,	Building elements
Façade	Also in the facade facing the street , the south side, the internal distribution of the symmetric school building is clear .	Building elements
Auditorium	It (auditorium) has the allure of a true theatre with seats .	Building elements

3.2.4 SLOTERMEER SCHOOL:

In Slotermeer School, as can be seen in figure 3.7, most mentioned values in the inscription text are in the *Urban context*, *Building elements* and *Typology*, respectively. *Urban context* category has 37 mentioned values in total, in which *school in urban design* sub-category has the most values with 17 numbers. *Building elements* has 35 mentioned values, in which the most mentioned values (the number of 6) are in the sub-categories of *Windows*, *Interior* and *Art-works*. *Typology* has the least mentioned values amongst the three categories. The sub-category with the most mentioned values in this group is *Architectural style* with 12 values in total.

Here, an explanation is given for the most mentioned sub-categories in each group:

School in urban design:

As can be seen in the chart, most values in general are mentioned for the role of school in urban design, it reveals the fact that schools are playing an important role in the urban design of AUP area. For instance, large areas are dedicated to schools and the primary schools and kindergartens are distributed in the district to keep the distance between home and schools as short as possible. Another reason is that, H-schools act as a great architectural variety in the neighborhood. They are also playing a social role in the neighborhood as the text expresses that the school serves as a meeting point within the district and it helps to liven up the neighborhood. There are also several other reasons mentioned in the text that together prove that the role of the schools in the urban design is very thought-out in AUP areas.

Architectural style

Amongst the sub-categories within the second group (Typology), architectural style has the most mentioned values in Slotermeer school. According to the text, the architecture of the school is clear and simple, and the design of the school has its origin in Modern Movement. Other reason is that, Slotermeer school represents architectural value as intact preserved example of the new series of Amsterdam 'permanent' schools of Public Works, and the building expresses the cultural and historical value of the interesting post-war changes in the educational field. According to the text, Slotermeer school is the coolest of the new series of Amsterdam 'permanent' school of Public Works.

Windows, Interior and Art works:

In the third category, the sub-categories of Windows, Interior and Art-works have the most number of values.

The windows are valuable because the rhythm of rectangular modules in the form of windows determines the design of the school. Moreover, the windows that can open in the classrooms are painted in contrasting colour in order to distinguish. So in general, in design of the school, windows had a great importance and they represent the ideas of the architect. The interior is valuable, because it is bright, spacious and entirely in its original state. According to the sub-category of Artwork it is mentioned in the text that in the courtyard of the school in the middle, there is a bronze figure of a rooster, by an unknown artist. The rooster is a favourite subject for images in schools. This artwork symbolizes Christ who does the new day dawning of faith.

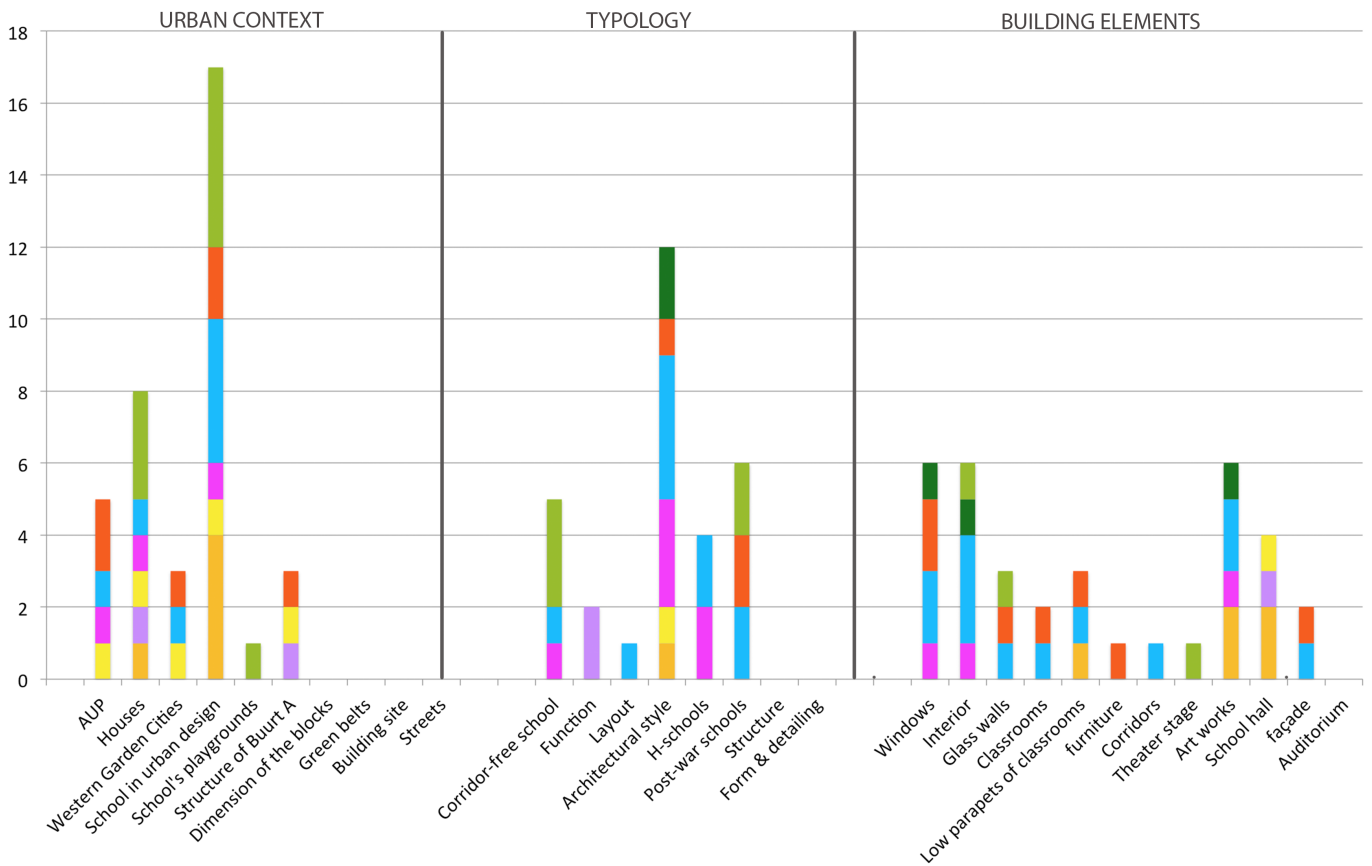


Figure 3.7: Dispersion of the attributes amongst the sub-categories in Slotermeer school

3.2.5 OBS MULTATULI:

In OBS Multatuli, *Urban context* has the most mentioned values amongst the three groups with 38 mentioned values in total. In this category, the sub-category of *School in urban design* has the most number of values with 14 numbers. The second category with more values is *Typology* with 37 mentioned values. In this category the most values are regarding the *H-schools*. The *Building elements* has the least values with the number of 28. In this category, the most mentioned values are regarding the *Interior* (Fig. 3.8).

Here, an explanation is given for the most mentioned sub-category in each group:

School in urban design:

Similar to Slotermeer school, also in OBS Multatuli, school in urban design has the most mentioned values. Even the values that are mentioned regarding this sub-category are mostly the same as the values that are mentioned in Slotermeer school. For instance, dedication of large areas to schools, distribution of the primary schools and kindergartens in the district. Beside the values that are mentioned in Slotermeer school, here it is emphasized that, significance of the building, as a green oasis and social meeting point, is in the interplay between building, district and green zone. So it can be concluded that, generally, H-school of AUP areas are playing an important role in the neighborhood.

H-schools:

This sub-category has the most mentioned values in the category of *Typology*. The mentioned values are as follows:

OBS Multatuli is the first of the new series of Amsterdam ‘permanent’ school of Public Works and generally H-schools are the successors of the famous Eerste Openluchtschool schools by architect Jan Duiker. OBS-Multatuli expresses the characteristics of the post-war time that it was designed in, when much importance was given to light and air during the design of the school. Furthermore, it is mentioned that this school has typological value as H-school.

Interior:

Sub-category of interior, in OBS Multatuli has the most number of values that are mentioned in the text. The values are exactly the same as the values in Slotermeer school; brightness, being spacious and being entirely in its original state.

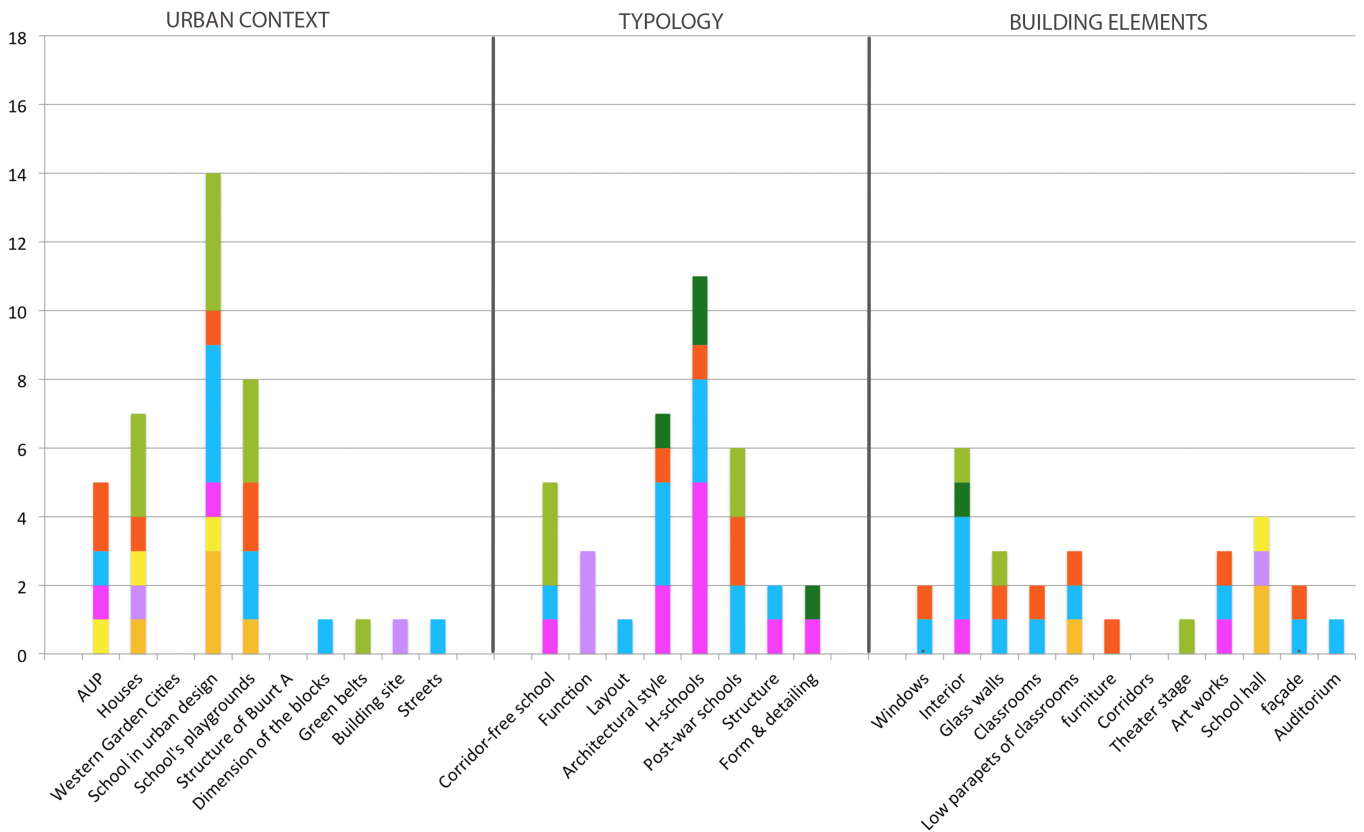


Figure 3.8: Dispersion of the attributes amongst the sub-categories in OBS Multatuli

3.2.6 HERMAN DE MONSTRAAT 1:

In Herman de Monstraat 1, *Urban context* has the most mentioned values amongst the three groups with 13 mentioned values in total. In this category, the sub-category of *School in urban design* has the most number of values with 7 numbers. The second category with more values is *Typology* with 8 mentioned values. In this category the most values are regarding the *H-schools*. The *Building Elements* has the least values with the number of 4 (Fig. 3.9).

School in urban design:

According to the text, schools are important in the whole anchor of the neighborhood and they are

of a great importance for the urban composition. Furthermore, the text emphasizes that that the design of the schools was regarded as an important social task.

H-schools:

The school represents architectural value as an example of new type of school; H-schools. And besides, the text states that there is only small number of preserved H-schools and the type is increasingly rare.

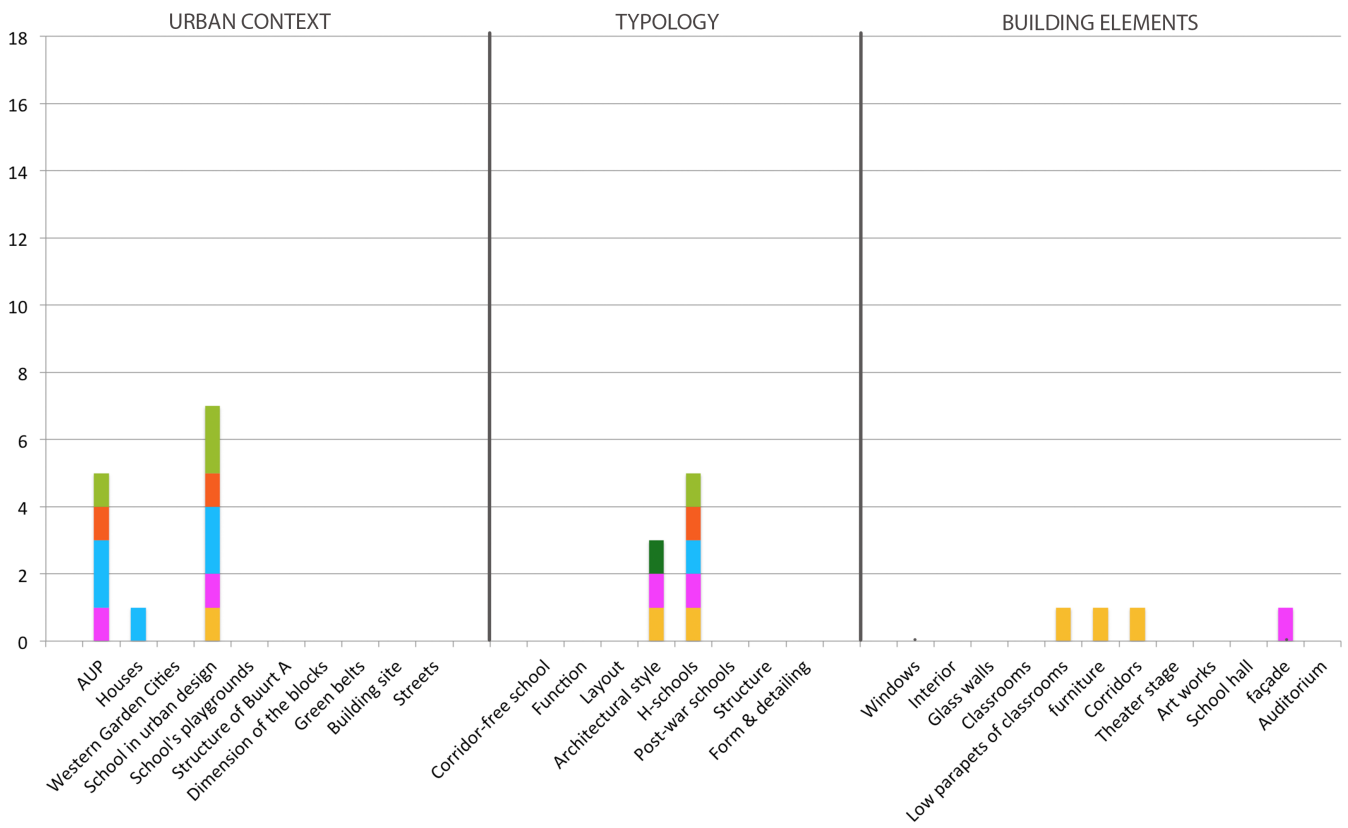


Figure 3.9: Dispersion of the attributes amongst the sub-categories in Herman de Monstraat 1

3.2.7 COMPARATIVE ANALYSIS OF SCHOOLS:

Comparing the three H-schools makes clear that the most mentioned values in all the three texts are in the category of **Urban Context**. Moreover, in all the three schools, the sub-category of **School in urban design** has the most mentioned values (Fig. 3.10). This reveals the fact that, these schools play an important role in the urban design of the neighbourhoods, for example, the school's building and also the greenery that surrounds it contribute to the openness of the neighborhood.

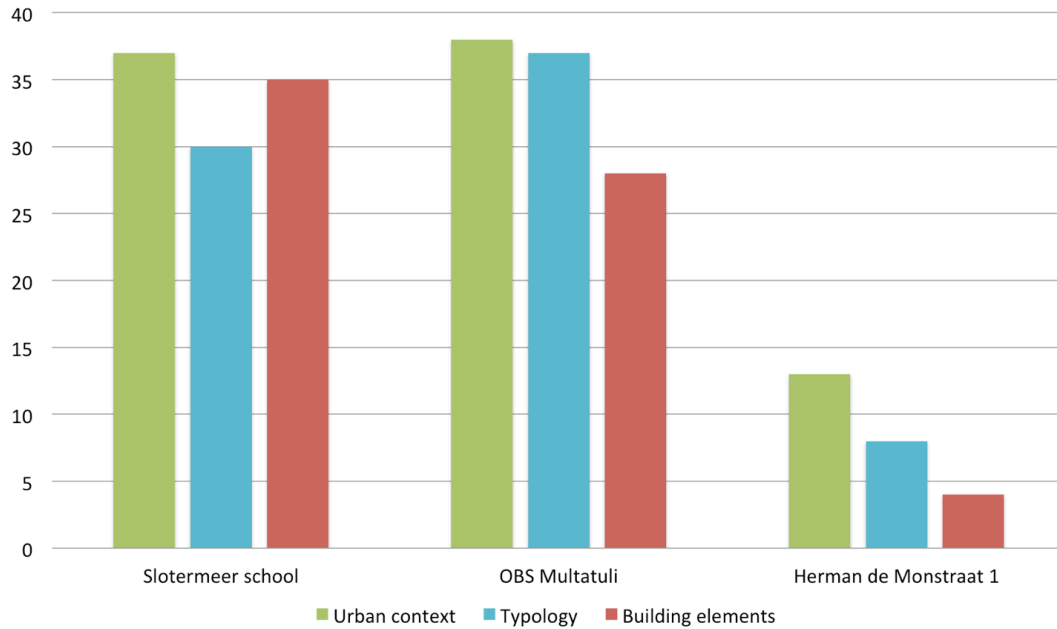


Figure 3.10: Dispersion of the attributes amongst the sub-categories in Sloterveer school

Sloterveer school and OBS Multatuli have many similar values (Fig. 3.11). Most of the values in *Urban context*, in OBS Multatuli (number of 18 of 20) are the same as the values in Sloterveer school. Moreover, in other two categories there are also many similar attribute and values. However, there is not any similar values between the Herman de Monstraat 1 and the other two schools.

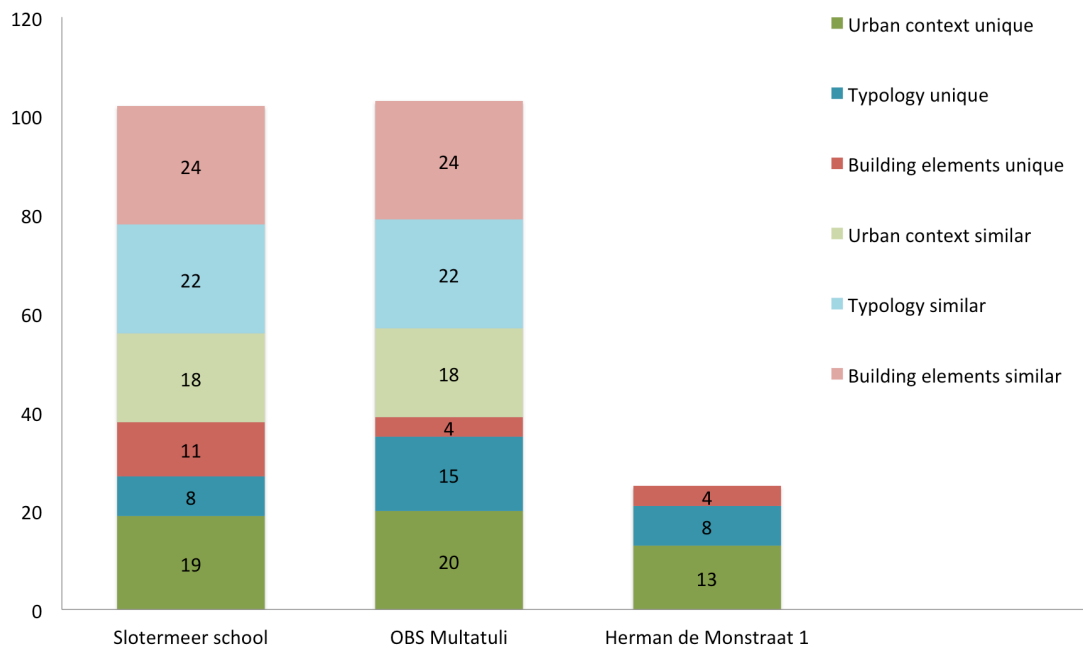


Figure 3.11: Many similar values in OBS Multatuli and Slotermeer school

3.2.8 CONCLUSION:

Slotermeer school and OBS Multatuli have approximately the same amount of primary values and also in both schools, *aesthetical*, *ecological* and *scientific* values have the biggest share of the all values, respectively.

Two schools of Slotermeer and OBS Multatuli have approximately the same amount of words (2817 and 3168 words) and attributes, but Herman de Monstraat 1 has less than one third (945 words) of the other documents words, this raise the question that if this fact means there exist less values in this school in comparison with the other two. However, more clarity in the text is needed in relation to this fact.

The texts for two schools of Slotermeer school and OBS Multatuli have the same headings, Urban context, Building type and building history in outline, Architectural appearance (with exterior and interior subtitles), Cultural-historical context and conclusion. The text regarding Herman de Monstraat is almost identical, however, it does not have the Building type and building history in outline header.

According to the figure 3.3, there are more than 55% of the quotes that express the same attribute and values in OBS Multatuli and Slotermeer school, therefore it can be concluded that there are several common characteristics in H-schools.

More than 80% of the total values in all of the three schools are real values. This indicates that the texts regarding the inscription of these H-schools are clear and reliable, as they do not leave a reader many vague statements that make it hard for him to extract the attributes and values within the text. As mentioned, *aesthetical* value is the most mentioned values amongst all of the 8 primary values. This is mainly because the texts reveal that in many different aspects of the building that are investigated, there is a concept behind. For instance, in Slotermeer text it is mentioned:

'(In AUP area) kindergartens and primary schools were distributed in the district for the youth to keep the distances between home and school as short as possible.'

This quote mentions a concept and an idea behind the fact that schools and kindergartens are distributed in the neighborhood, so *aesthetical* value is assigned to it.

This resulted in many attributes that are assigned with *aesthetical* value, because they express the architect's ideas and materialization of his conceptual imagination.

Ecological values are the second primary values that are mentioned more in texts for Sloterveer school and OBS Multatuli. This comes mainly from a harmony between the building and its environment. H-schools are known for providing a great connection between the building and its surrounding. Besides that, greenery that surrounds the building has also a role in the neighborhood, because it contributes to the neighborhood openness. In general, there is an intense connection between the H-schools and their surrounding, and also the greenery plays an important role in the neighbourhoods, so this leads to many attributes that are mentioned in the texts assigned with ecological value.

OBS Multatuli has the most mentioned attributes amongst the three schools with 27 sub-categories that are mentioned in the text. Sloterveer school has 23 sub-categories that have mentioned values, while Herman de Monstraat 1 has only 9 sub-categories.

In all of the three schools, the *Urban Context* category has the most values amongst the three main categories. This represents the fact that urban design of the area and attributes regarding the urban context, like the role of the school in the urban context, has a great matter. For instance, dedication of large areas to schools, distribution of the primary schools and kindergartens in the district are two values that are mentioned for both Sloterveer school and OBS Multatuli. So it can be concluded that H-school of AUP areas are playing an important role in the neighborhood.

3.2.9 DISCUSSION AND RECOMMENDATION:

As the document of Herman de Monstraat 1 is too short in comparison with the other two schools, further researches are recommended to investigate the reason why it has much less amount of words and therefore attributes, although they are all municipal monuments. The fewer amounts of words can be interpreted as lack of a clear structure for the parties in charge of assessing the cultural significance and writing the texts. It can also be interpreted as generally less valuable attributes exist in Herman de Monstraat 1. However, in order to make clear for the reader, the reason of this difference should be mentioned in the texts.

Many of the attributes and values are the same in Sloterveer school and OBS Multatuli, so it can be concluded that there are several common characteristics amongst the H-schools. So it is recommended that, for inscription texts for H-schools, there will be a general text about the H-schools and the attributes that they have in common (like attributes regarding AUP, typology, etc.) and beside that a specific text regarding the attributes and values that are specially exist in a specific school. This provides a better overview on the attributes that are the same and the attributes that are different amongst the schools that have the same typology and therefore many similar characteristics.

Although, the ratio of the assumed and real values in the schools reveals the fact that texts are noticeably clear for the reader in terms of understanding the values. However, it is recommended that writers of the texts make it more specified for each and every attribute why exactly they are valuable in order to avoid misinterpretation amongst the readers.

There are some values that are ambiguous in the texts. For instance, it is mentioned that "the school which still has the character of youthful openness and cheerfulness...", but it is not clear that if this value is according to the relation to the greenery, or the existence of windows on two sides of the classrooms or other facts. So it remains vague for the reader to understand where this value comes from. Also when the text indicates that the school is cheerful, but without mentioning the reason, it makes the value subjective to some extent because it is not specifically mentioned why the school is

assigned with this value.

The recommendation in this case is using clear adjectives and certain reasons in the texts, to prevent misinterpretations amongst readers and HIA parties why a value is assigned with an attribute.

There are numbers of attributes that are mentioned in one school and remain unmentioned in other schools. For instance, for the sub-category of form and detailing, there are mentioned values for it in OBS Multatuli, while there is not any value for it in Slotermeer school. However, it is not clear for a reader if this difference is coming from a lack of structure in the texts or it implies that there is not any value regarding the form and detailing in Slotermeer school.

So it is recommended that there will be a thorough list of attributes in relation to schools for the parties who are in charge of writing the inscription texts, in order to make it specified why no value is mentioned for a certain attribute in one school while it is mentioned for another school.

4 HERITAGE IMPACT ASSESSMENT:

Slotermeer school is recently has undergone an intervention that led to build a new exterior addition next to the old building. This addition is attached to the old building, with a corridor in between that connects the two building. In order to assess the impact of this new addition on the old building, the attributes that are changed amongst the all attributes that are mentioned for Slotermeer school are explored and the magnitude of the impact on each of them is assessed. According to the suggested method of ICOMOS for assessing the magnitude of the impact, there are five scales that express the extent that an intervention has an impact on the old building: No change, Negligible change, Minor change, Moderate change and Major change (Table. 4.1).

Table below is derived information from the document of ICOMOS (ICOMOS, 2011) regarding the assessment of magnitude of the impact for “built heritage or historic urban landscape” attributes:

Table 4.1: 5-scale for assessment of magnitude of impact, derived from (ICOMOS, 2011)

Impact grading	Description
Major	Change to key historic building elements that contribute to OUV, such that the resource is totally altered . Comprehensive changes to the setting.
Moderate	Changes to many key historic building elements, such that the resource is significantly modified . Changes to the setting of an historic building, such that it is significantly modified .
Minor	Change to key historic building elements, such that the asset is slightly different . Change to setting of an historic building, such that it is noticeably changed .
Negligible	Slight changes to historic building elements or setting that hardly affect it.
No change	No change to fabric or setting.

According to this method there is not a clear definition of the terms like “slight changes”, “noticeably changed”, etc. This can be resulted in different interpretation from one person to another. Therefore, in this research for the attributes that can be measured by numbers, the percentage of the change is counted in order to represent why a specific scale is assigned to an attribute. In this case, when 1% - 10% of the attribute is altered, ‘negligible change’ is considered for the magnitude of impact. ‘Minor change’ is assigned to the attribute when 11% - 30% of the attribute is changed, 31% - 70% will represent ‘moderate change’ and 71% - 100% will show ‘major change’. Clearly, when 0% of the attribute is changed, ‘no change’ is assigned to that attribute (Table. 4.2). Furthermore, for each altered attribute, a clear statement of “what” and “how” is given.

Table 4.2: Magnitude of impact

No change	Negligible change	Minor change	Moderate change	Major change
0%	1% - 10%	11% - 30%	31% - 70%	71% - 100%

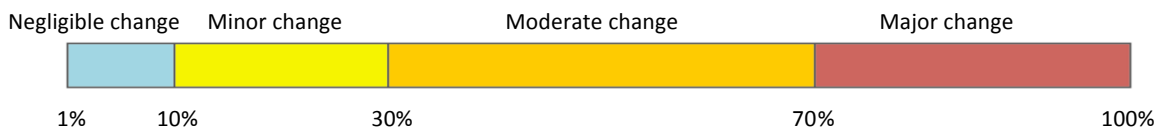


Figure 4.1: Assigned percentage for each scale of magnitude of an impact

4.1 URBAN CONTEXT:

This category has the most altered attributes amongst the three categories. In total, five attributes have altered after building the new exterior addition. Character of youthful openness and cheerfulness, acting as a grateful architectural variety in the neighborhood, lying freely in a park setting, exposed position of the building and contribution of the school to the openness of the neighborhood are the changed values in this category. The table below represents the changed attributes and values in this category.

Table 4.3: Heritage impact assessment on the attributes regarding the Urban context

	Quote	Attribute	Value
1	The schools, which still have the character of youthful openness and cheerfulness, act as a grateful, architectural variety in the neighborhoods.	The schools (of AUP)	still have the character of 'youthful openness and cheerfulness,
2	The schools, which still have the character of youthful openness and cheerfulness, act as a grateful, architectural variety in the neighborhoods.	The schools (of AUP)	act as a grateful, architectural variety in the neighborhoods.
3	For schools, large areas were reserved, so they came to lie freely and as much as possible in a park setting.	large areas for the schools (of AUP)	they came to lie freely and as much as possible in a park setting.
4	The urban significance of the school building was also important for health reasons and was reflected in the exposed position on a lawn.	The urban significance of the school building	exposed position on a lawn.
5	The school playgrounds and fields had to contribute to the openness of the district.	The school playgrounds and fields	contribute to the openness of the district.

No change	Negligible change	Minor change	Moderate change	Major change
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1: Having a character of youthful openness and cheerfulness

H-schools are considered as having a character of “openness and cheerfulness”.

This value is ambiguous, because there is not any specific attribute mentioned in the text that conveys this value. However, openness and cheerfulness can be related to the ratio of the windows in the façades (that results in relation of the interior with exterior), or it can be dependent on the amount of greenery that surrounds the school, etc.

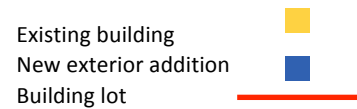
In this research, the two factors of relation of the building with the greenery and ratio of the windows in the façades are considered as main attributes that are conveying the value of openness and cheerfulness.

- Amount of greenery that surrounds the school:

In Slotermeer school, the new addition occupies a small space (420 m²) in the lot. Before building the new addition, it was approximately 6445 m² free space around the building, now as the new addition occupies 420 m² of the surface on the ground, this amount is reduced to approximately 6000 m² (Fig. 4.2) In other words, the new addition occupies around 6.5% of the site.



Figure 4.2: New Addition occupies 6.5% of the building lot – SC: 1:2000



- Ratio of the windows in the façades:

The new addition also altered the windows in the eastern part of the rear building. For instance, the windows of the gymnasium that used to open to an open-space, now open to the corridor between the old and new building. As the relation of the interior part of the building with the outside is altered in the rear building, it can be mentioned that amongst all of the four main façades that together provide the relation of the building with outside, approximately half of one of the façades has been altered after building new exterior addition (Fig. 4.3). Therefore, it can be concluded that around 12% of the whole façades is altered.

In total, two main attributes have changed that are considered as conveyor of the value of openness and cheerfulness. One is altered 6.5% and the other is changed 12%, so in general 18.5% of the whole attributes are altered and therefore, **minor change** is considered for this value.

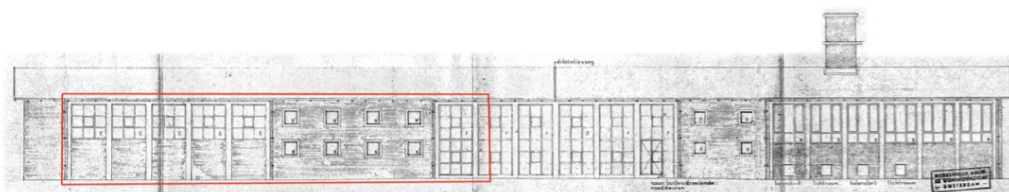


Figure 4.3: Windows within red lines no longer open to outside after building the new addition, SC: 1:500

2: Acting as a grateful, architectural variety in the neighborhood

H-schools are meant to act as a grateful, architectural variety in the neighborhood. This attribute is also ambiguous to some extent, because it is not expressed in the text if this variety comes from the shape of the building or characteristics of the façade, etc. In this research two factors of visibility of the H-shape for an observer that walks on the main adjacent street (Burgemeester Fockstraat), and also the main characteristic of the façades, rhythm of rectangular shapes, are taken into account as the main conveyors of this value.

- Visibility of the H-shape for an observer:

Visibility and how an observer perceives the H-shape are altered after building the exterior addition. In the Figure 4.5, 4.6 and 4.7, it is evident that the H-shape is only recognizable from the point C (Fig. 4.4). And as the new addition is located besides the old building, it is influenced the understanding of H-shape. However, assigning a percentage to the magnitude of change in this attribute is difficult. But, what is evident is that if the new addition would have shifted more to the backside or it would have not been as high as the main building, the effect would be less. Moreover, if the new exterior addition was not attached to the old building, the visibility of H-shape was less affected. In this case, because percentage assigning is hard and the asset is significantly modified, moderate change is considered. In order to be able to consider a numerical indicator for this attribute, the average of the moderate change, 50%, is considered for this attribute.

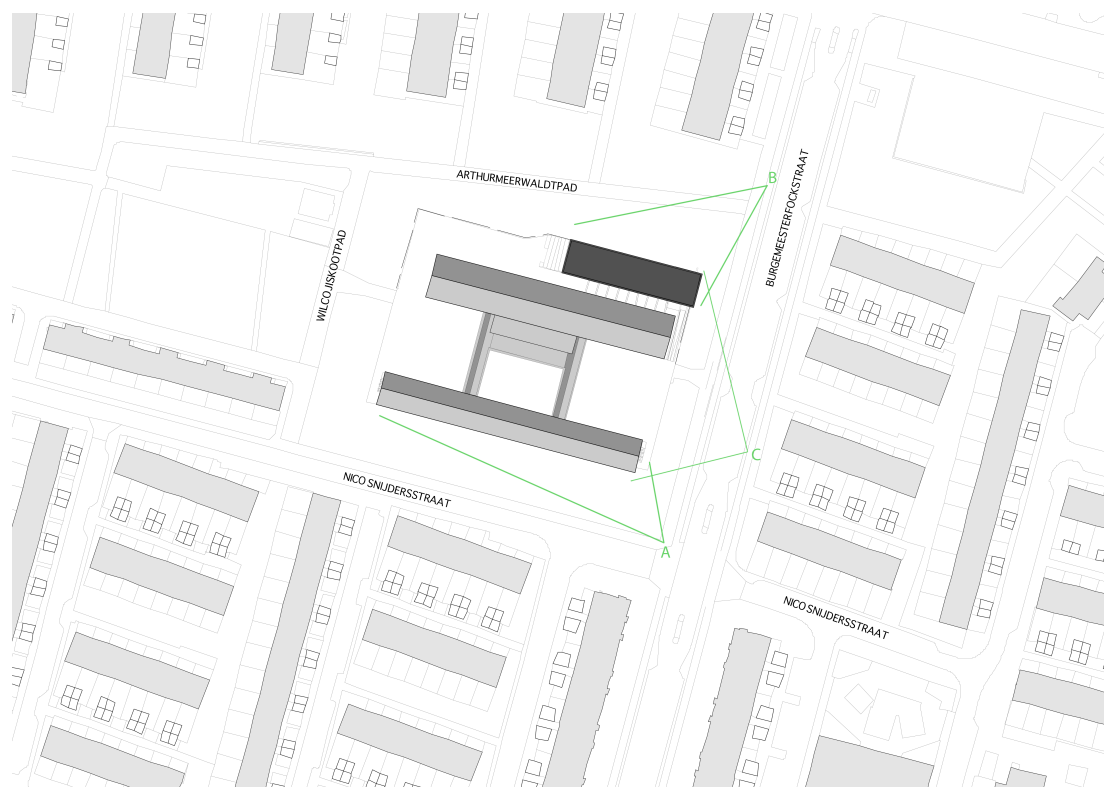


Figure 4.4: From point C the H shape is visible, SC: 1:2000



Figure 4.5: View of the school from B



Figure 4.6: View of the school from A



Figure 4.7: View of the school from C

- Rhythm of rectangular shapes in façades:

Besides the visibility of the H-shape, one other important factor that is mentioned in the text about the façades of the building is rhythm of rectangular shapes of the windows. And as the new exterior addition is attached to the building, it resulted in covering half of the front façade of the rear building. This rhythm is visible in four main facades (Fig. 4.8 to Fig. 4.11). The only façade that is influenced by the new exterior addition is the front façade of the rear building (Fig. 4.11). In this façade, the new exterior addition covers nearly half of the all windows, so it can be derived that amongst the four main façades that convey this value, nearly half of one of the façades has been altered, so 12% is considered for the magnitude of the impact.

In general, as the first conveyor is changed 50% and the second one is changed 12%, in general the main attribute can be considered as 62% changed. Therefore, **moderate change** is considered for this attribute.



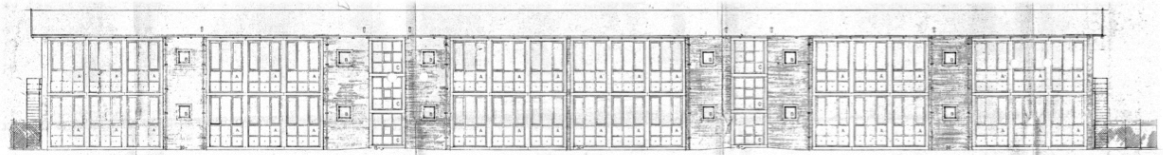


Figure 4.8: Front building, front façade, SC: 1:500

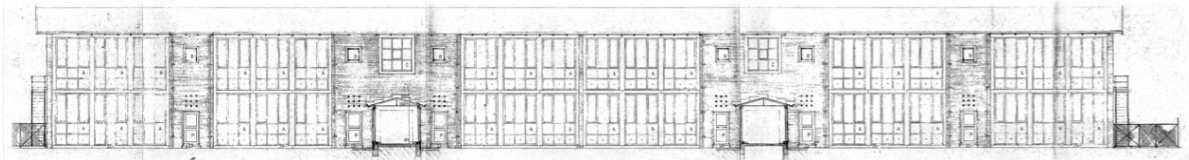


Figure 4.9: Front building, rear façade, SC: 1:500

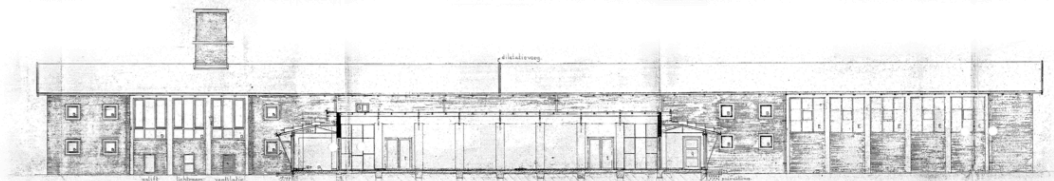


Figure 4.10: Rear building, rear façade, SC: 1:500

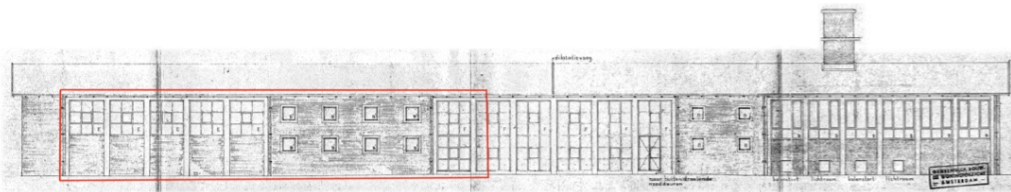


Figure 4.11: Rear building, front façade, SC: 1:500

3: lying freely in a park setting

According to the description of the Slotermeer school, in the urban design of AUP, large areas are dedicated to schools, therefore they lie freely in the site and as much as possible in a park setting. However, if the new addition occupies the site of the school, they influence this basis of the design of the AUP schools.

Before building the new addition it was approximately 6445 m² free space around the building, now as the new addition occupies 420 m² of the surface in the ground, this amount has been reduced to around 6000 m². In other words, the new addition covers around 6.5% of the site and therefore **negligible change** is considered for this attribute.



4: Exposed position of the building on a lawn reflects the urban significance of the school

The school building is positioned freely on a lawn and it is surrounded by greenery from all sides. The building's exposed position on a lawn is evident on all of the sides of the building. However, after the new addition was built next to the building, the relation of the building with outside is corrupted in the eastern part of the rear building. According to the figure 4.12, the red line indicates the altered part and green line indicates the unchanged part of the building. Approximately 12% of the whole façades is changed after building the new addition, so **minor change** is considered for this attribute.



Figure 4.12: In red parts the relation with outside is corrupted, SC: 1:200



5: Contribution of the playgrounds and fields to the openness of the district

The school playgrounds and fields have to contribute to the openness of the district. In Slotermeer school, the new addition does not influence the playgrounds of the school, as playgrounds are located on the other sides of the building (Fig. 4.13), but it influences the fields that are surrounding the building, because it covers the 6.5% of the northern field (as explained for attribute 1). Therefore **negligible change** is considered for this attribute.



Figure 4.13: New addition occupies the field on the northern part of the building site

- Existing building
- New exterior addition
- Playgrounds
- Building lot

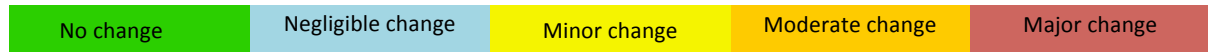


4.2 TYPOLOGY:

In the second category, typology, there is one attributes that is changed after building the new exterior addition and that is optimized light-inlet.

Table 4.4: Heritage impact assessment on the attributes regarding the Typology

	Quote	Attribute	Value
1	The advantages of a corridor-free school are that the light-inlet and the air circulation are optimized.	A passage -free school	optimized light-inlet



1: optimized light-inlet in corridor-free schools

Every part in a corridor-free school has an optimized light-inlet because of the windows that exist in all façades. However, the windows within the red dotted line in the picture of the façade below are now open to the space between the old building and the new addition, therefore they do not get as much sun as they used to get before building the new addition. Although they are not fully deprived from the light as they get some light from the skylights in the space between the old and new.

In general, windows of the four main façades are in charge of light-inlet of the whole interior, and approximately half of the windows in one façade are blocked from the direct sunlight. Therefore, it can be concluded that around 12% of all the windows are altered. So, **minor change** is considered for this attribute.



Figure 4.14: The windows in the rear building are getting light from skylights of corridor

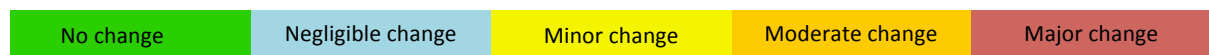


4.3 BUILDING ELEMENTS:

In the third category, building elements, there are three attributes that have altered in the school after the new exterior addition was built next to the old building. Brightness of the interior, interplay between inside and outside and rhythm of rectangular shapes in the façades are the altered values in this group. The table below represents the changed attributes and values in this category.

Table 4.5: Heritage impact assessment on the attributes regarding the Building elements

	Quote	Attribute	Value
1	The interior is spacious, bright and entirely in its original state.	The interior	bright
2	The large glass walls give a transparent effect in a beautiful interplay between inside and outside.	The large glass walls	(make a) beautiful interplay between inside and outside.
3	The design of this school was determined by a rhythm of rectangular modules in the form of windows with white grooves that evokes an association as if it is influenced by a painting by Mondrian.	Rhythm of rectangular modules in the form of windows with white grooves	evokes an association as if it is influenced by a painting by Mondrian.



1: Brightness of the interior

Sufficient distance should be kept when building a new exterior addition next to the old building in order to maintain the brightness of the interior. However, as mentioned in the previous part, some of the windows in the front façade of the rear building now open to the space between the old building and the new addition, therefore they do not get light as much as they used to get before building the new addition (Fig. 4.14). In the Fig. 4.14 the windows on the right side of the picture (old building) are opening to the corridor, rather than outside. However, these windows are not fully deprived from the light, as they get some light from the space between the old and new. As the building get light mostly from the 4 main façades (Fig. 4.8 to Fig. 4.11), and after building the new addition, less than half of one of the façades has been affected, it can be concluded that less than 12% of the attribute is altered. Therefore **minor change** has been considered for this attribute.



2: Beautiful interplay between inside and outside

The building's large windows allow interplay between inside and outside in each place of the building. The possible impact of new exterior addition in this case could be, for example, decreasing transparent surfaces and therefore, reducing the connection between inside and outside through the windows (Fig. 4.15).

The new exterior addition blocks some of the windows in the front façade of the rear building; the blocked windows belong to the gymnasium and a small part of the auditorium. However, the other façades are remained intact and they are not influenced by the new exterior addition. It can be concluded that approximately 12% of the whole main façades have altered since building the new addition. Therefore, in general this attribute has undergone a **minor change**.



Figure 4.15: Relation of the building with outside is destroyed in the red part of the old building



3: Rhythm of rectangular modules in the form of windows

Rhythm of the rectangular modules in the windows is also valuable in the school because it evokes an association as if this rhythm is influenced by a painting by Mondrian. This feature can be disregarded if the new exterior addition, for instance, interrupts the harmony in the façade of the existing building. This rhythm is visible in four main façades (Fig. 4.8 to Fig. 4.11). The only façade that is influenced by the new exterior addition is the front façade of the rear building (Fig. 4.11). In this façade, the new exterior addition covers nearly half of the all windows, so it can be derived that amongst the four main façades that convey this value, nearly half of one of the façades has been altered, so 12% is considered for the magnitude of the impact. In other words, **minor change** is assigned for this attribute.



4.4 CONCLUSION:

Interventions in schools are inevitable. In fact, many schools from the 1960s, 1970s and 1980s are in need of intervention – often, in relation to new and other (education related) functionality. (Van der Pol, Mol & Broekhuizen, 2012). However, the importance of the building in terms of cultural significance should be complimented or at least not disregarded in any intervention that occurs in a building. Especially in post-war areas that generally it is not clear sufficiently which cultural historic values are worth preserving and how these areas can function after a transformation (Blom, 2013a), more attention should be paid during the process of intervention.

In order to answer the research question; “*What is the impact of new exterior additions on the cultural significance of H-schools in New-West?*” three H-schools that are municipal monuments were taken as case studies and their inscription texts were analysed to find the main attributes and possibly common values amongst them.

The analysis revealed that, amongst the eight primary values, all the schools have *aesthetical value* as the most mentioned value. That is mainly because in many aspects, they represent and embody the ideas and imagination of the architect. Second most repeated value is *ecological value*, and this comes from a close relation of the schools with the greenery that surrounds them and also the ideas of architect to take advantage of the natural resources, like light and fresh air.

Furthermore, the cultural significance analysis revealed that in Slotermeer school and OBS Multatuli there are more than 55% of the quotes that convey attributes and values that are exactly similar in these two schools. And this indicates that they are sharing many similar characteristics.

After finding the values and attributes in the schools, one of them (Slotermeer school) is chosen to do a heritage impact assessment on. For this, the suggested method of ICOMOS is used with some modifications in order to reduce the shortages that were noticed during the process of HIA. The HIA showed that 9 attributes out of 53 attributes are altered after building the new exterior addition next to the old building. In other words, approximately 17% of the all attributes are changed.

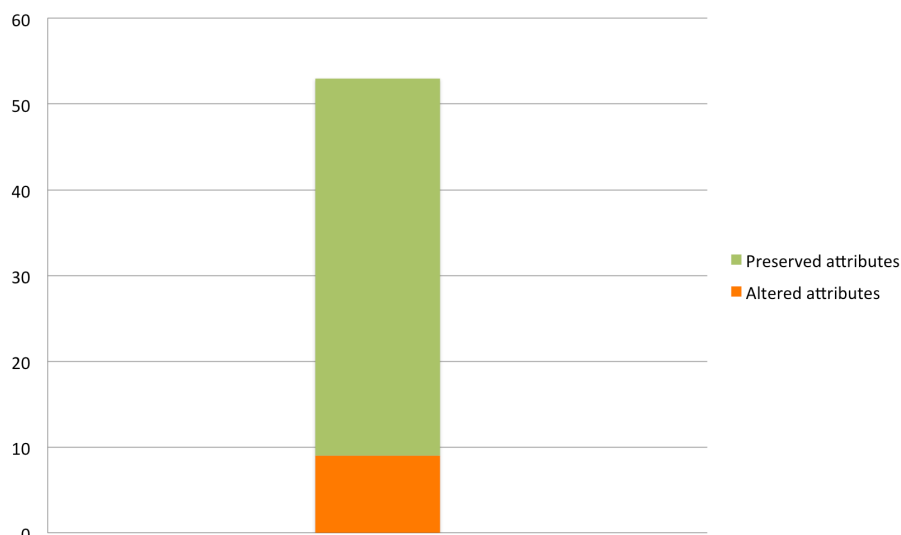


Figure 4.16: 17% of all the attributes are changed after an intervention in Slotermeer school

Most of the changed attributes are in the *urban context* category, with the number of five altered attributes. Regarding the attributes in the category of *typology*, there is one altered attribute and in the *building elements* category, there are three changed attributes. Some attributes have changed because of multiple reasons and some have altered because of one reason. Amongst the different

reasons, decreasing the amount of windows and transparent surfaces is the most important factor, because it influenced 4 attributes. Occupying the green surfaces around the school is the second most influential factor, because it has an effect on 3 altered attributes. Rhythm of rectangular shapes and visibility of the H shape are the other two reasons that have the least influence on the changed attributes.

So it can be concluded that if the new exterior addition was located in a way that it would not cover the façades of the rear building, the effect on the amount of windows and rhythm of rectangular shapes would have decreased a lot. Secondly, if the new exterior addition were located on top of the building, rather than next to the building, the effect on the greenery that surrounds the building would be abolished. Undoubtedly, if it was located on top of the building it could also led to other effects on the other attributes. Thirdly, if the new exterior addition had placed with more distance from the main street (Burgemeester Fockstraat), the visibility of H shape from the main street would not be affected.

Table 4.6: Heritage impact assessment on the attributes regarding the Building elements

		Quote	Attribute	Value
URBAN CONTEXT	1	The schools, which still have the character of youthful openness and cheerfulness, act as a grateful, architectural variety in the neighbourhoods.	The schools (of AUP)	still have the character of youthful openness and cheerfulness,
	2	The schools, which still have the character of youthful openness and cheerfulness, act as a grateful, architectural variety in the neighbourhoods.	The schools (of AUP)	act as a grateful, architectural variety in the neighbourhoods.
	3	For schools, large areas were reserved, so they came to lie freely and as much as possible in a park setting.	large areas for the schools (of AUP)	they came to lie freely and as much as possible in a park setting.
	4	The urban significance of the school building was also important for health reasons and was reflected in the exposed position on a lawn.	The urban significance of the school building	exposed position on a lawn.
	5	The school playgrounds and fields had to contribute to the openness of the district.	The school playgrounds and fields	contribute to the openness of the district.
TYPOLGY	6	The advantages of a corridor-free school are that the light-inlet and the air circulation are optimized.	A passage -free school	Optimized light-inlet
BUILDING ELEMENTS	7	The interior is spacious, bright and entirely in its original state.	The interior	bright
	8	The large glass walls give a transparent effect in a beautiful interplay between inside and outside.	The large glass walls	(make a) beautiful interplay between inside and outside.
	9	The design of this school was determined by a rhythm of rectangular modules in the form of windows with white grooves that evokes an association as if it is influenced by a painting by Mondrian.	Rhythm of rectangular modules in the form of windows with white grooves	evokes an association as if it is influenced by a painting by Mondrian.

Regarding the changed values, it can be stated that, *ecological* and *aesthetical* values are the most altered values after the new exterior addition was built next to the old building (Fig. 4.17). This is mainly because the building influences the relation of the building with its surrounding, by blocking some windows and also the fact that it occupied some parts of greenery. *Aesthetical* values changed are mainly because the building influence the main ideas and concepts behind the design of the building.

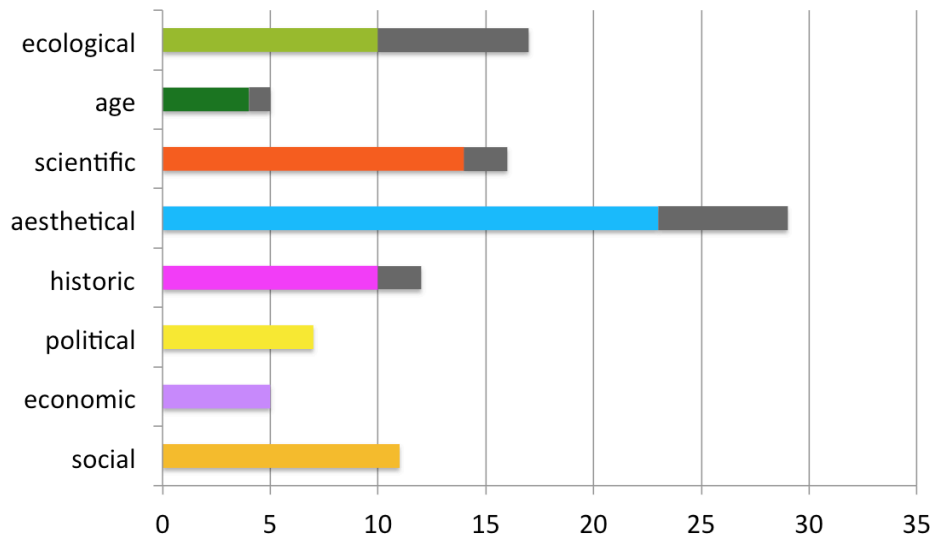


Figure 4.17: Ecological and Aesthetical values influenced by the intervention more than other values

4.5 DISCUSSION AND RECOMMENDATION:

Some values that are mentioned in the texts were hard to assess the impact on them. For instance, the text mentions: “the architecture of the building is clear and simple.” But being clear and simple can be in relation of the materials, layout, ornamentations, etc. So it is recommended that the evaluators of the municipal monument make clear and specific the definition of some adjectives and values that are mentioned in the texts to prevent confusion and different impressions amongst readers.

It is also recommended that there is a clear list of attributes for the people who write the inscription texts, in order to make it clear why no value is mentioned for a specific attribute in one school while it is mentioned for another school that has the same typology.

As the method of ICOMOS (ICOMOS, 2011) is specifically for the World Heritage Sites, adapting it for the case studies that are municipal monuments is also of a discussion. Besides, the definitions that are used in this method for assessing the magnitude of impact are not defined clearly. Therefore it can arise several interpretations amongst the readers. As there is not yet a clear method of HIA on the buildings and sites, which are national and municipal monuments, further researches are recommended in this relation.

As mentioned earlier, in this research the method of ICOMOS is applied with some modifications. The percentages were used in order to define a recognizable border between the different scales. However, further researches are recommended to explore the shortages of this method and improve the assessment of the impact.

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6 ABBREVIATION & ACRONYMS:

AUP: Amsterdam General Expansion Plan (Algemeen Uitbreidingsplan van Amsterdam)

BMA: Bureau of Monuments and Archaeology of Amsterdam (Bureau Monumenten en Archeologie)

ICOMOS: International Council on Monuments and Sites

CWM: Commission for Wealth and Monuments (Commissie voor Welstand en Monumenten)

RCE: National Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed)

RVO: National Entrepreneurial Office of Netherlands (Rijksdienst voor Ondernemend)

UNESCO: The United Nations Educational, Scientific and Cultural Organization

7 APPENDIX:

1: ICOMOS guide for assessing value of heritage assets

Grading	Archaeology	Built heritage or Historic Urban Landscape	Historic Landscape	Intangible Cultural Heritage or Associations
Very High	Sites of acknowledged International importance inscribed as WH property. Individual attributes that convey OUV of the WH property. Assets that can contribute significantly to acknowledged international research objectives.	Sites or structures of Acknowledged international importance inscribed as of universal importance as WH property. Individual attributes that convey OUV of the WH property. Other buildings or urban landscapes of recognised international importance.	Landscapes of acknowledged international importance inscribed as WH property. Individual attributes that convey OUV of the WH property. Historic landscapes of international value, whether designated or not. Extremely well preserved historic landscapes with exceptional coherence, time depth, or other critical factors.	Areas associated with Intangible Cultural heritage activities as evidenced by the national register. Associations with particular innovations, technical or scientific developments or movements of global significance. Associations with particular individuals of global importance
High	Nationally-designated Archaeological Monuments protected by the State Party's laws Undesignated sites of the quality and importance to be designated. Assets that can contribute significantly to acknowledged national research objectives.	Nationally designated structures with standing remains. Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. Conservation Areas containing very Important buildings. Undesignated structures of clear national importance.	Nationally designated historic landscape of outstanding interest. Undesignated landscapes of outstanding interest. Undesignated landscapes of high quality and importance, and of demonstrable national value. Well preserved historic landscapes, exhibiting considerable coherence, time depth or other critical factors.	Nationally designated areas or activities associated with globally important Intangible Cultural Heritage activities. Associations with Particular innovations, technical or scientific developments or movements of national significance Associations with particular individuals of national importance
Medium	Designated or undesignated assets that can contribute	Designated buildings.	Designated special historic landscapes.	Areas associated with Intangible Cultural

	significantly to regional research objectives.	Historic (unlisted) buildings that can be shown to have exceptional qualities or historical associations. Conservation Areas containing buildings that contribute significantly to its historic character. Historic townscapes or built-up areas with important historic integrity in their buildings, or built settings.	Undesignated historic landscapes that would justify special historic landscape designation. Landscapes of regional value. Averagely well preserved historic landscapes with reasonable coherence, time depth or other critical factors.	heritage activities as evidenced by local registers. Associations with particular innovations or developments of regional or local significance. Associations with particular individuals of regional importance
Low	Designated or undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.	“Locally Listed” buildings. Historic (unlisted) buildings of modest quality in their fabric or historical associations. Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings.	Robust undesignated historic landscapes. Historic landscapes with importance to local interest groups. Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.	Intangible Cultural heritage activities of local significance. Associations with particular individuals of local importance. Poor survival of physical areas in which activities occur or are associated
Negligible	Assets with little or no surviving archaeological interest.	Buildings or urban landscapes of no architectural or historical merit; buildings of an intrusive character	Landscapes little or no significant historical interest.	Few associations or ICH vestiges surviving
Unknown potential	The importance of the asset has not been ascertained.	Buildings with some hidden (i.e. inaccessible) potential for historic significance.	n/a	Little is known or recorded about ICH of the area

2: ICOMOS guide for assessing magnitude of impact

Impact Grading	Archaeological Attributes	Built heritage or Historic Urban Landscape Attributes	Historic landscape Attributes	Intangible Cultural Heritage Attributes or Associations
Major	Changes to attributes that convey OUV of WH properties Most or all key archaeological materials, including those that contribute to OUV such that the resource is totally altered. Comprehensive changes to setting.	Change to key historic building elements that contribute to OUV,, such that the resource is totally altered. Comprehensive changes to the setting.	Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit and loss of OUV.	Major changes to area that affect the ICH activities or associations or visual links and cultural appreciation.
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.	Changes to many key historic building elements, such that the resource is significantly modified. Changes to the setting of an historic building, such that it is significantly modified.	Change to many key historic landscape elements, visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character.	Considerable changes to area that affect the ICH activities or associations or visual links and cultural appreciation.
Minor	Changes to key archaeological materials, such that the resource is slightly altered. Slight changes to setting.	Change to key historic building elements, such that the asset is slightly different. Change to setting of an historic building, such that it is noticeably changed.	Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited change to historic landscape character.	Changes to area that affect the ICH activities or associations or visual links and cultural appreciation.
Negligible	Very minor changes to key	Slight changes to	Very minor changes	Very minor changes to

	archaeological materials, or setting.	historic building elements or setting that hardly affect it.	to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.	area that affect the ICH activities or associations or visual links and cultural appreciation.
No change	No change.	No change to fabric or setting.	No change to elements, parcels or components; no visual or audible changes; no changes in amenity or community factors.	No change

