

AN INTRODUCTION TO THE DEFENCE LINE OF AMSTERDAM v1.0

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AN INTRODUCTION TO THE DEFENCE LINE OF AMSTERDAM



The Defence Line of Amsterdam is a 135 kilometre long defensive ring around the Dutch capital. Between 1881 and 1914 the Dutch Department of War built a ring of forts and other defensive constructions around Amsterdam, circling the city at a distance of 15 to 20 kilometres. The area inside, called the 'national redoubt', was designed to be the final refuge for the government and armed forces of the Kingdom of The Netherlands. The size of this redoubt (ca. 900 km²) was such that they could be expected to hold their position for a prolonged period.

The Defence Line consists of 38 fortresses, 2 coastal forts and 6 batteries with a large number of sluices, auxiliary batteries and depots in support. The core of the line's defensive power, however, was formed by a strip of flooded (inundated) polder three to five kilometres wide.

Technological advances in artillery, infantry, and aeroplanes would eventually render the Defence Line redundant and its military relevance was diminished still further by the loss of external threats after the second world war, as former enemies joined forces in NATO.

The test of time: a bomb-proof shelter for artillery at Fort near Abcoude.



A typical Dutch overcast sky above Fort along the Drecht, near the town of Uithoorn. An enemy soldier would be hard put to see the fort, hidden in the landscape.

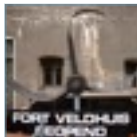
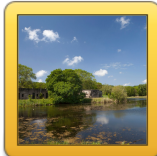
Even though its military purpose has ended, the Defence Line of Amsterdam still exerts considerable influence over Dutch life. Hardly any soldiers remain, but current spatial planning and infrastructure can, for a large part, be traced back to the line. At the time of the Defence Line's construction, a law instituted 'forbidden circles' around the forts, which were areas in which building was severely restricted in order to deny cover to an approaching enemy. Due to this 'Circle Act', hardly any building took place. In fact, new railways and

motorways were obliged to be built right next to existing forts in order to guard and defend accesses to the redoubt. These developments resulted in a green and open area in which the landscape remained relatively untouched and nature could largely take its course. A number of forts are owned by national and regional nature conservation organisations and in 1996 the Defence Line of Amsterdam was inscribed on UNESCO's World Heritage List because of its 'outstanding universal value'.

GALLERY 1.1 An impression of the current, varied Defence Line of Amsterdam for which we have to thank our forefathers.



The green atmosphere in Fort north of Spaarndam, situated in the recreational area between Haarlem and Amsterdam.



The forts are used for many purposes nowadays: childcare, physiotherapy, wine trading, wellness centre, hotel, restaurant, museum and art gallery are just a few examples.

Bike and foot paths guide the visitor through the green belt, formed by the presence of the Defence Line of Amsterdam. At some of the forts guided tours are given and the province of North Holland is working on the creation of three visitor centres.

The forts are undeniably the most visible elements of the Defence Line to have captured the imagination of the public. More

imagination is needed to perceive the Defence Line as a coherent whole and logical system that includes the inundations, but these truly are the essence of this unique fortification type.

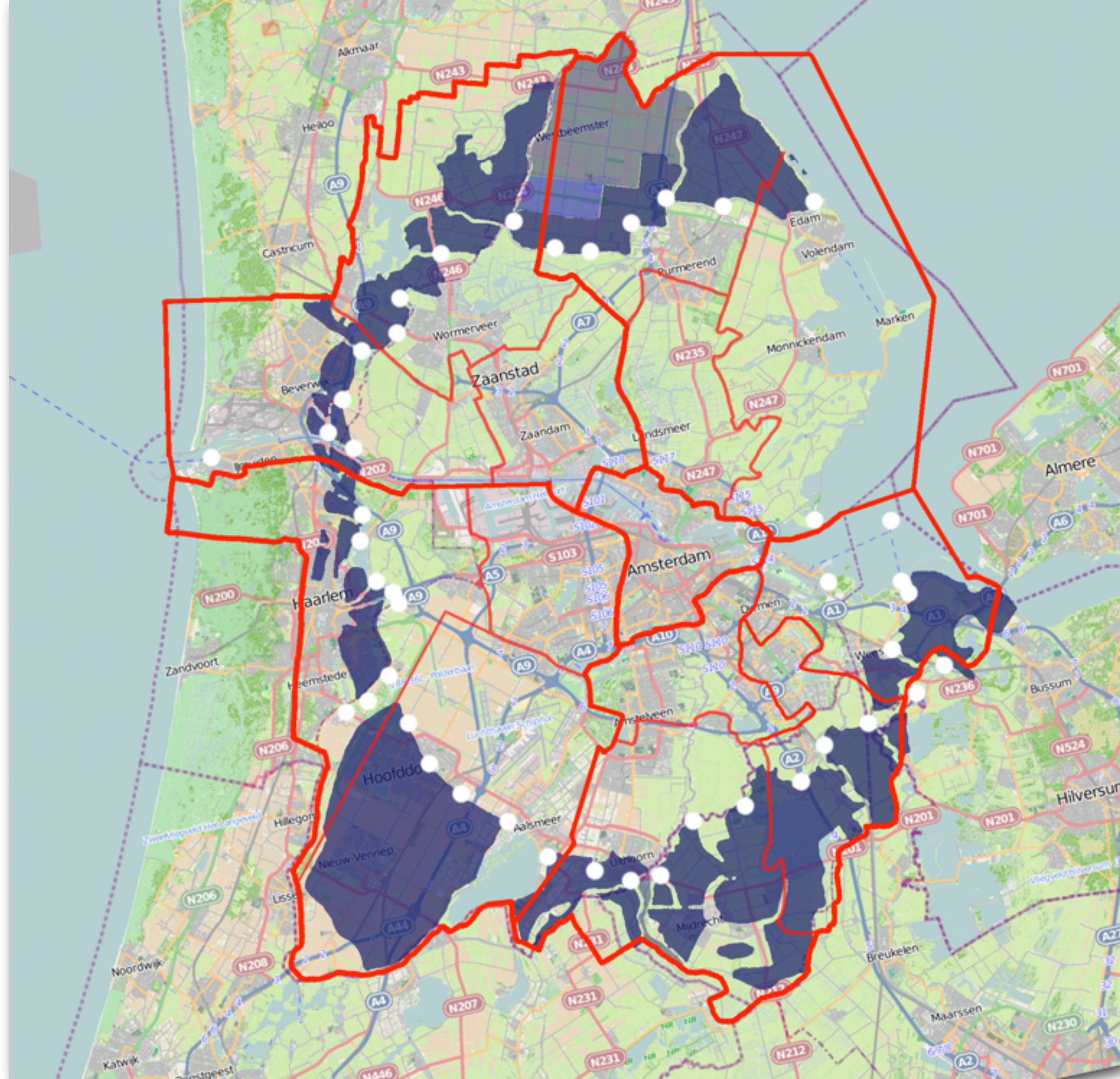
This iBook is meant as a quick introduction to the Defence Line of Amsterdam as a whole. For those who would like to know more, we would like to point you to the links at the end of the iBook for a wealth of background information. You will hopefully enjoy reading and afterwards see the area in a very different way.

Cyclists take a break on a terrace in front of the bomb-proof munitions depot Steenen Paal in the Assendelver Zeedijk.



An overview of the inundations and forts of the Defence Line of Amsterdam.

The boundaries of the Defence Line and its subgroups are marked by red lines.





2

PROLOGUE

Amsterdam probably dates from about the year 1000, as a settlement built on the banks of the Amstel river. At around 1275 a castle must have been built, which was quickly demolished again around 1300 and in 1346 the population of some 1000 inhabitants erected earthen city walls with palisades and three gate houses, but of these earliest walls no remnants exist.

The artillery batteries along the Gein River were originally designed for the Posten van Krayenhoff, the Defence Line's predecessor.



The Waag building in Amsterdam is the former St Antoniespoort.



Aerial photo of the Harlem bastion.



The Montelbaanstoren.

Building of the first stone walls, with an imposing series of towers and gates, started in 1481 and was finished by 1494. They protected the city in 'Holland' against the 'Utrechters' and 'Geldersen' (residents of today's Dutch provinces of Utrecht and Gelderland). At the time of completion these city walls were already outdated because of the introduction of gunpowder. Of these walls several parts still remain, such as the 'Schreierstoren', the 'St. Antoniespoort', 'Montelbaanstoren' and (a part of) the 'Regulierspoort' (Munttoren).

From 1609 to 1613 and again from 1658 to 1663 Amsterdam was transformed into a modern fortified city with earthen walls, 26 bastions and a wide moat, still recognisable as the Singel canal complete with undulations where the bastions used to be. 'Haarlem' bastion is particularly easily recognisable (see picture on the left).

Permanent fortifications circled fortified towns, but defence lines were normally only built when war had already broken out, as it could take months before hostilities actually started. As warfare became ever more dynamic and faster paced, however, the building of fortifications also required more time, so preparations had to start in peace time.



In August 1799 English and Russian forces landed on the Dutch coast near what is now Julianadorp. It was the first time Amsterdam had been attacked from the north and a long (26 km) defence line was built in the polders, the 'defence line of North Holland'. Inundations were guarded by 3000 to 4000 men, while the rest of the troops, some 22.000, took up positions in the dunes, from where an attack was expected. On assaulting the dune area, the English and Russian forces were repulsed near the village of Castricum and withdrew.

In the spring of 1800 the Dutch feared another English attack and so the front through the dunes was strengthened by building lunettes north of the village of Beverwijk. This defence line was later named the 'Line of Beverwijk'.

In 1805 the Dutch (Batavian) Republic expected yet again to be attacked by the English, while its own troops were fighting elsewhere under Napoleon. Partly because of this constant threat, in 1809 and 1810 the Dutch built an 'inundation-line' which currently carries the name 'Posten van Krayenhoff' after its architect, Baron Cornelius Krayenhoff.

The monument in memory of the Russian soldiers who died near the town of Bergen.

In 1830 Belgium seceded from The Netherlands. What was left of the little state of The Netherlands tried its best, as a buffer state between the major powers of Great Britain, France and Prussia/Germany, to keep out of European politics and its tensions. Plans to add teeth to this neutrality by building a robust defence force were thwarted by budget cuts.

The army and government identified Amsterdam as the best place for a national redoubt as it was of sufficient size to be able to survive for a considerable time. This led to the “Wet tot regeling en

voltooing van het Vestingstelsel” (Fortress Act) of 1874, in which it was established that a Defence Line of Amsterdam was to be built.

Construction was by no means undisputed. Before, during and after construction different political forces were convinced that forts were an old fashioned means of defence. They were convinced that the money would be better spent on soldiers in a field army.

Government and parliament chose to spend its budget on both.

The soldier, or living means of defence, with his artillery on top of a dead means of defence: probably Fort near Hinderdam on the Vecht river.





3

CONSTRUCTION

Although the decision making process regarding construction of the Defence Line was not finished, actual building activities began with Fort near IJmuiden. Its purpose was to defend the Noordzeekanaal, which had been finished in 1876. War Minister Reuther presented his plans for the Defence Line of Amsterdam in the budget on the third Tuesday of September 1880 (traditionally the Government presents its budget on this “prince’s day” every year).



Fort in the Botshol was never finished off with the addition of bomb-proof buildings. It is the best example of a defensible earthwork.

Before this act could be adopted however, the Second Chamber (lower of the two legislative houses) voted for further investigation in December 1880. A year later Reuther did get the approval of the Second Chamber, although now disagreement quickly developed on the subject of which type of fort was the best.

The subsoil of the designated locations for the forts was such that huge amounts of peat and clay were removed and replaced by sand. Using this method, the sand had to be left to

subside for a long time and piling gradually came to be preferred in later forts because sand was not always stable enough.

Fort near Abcoude was finished in 1886. A year earlier a report was published on a new, powerful, explosive shell and so construction of the other forts was halted. After extensive trials with this new shell at a shooting range at Schoorl, a different model of fort was adopted. This model was wider and not so deep, which in theory made it less vulnerable.



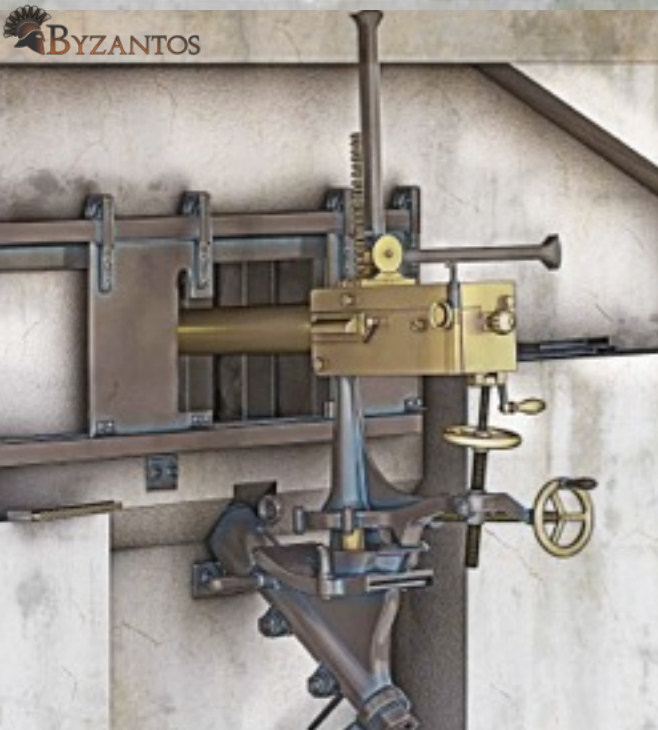
A computer rendering of a 6cm artillery for the rear defence of a fort.

War Minister Reuther's successor, Seyffardt, was in a hurry after all the delays. He decided to remodel the earthworks into defensible earthworks without buildings. This metamorphosis, named 'the little plan', was achieved between 1894 and 1897. At the same time the necessary construction for the flooding and other infrastructure was carried out.

The delay was caused by the need for the defence budget to be approved annually by an increasingly parsimonious Second Chamber. In 1897 it approved the construction of bombproof buildings on the Liede-Spaarndam line as well as at Vijfhuizen, Veldhuis, St. Aagtendijk and Velsen. Construction started on the latter because of the vulnerability of the narrow inundations at this point.

Most forts were equipped with two 6 cm guns in retractable turrets. Post 1907, forts were also equipped with machine gun mountings in the front wall and every 'gorge casemate' had room for two '10 cm bronze' or two 7 cm guns to cover the grounds to the next forts.

In addition, the 'gorge casemates' were equipped with at least two machine gun mountings for short range support.



A computer rendering of the Gardner M'90 machine-gun.



A building with a risen disappearing cupola.

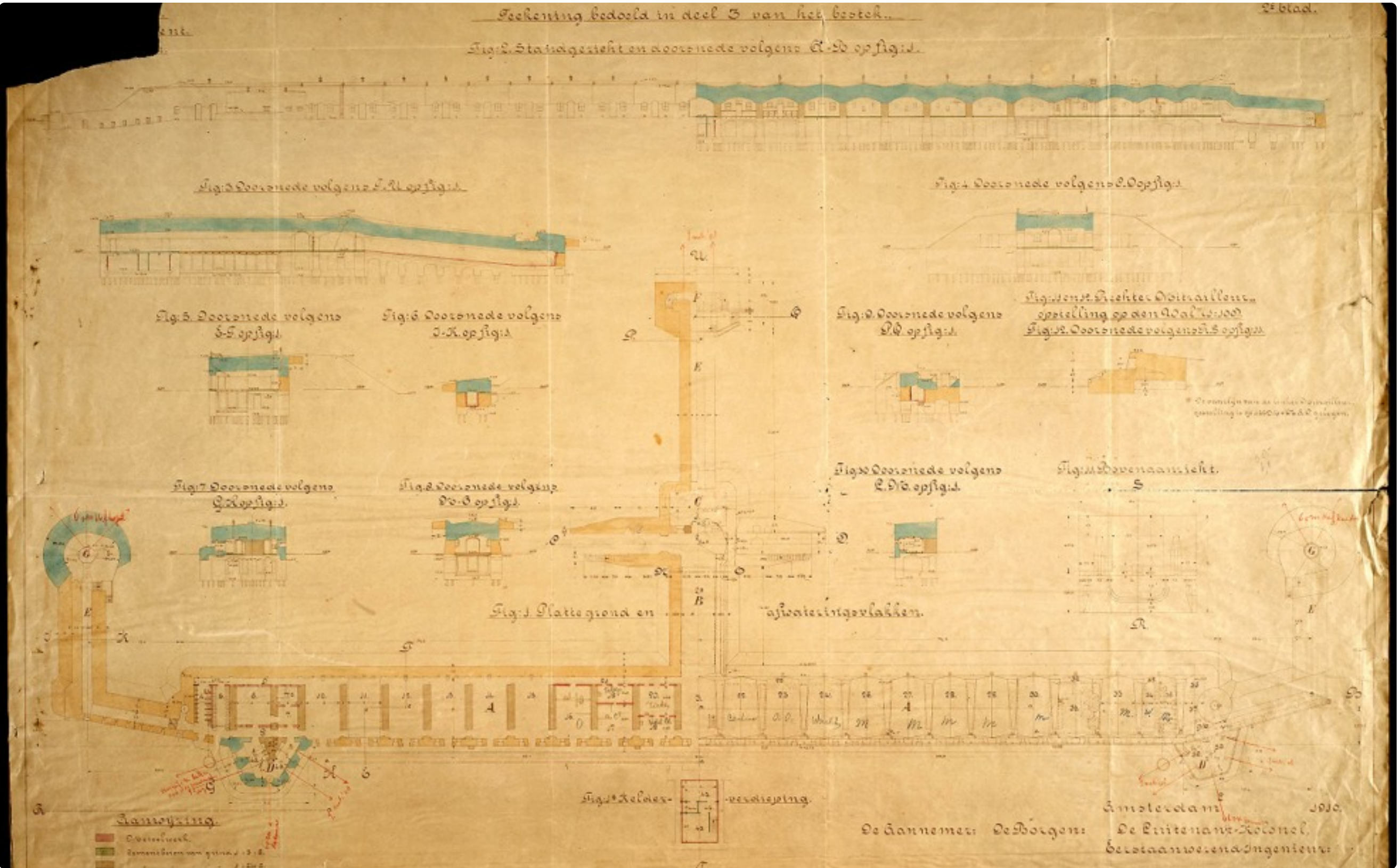


From 1902 until 1908 concrete 'secondary batteries' were built instead of planned earthworks. These 'secondary batteries' were placed between the forts in order to spread the heavy guns across the terrain and make them less vulnerable.

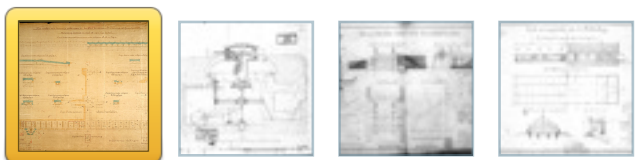
The Defence Line also took shape in other ways, such as in the construction of various 'central depots'. In 1916 the line was further enhanced by a military airfield: Schiphol (now a major European airport). Several 'institutions' were moved inside the redoubt with the 'artillery institutions', for instance, being relocated from Delft (south of The Hague) to Zaandam (just north of Amsterdam).

At the start of the First World War the Defence Line of Amsterdam was unfinished. The forts at Kwadijk and Muiderberg were still under construction, and the forts at De Winkel and Botshol had not even progressed past the status of defensible earth works – which remains the same today.

A secondary battery in the Engineers Dike through the Haarlemmermeer polder. In the background Fort near Aalsmeer is just visible.



The plan of Fort North of Purmerend.



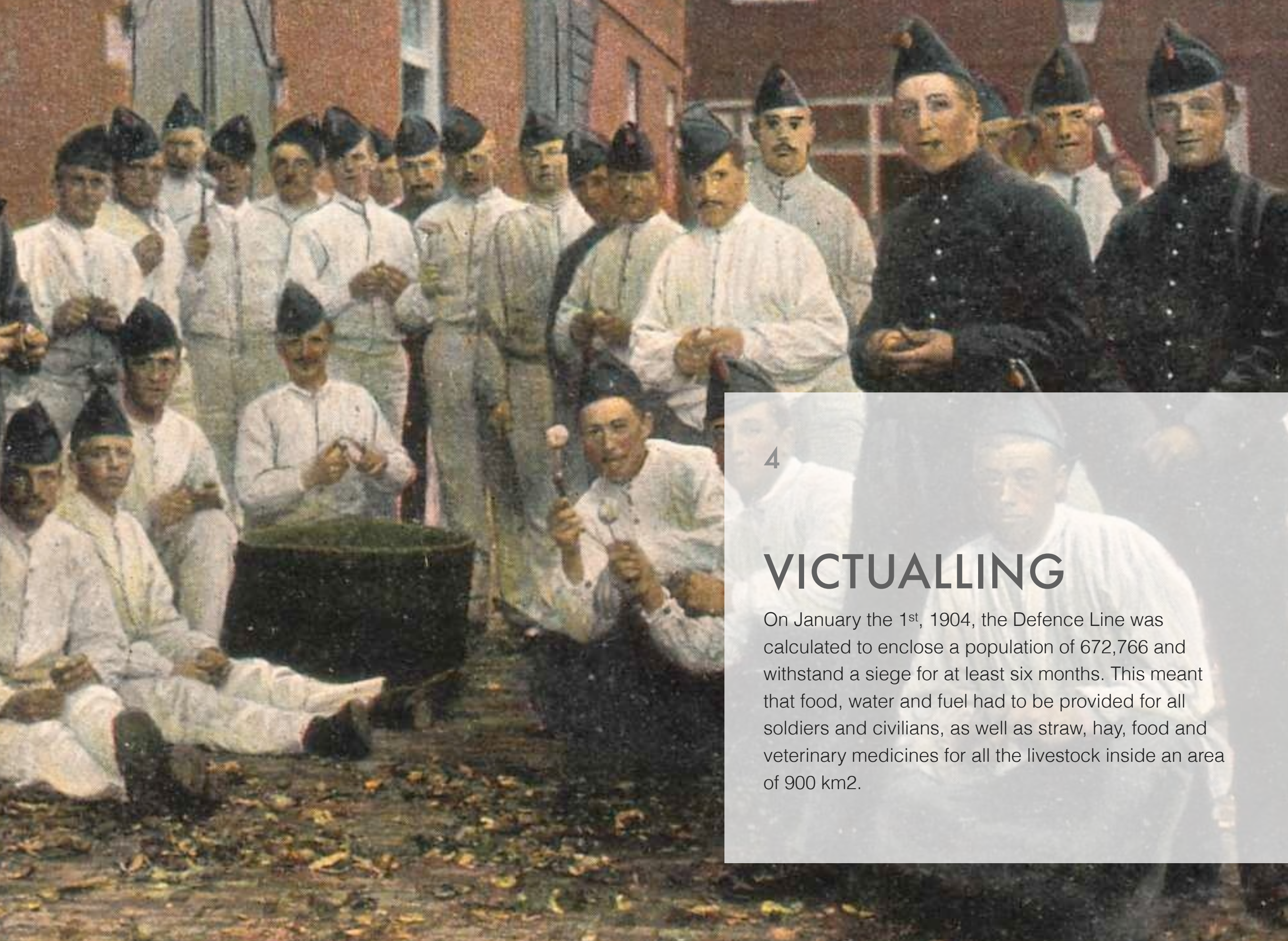
In 1911 the commander of the Defence Line, General Van Nooten, presented a plan for “The expansion or modification, finishing and deployment of the Defence Line”. This was approved by the General Staff, but never fully executed because of the outbreak of the First World War and the changing views it brought about.

Neither the planned conversion of Fort near Abcoude and Fort Uitermeer, nor the permanent extension of the 'wings' of the Defence Line to the coast, were ever executed.

In the end, work on the Defence Line spanned 33 years and cost a total of 40 million Guilders. This is about one and a half times as much as originally estimated and converted to present day prices (from 1905 to 2012) the total cost is € 470 million (\$ 640 million).

The Geindijk-Nigtevecht Line is one of the specially constructed systems that used dikes and quays to confine inundation waters and act as a breast for weapons. The Pollard Willows are part of the original plantation, which was also used for camouflage purposes.





4

VICTUALLING

On January the 1st, 1904, the Defence Line was calculated to enclose a population of 672,766 and withstand a siege for at least six months. This meant that food, water and fuel had to be provided for all soldiers and civilians, as well as straw, hay, food and veterinary medicines for all the livestock inside an area of 900 km².



On top of this, a population increase over the next 10 years to 750.000 and an extra 200.000 military personnel in war time had to be taken into account. A guide number of one million people was adopted and for this a minimum quantity of food had to be kept within the Defence Line perimeter at all times. A major part of these victuals was stored in the 'Gemeentelijk Handelsentrepot' (Municipal bonded Warehouse).

For military reasons, the dunes, used for water purification, fell outside the Defence Line and they could therefore not be used during a siege. An unknown number of rainwater basins were constructed under major municipal and national buildings but because of problems with the quality of this water, their use was discontinued. In 1890 a large enough quantity of suitable groundwater was found nearby the old Fort near the Nieuwe Meer. In 1899 work started on what was called 'the military drinking water installations'. A total of 106 water wells were drilled in the 'Riekerpolder'. These had to provide drinking water for “600.000 heads and 8000 to 9000 horses” (from a document dated 1892).

**A 'deferrisation installation',
which was part of the military
drinking water installations near
Amsterdam-Sloten.**



The buildings of the former arms works Artillerie Inrichtingen, now part of the Hembrugterrein in Zaandam.



The Orange-Nassau barracks in Amsterdam.



The grain silo Korthals-Altes for the grain stock.

For obvious reasons it wasn't considered feasible to purchase wheat and flour in times of crisis; there simply wouldn't be enough. Stockpiling 'a set quantity on national account' was recommended and for the milling of this grain it was decided that a state mill should be built, although it is not known whether this plan was actually executed. The grain silo 'Korthals Altes' in Amsterdam and the steam mill 'Vrede' (peace) in Zaandam were built by private enterprises. It isn't clear whether the Government only encouraged building or actually contributed financially.

Railway companies were obliged to stock a minimum quantity of coal and in 1899 the Dutch Royal Navy built a large coal depot on the grounds of the Artillery Installations in Zaandam. Harvesting peat was successfully trialed in the 'Akerpolder' and a stock was compiled in the 'Algemene Verdedigingspark' (General Defence Park) at the Hembrug site. Constructing a petroleum harbour assured sufficient quantities of light fuels.



Dated 1916, this photograph shows the members of the permanent Care Commission in front of their offices in the Burgerweeshuis (orphanage) in Amsterdam. Today it houses the Amsterdam Museum.

The Care Commission drafted a list of human and veterinary medicine. Around 8000 hospital beds were considered necessary for the wounded during a siege. Besides a State Military Hospital two municipal and 17 private hospitals or temporary institutions could be used to this end.

In times of crisis an export ban could be put on regular goods and extra goods could be brought within the Defence Line. For this extra storage space was needed.

To house all the additional goods a list of warehouses in Amsterdam was compiled. This list consists of 19 pages of names, addresses and capacity of all warehouses. The total storage capacity was 216.825 tonnes.



Most national facilities and warehouses were situated in Amsterdam, including those earmarked for the Nieuwe Hollandse Waterlinie (New Dutch Waterline). If that line were to fall unexpectedly its supplies would be safe within the Defence Line.

Fortunately it never had to become clear whether, in reality, these precautions would have been sufficient. In any case, the population inside the area could not have been allowed to grow explosively or there would have been a serious issue.

Façade with main entrance of the State Medicine Storage Depot, in Sarphati street in Amsterdam.

A black and white photograph of a flooded tree-lined path in Amsterdam. The path is flanked by tall, bare trees, and the water is shallow, reflecting the sky and the trees. The path leads into the distance, where a small light source is visible. The overall mood is somber and historical.

5

INUNDATION

The area around Amsterdam is still made up of polders and remnants of peat bogs. It is normally low lying and very wet.

In case of enemy attack, the polders could be inundated by letting in large quantities of water, which would form a layer 20 to 30 cm deep; too deep to wade with heavy weapons, too shallow to use boats.



Spring of 1944. The German occupier has opened the large inundation sluice in the Southern Beemster ring dike in order to inundate the Beemster polder.



A benchmark on the inlet into the Starnmeerpolder.



The wet moat of Fort North of Spaarndam.

This inundation forced the attacking army to use 'accesses' for their attack; high lying entry points, narrow tracks, dikes, railways etc.

The defending force had to concentrate its defences on these access points. By building defensive constructions in peace time, it could take a decisive lead as attackers would be hard put to use the entry points in the boggy, wet countryside and build their own defensive constructions. Only a defending general dreams of watery expanses.

Two things were of importance to 'setting' (carrying out) inundations. The first was a sufficient supply of water and the second were the sluices that distributed this water and brought it to the polders. Sluices or locks can be divided into inundation sluices, dam sluices and adapted civilian pound locks.

In a number of cases spillways were used. These were lower parts of dikes over which water would flow when it reached a predetermined water level.



Photographic record of a test with horse drawn artillery in an inundation area.

To 'set' inundations it was essential to be able to control the water works and so supplying and keeping sufficient water was crucial. The attacking force should be denied any chance of influencing water levels by blocking or overfeeding inundations. To be able to set inundations in a controlled manner, time was of the essence, the enemy had to be delayed to allow for the supply of enough water from outside the Defence Line. Ceasing drainage for

a couple of days was usually enough for most polders as rain and seepage did most of the work.

To maintain inundation levels the usual water works, such as pound locks and pumping stations, could be used. Inundation levels were higher than normal water levels (about 50 cm) but required no special measures as such. Setting inundations did require extra water works: inundation sluices. These water works were built by military engineers with permission from the polder board and were funded by the Ministry of War.

Extra water works, known as dam sluices and passage sluices, were also necessary to prevent water flowing out of the polders or flooding too large an area.

Existing civilian pound locks were adapted, especially for the supply of inundation water. To be able to use a pound lock as an inlet sluice, the doors needed to be opened against high water, with a 'toldeur' for instance. This is a sluice door with the pivot point slightly off centre, instead off at one of the sides. By closing the door when the water on both sides is level, the door can be opened fairly easily. It can be opened in a controlled manner, making a quarter turn without any damage, allowing water to flow through the sluice.

A 'bombproof' dam sluice in the 'Kagertocht' situated in the Aagtendijk- Zuidwijkermeer Line dike. Its wartime purpose was to keep inundation water on the other side of the dike.





6

USE

During construction of the Defence Line, defensible earth works were put into operation first. Later bomb proof buildings were put into operation as soon they were finished. The forts and batteries were not permanently manned and most of the troops were conscripts.



Fort near Nigtevecht with bombproof buildings inside of the moat.

Outside of the moat stands a wooden storage shed, usually called an 'engineer's shed' or genieloods in Dutch.

From the time of its establishment the Defence Line was divided into four sectors, which were in turn divided into groups and subgroups that contained forts. In wartime, each of these divisions had a commander and staff.

In peace time the forts were unmanned, whereas in time of war 10.000 troops would form the security garrison, mostly consisting of militia and more experienced classes of conscripts. After a breakthrough of the Nieuwe

Hollandse Waterlinie (New Dutch Water Line) the security garrison would be reinforced by the retreating units from the army. In peacetime most of the inventory of the forts and the field guns were stocked in storage barracks to keep them out of the damp conditions prevalent in the forts.



The main advantage of an inundation line is the fact that relatively few troops can defend a large territory. Inundated areas required only a light force and entry points could also be defended with limited resources. The main disadvantage was of course that the defending force would also be unable to go on the offensive through inundated terrain.

In The Netherlands the Circle Act of 1853 was in effect. It restricted building activities in certain 'circles' around defensive constructions. What was permitted in the inner (300 m), central (600 m) and outer (1000 m) circle depended on the classification of the defensive construction. In case of war everything within the circles could be demolished to create a free field of fire. The Circle Act stayed in force until 1963.

In 1921 it was decided, following the experiences of WW1, to dismiss the idea of a national redoubt. The Defence Line of Amsterdam was incorporated into 'Fortress Holland', of which it formed the northern side with the New Dutch Water Line forming the eastern.

South of Weesp can be found the largest collection of wooden 'Circle Act' buildings such as these on the Molenpad (Mill track).

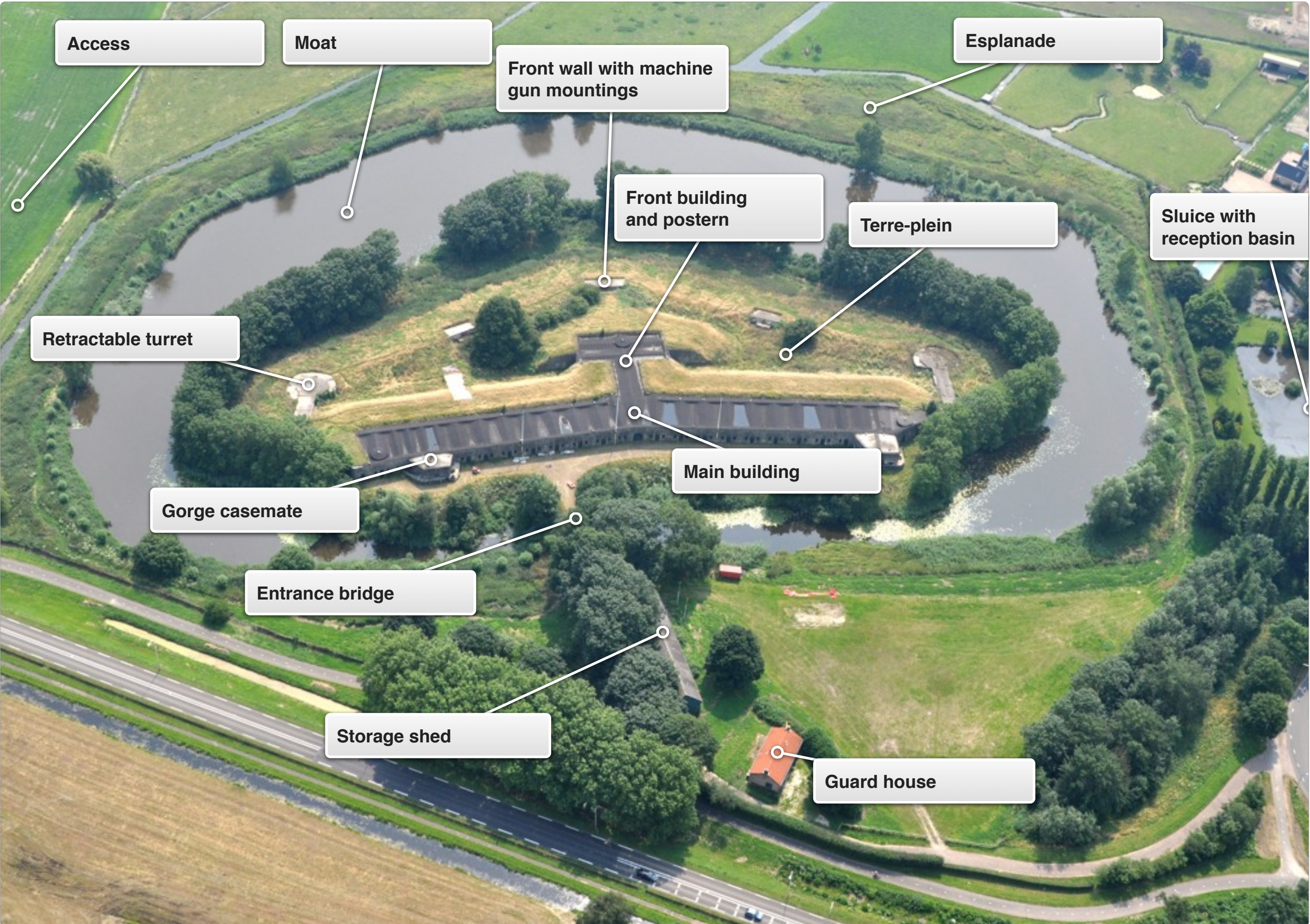
Military exercises were held to train the troops in siege warfare. Field manoeuvres were only held from 1875 onwards and after 1907 these were held bi-annually, interspersed with siege exercises. Most of the exercises, unsurprisingly, were held during the mobilisation of 1914-1918. The one of which most is known took place in a part of the Defence Line near Uithoorn.

Exercises showed that there was still a great deal to learn, revealing bad preparation, delays caused by a lack of materials and supplies and a command structure which turned out to be far from optimal.

Soldier drawn artillery during manoeuvres held in September of 1912.



INTERACTIVE 6.1 The different parts of Fort near Uithoorn, as an example.





7

WAR

In view of the fact that The Netherlands is such a small country it had no choice but to pursue a policy of neutrality. This was recognised in 1839 with an international treaty. The Dutch army, fully mobilised, was smaller than the peacetime army of Prussia/Germany, with which the country shared a border. The other major powers, France and Great Britain, were separated from the Netherlands by Belgium and the North Sea respectively.



Fort South of Spaarndam is one of the forts where hundreds of soldier helped to enforce neutrality.

Moreover, The Netherlands was so small that it was feared the enemy would already have overrun half the country before mobilisation could be completed. The Dutch government was convinced that its position on the delta of the river Rhine was of such strategic importance that none of the powers would tolerate the occupation of the country by another.

All things considered, the Netherlands realised part of the defence of all three major powers. It did mean though, that a strict defence had to

be implemented on all sides as neglecting coastal defence against the British could be a reason for the Germans to occupy The Netherlands. If one of the major powers were to invade it was assumed that their opponent(s) would become allies of the Dutch.

This neutrality had to be strictly enforced. Hence several defence lines had to be constructed and conscription increased. Within this system of defence lines, the Defence Line of Amsterdam was constructed as the 'national

redoubt'. It was designed to be able to defend itself on all sides, in anticipation of help coming from an ally. As long as the Dutch flag flew over the capital, that ally would have a reason to come to the rescue. All this was done as a form of national insurance, because it is very unlikely that even one Dutchman really wanted the Defence Line of Amsterdam to be used in earnest.

Although German spies were impressed (1903) by the Defence Line – in spite of its lack of organisation and defensive power – it is uncertain whether it was the main reason for the preservation of Dutch neutrality. The reasons for respecting the Dutch stance were probably many. For instance, all parties concerned had an interest

in neutral countries as a means of circumventing economic blockades. This was especially the case for the Germans, who were feeling the effects of a British naval blockade.

As early as July 1st, 1913, the fortress artillery were garrisoned in six forts along the Noordzeekanaal, but it wasn't until July 31st, 1914 that a total mobilisation was declared. Only then did the conscripts actually take up their positions in the forts. On August 2nd, 1914 all of the troops were garrisoned inside the Defence Line. A few days later the 10.000 troops were battle ready, 7500 of them inside the forts while 2500 were kept in reserve in military barracks.

A German caricature depicting Europe during WW1. The Netherlands, together with the other neutral countries Portugal, Switzerland and Denmark, are displayed in a neutral fashion.



Soldiers from Fort near Hoofddorp purchased a piano for their entertainment in a shop in Amsterdam. They were almost back at the fort when they posed for this photo.



Initially most troops were occupied with establishing their forts and barracks, including listening posts and barbed wire defences. The operation of the guns was practised often. Corporal Theo Thijssen (a well-known writer to be) wrote the following on September 12th, 1914: "Military work is absolutely finished. We are keeping from dying of boredom by marching, playing football or some military exercise. These modern guns take so little practice. It takes a layman only ten minutes to know all there is to know."

After four years of mobilisation the men were fed up with military life, the food, the dark and damp quarters, the uniforms, rigid discipline and heavy penalties for small offences. Long leaves, exercises, hobby clubs, recreation committees and courses offered by the people's university were to no avail.



Senior officers during a banner presentation ceremony to the Volunteer Militia Corps 'Defence Line of Amsterdam' in a stadium in 1916. Standing in the centre is Defence Line Commander Ophorst. It is assumed he is wearing a crape because of the death of his daughter in March 1916.

1918 even saw riots in some of the barracks and the revolutionary part of the population – the Russian revolution had just taken place – had other reasons to foment unrest. A few of the troublemakers tried to blow up the powder depot near Halfweg and a demonstrative march near the Cavalry barracks in Amsterdam quickly got out of hand. Prisoners in the Fort along Nekkerweg revolted because they believed the revolution had also broken out in The Netherlands.

Two years earlier, on March 29th, 1916, the 'landweer' (voluntary reserve) had been sent on indefinite leave followed by a part of the fortress artillery troops. Developments in the war made it unlikely that The Netherlands would still get involved and so only a few dozen troops stayed on each fort for maintenance and guard duty.



Dutch neutrality would not be preserved in the Second World War, when in May of 1940 the German army invaded. This invasion occurred for three reasons: first of all, Dutch military importance had increased, especially for Germany's airforce. Secondly, static defences in France (Maginot Line) and Belgium (Fort Eben-Emael etc.) had improved. Thirdly, the Dutch ability to defend its neutrality was deemed insufficient; armament and defensive reinforcements were light and the troops were badly trained. Due to a small domestic arms industry and belated orders from abroad, the Dutch possessed too few planes, armoured cars and anti-aircraft guns.

During the occupation most forts were used by the Germans, mostly as depots or barracks. Sometimes they were used as listening posts or gun bases, in particular in the part of the Defence Line that was incorporated into the Atlantic Wall. At the end of the war the occupiers used the typically Dutch mode of defence against the arriving liberators. In the spring of 1944 a large part of the Defence Line was made active as a purely defensive line. The Germans also made some uncontrolled inundations by placing explosives in selected dikes, as well as inundating a number of polders in a haphazard manner.

During the Cold War most of the forts were used to store munitions and explosives. Some were used for storage of emergency food and medical supplies.

**German Luftwaffe soldiers
pose in front of the retractable
gun turret of Fort near
Aalsmeer.**



8

CIVIL USAGE

After the Second World War the era of permanent defensive structures ended. This also meant the end of the Defence Line of Amsterdam. The main reasons for this were the aeroplane, the increasing mobility and firepower of armed forces and international co-operation in NATO.



Storage shed at Fort near Nigtevecht.



Bikes at Fort near Penningveer.



The highly appropriate sign at the canoe club in Fort South of Spaarndam

Permanent fortifications have turned out to be just a phase in the endless arms race, from wooden club to nuclear bomb.

A brief revival in the use of the forts followed the liberation of The Netherlands. In 1946 a number of forts were designated as camps for 'political delinquents', Dutchmen who were arrested and interned because they had collaborated with the enemy. But after only a few years the number of occupants dwindled, with the exception of one fort which was used to intern conscientious objectors to what the Dutch euphemistically called 'police actions' in Indonesia.

Starting in 1964, but especially after the end of the Cold War (1990), most forts were decommissioned and transferred to a service of the Finance Ministry, called 'Domeinen'. In 1988 the Defence Ministry decommissioned all of the forts, whilst keeping ownership of some.

'Domeinen' initially offered the forts to the provinces, municipalities and public authorities. Only after that were companies, organisations and private persons allowed to purchase a fort. Most of them are now owned by public authorities and nature conservation organisations.

Most of the forts and sites were designated provincial monuments between 1990 and 1992. Some have become national monuments.

Furthermore, all of the modern zoning plans and regional plans take into account the value of the green belt that the Defence Line has now become. This green, pastoral strip of land is being shaped into one uninterrupted recreational area by the construction of cycle routes and nature reserves. The open landscape is also a part of the Defence Line and is being preserved as much as possible.

The Defence Line of Amsterdam as a whole has been inscribed on UNESCO's World Heritage List since 1996. This is proof of its great cultural historical value, comparable to that of the Pyramids and the Great Wall of China for instance.

The forts' decades of isolation, specific soil conditions and water management have created a unique flora and fauna. The Defence Line has become an important natural area; the forts themselves, as a rule, have an even greater natural value.

A 'node' in the extensive cycle network close by Fort near De Liebrug near Haarlem. Until the spring of 2003 this fort was used by 'Brinks Waardetransport' (a valuable transportation company). Today it is home to a number of companies and shops.





A hundred years after completion, Fort along the Nekkerweg has been turned into a hotel and wellness centre called 'Fort Resort Beemster' after the Beemster polder in which it lies. The Beemster polder itself is another one of the nine Dutch properties inscribed on the World Heritage List.

For other forts their monument status makes it imperative to look for useful ways of reusing the buildings that also pay for their maintenance. Sometimes radical modifications are made, which dramatically change their original character (such as at Fort Resort Beemster).

It is not only the individual forts that are worth preserving. There is also the question of cohesion between all of the parts that make up the Defence Line. The province of Noord-

Holland coordinates between the provinces, municipalities, owners, leaseholders and other stakeholders in this regard.

Provinces and the Cultural Heritage Agency of the Netherlands act as protectors. Still, objects regularly disappear due to the ignorance of parties involved or knowingly because of spatial planning developments.



It is our duty as stewards of this irreplaceable cultural heritage to preserve it for future generations out of respect for our ancestors. In the meantime, we are allowed to enjoy the ingenuity, tranquility and natural beauty that the Defence Line of Amsterdam has to offer.

MOVIE 8.1 Video Defence Line of Amsterdam.



A short video by Museion Media showing a concise image of the Defence Line of Amsterdam.

2004; Francesco Bandarin, then director of the WHC, during a visit to the Fort near Spijkerboor.



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OTHER PUBLICATION

If you understand the Dutch language, or have friends who do, please see the [Dutch version of the iBook in the iTunes Store](#).

Or check out the non-interactive version for other platforms at our [webpage about these iBooks](#).



LINKS

[Defence Line of Amsterdam. A city wall of water.](#)

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IMAGES

If you are interested in one or more of the images in this publication, please have a look at our [online shop](#) and [SengerPhoto](#).



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Map layer: © OpenStreetMap authors

Video:

Museion Media produce documentaries and digital stories on subjects in history, contemporary society, music and the arts. Over the years they have published extensively on the history, present and future of the Defence Line of Amsterdam – to single out a particular field of expertise – with numerous films for several interested parties such as the UNESCO World Heritage site-holder for the entire complex, i.e. the Province of North Holland. They endeavour to engage their audience with stories which are well-researched, properly told and aesthetically pleasing, whether they carry a grand theme or just a minor interest. The creative partnership consists of historian-and-filmmaker Huib J. Lirb and filmmaker John Twigt. For more information, please contact info@museion.nl.

We would also like to express our gratitude to everyone who has contributed in any way to the website 'Stelling van Amsterdam' (Defence Line of Amsterdam. A city wall of water) and its collection of images. For more information, please see the ['Thanks to' section in the Colophon](#) of our website.

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