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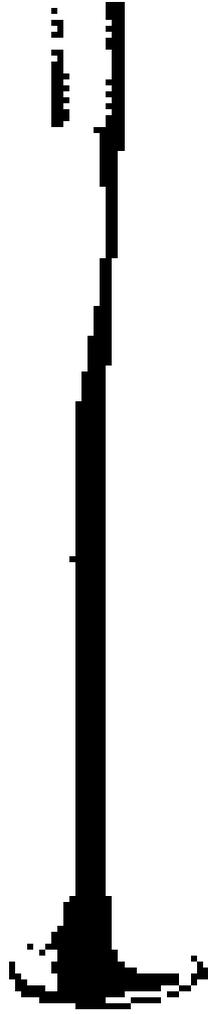
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Some of designed, mass-produced objects that seem to represent the Anthropocene or, in other words, will be the fossil-relics of the future, based on our research at KABK and in The Hague, are spread throughout this book.

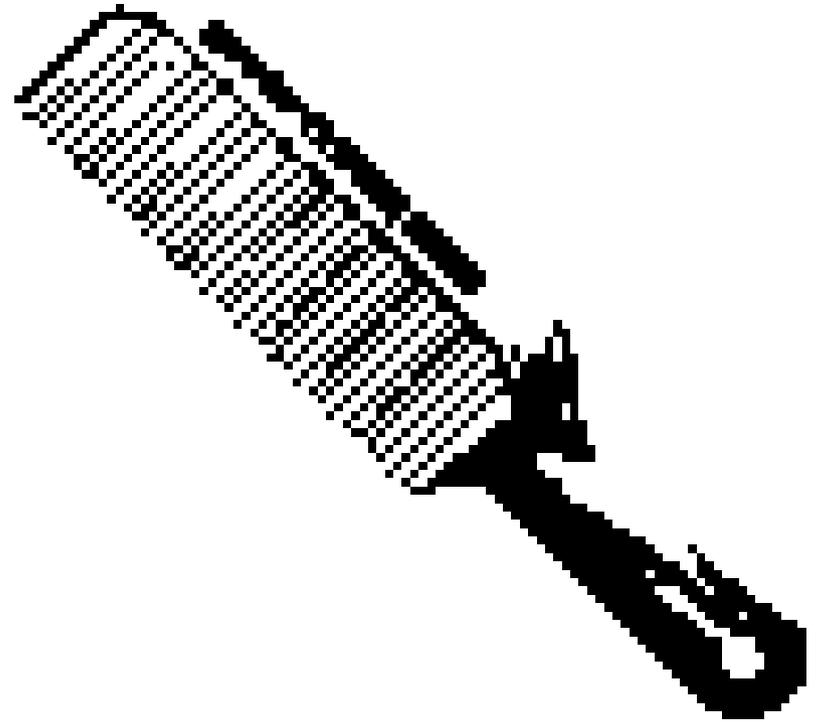
Plastic coffee cup lid

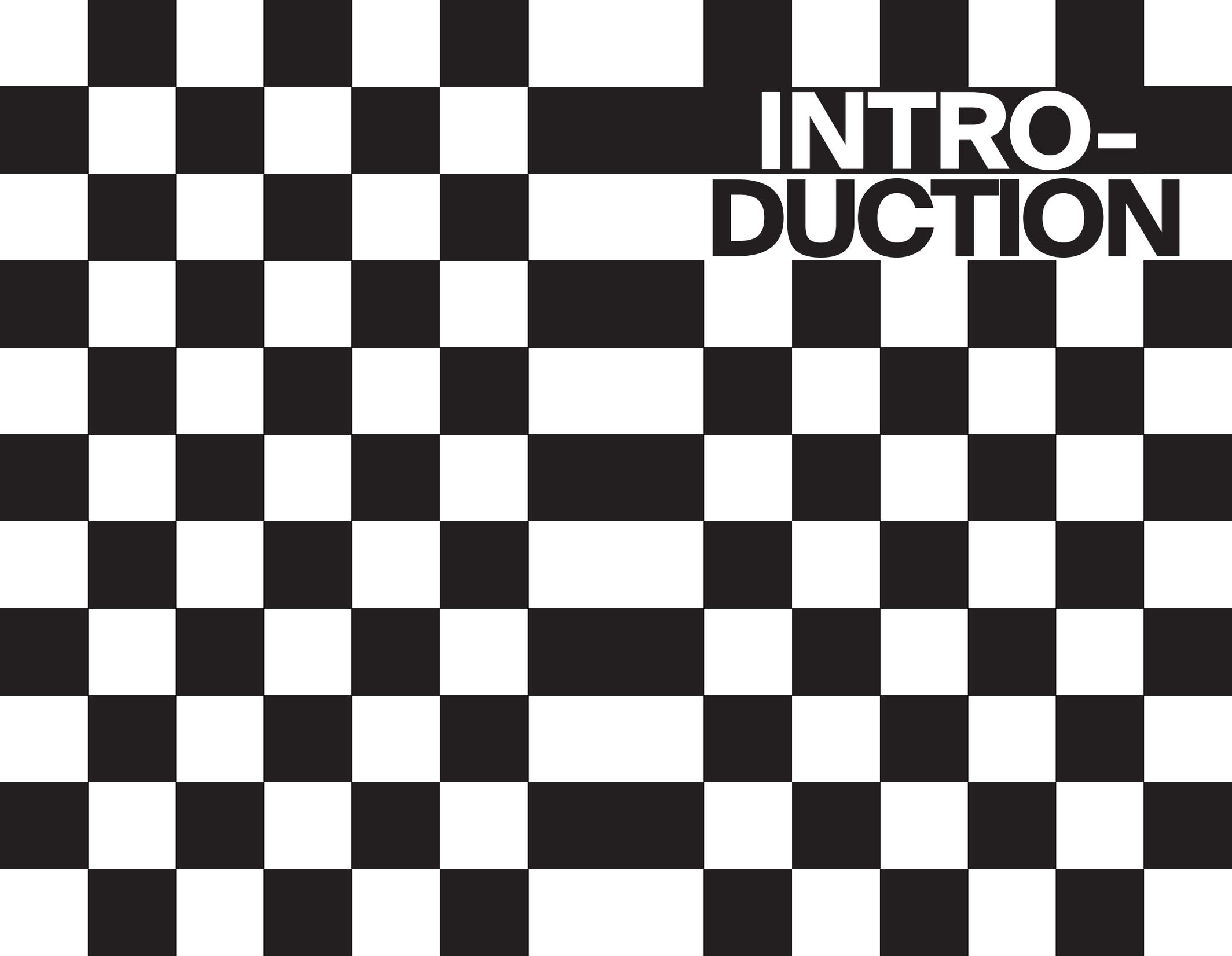


Toothbrush



Comb





INTRO- DUCTION

FUTURE FOSSILS

A Design Archaeology of the Here and Now

Royal Academy of Art The Hague

Independent Study Track, Spring 2019

Alice Twemlow

The damage being done to our planet by the products, processes, and values generated by design is increasingly visible and measurable.

This is particularly apparent when we look at a phenomenon like plastiglomerate, a new rock conglomerate made up of natural debris mixed in with molten plastic, found mainly on beaches in Hawaii where the plastic adrift at sea gets melted by underwater lava streams, or on beaches by the human intervention of campfires.

In this KABK IST course, a group of students spent a semester combing the increasingly blurred tidelines between the natural and manmade environment, archaeology and geology, fossils and relics, physical objects and digital data. Informed by key texts, guest lectures, and field trips, the working group conducted research and speculated through design, ceramics, writing, image-making, and curatorial strategy to imagine what are the mass-produced designed entities of our Anthropocenic era that will become signals in the earth's geological strata for future generations to read us by – the fossils of the future.

We located our enquiries in the KABK and since the KABK building was completed 81 years ago,

we decided to project 81 years into the future. Each student intuited the perspective of an archaeologist based in The Hague in the year 2100. Which designed, mass produced objects would they be likely to find on the site of the former KABK? How will the object have degraded in the intervening years, considering which types of soil and sand are below the KABK? What will The Hague be like in 2100? What would the archaeologist think their find was used for? What will be the values of 2100 and how will they shape the way the object is understood and interpreted?

The process and the outcomes of their enquiries are presented in this booklet.

DESIGN AND THE DEEP FUTURE

Design and the Deep Future, the thematic focus of the KABK Lectorate Design, issues from Alice Twemlow's research into design's complicity in climate change, design's complex interrelations with time and the environment and, in particular, the material manifestations and the meanings of design when it is disposed of and becomes trash. The lectorate theme also encompasses: investigation into geological time and design; circular economy; dematerialisation of design; repair; non-humans and design; digital detritus; design criticism; speculative and critical design; slow design, among others. Engagement with these and other issues is augmented through research projects, exhibitions, symposia as well as print and online publications.

<https://www.kabk.nl/en/research/lectorate>

MANY THANKS TO

Maura Biava, ceramics tutor, who taught us about glazes, casting, and led our visit to the EKWC.

Adam Nocek, Director, Laboratory for Critical Technics, Arizona State University, who launched the course with a lecture on 'Geomythology, Geocommunication, and Design'.

Corien Bakker, Head of the Hague Municipal Archeology & Nature and Environmental Education Department, who introduced us to the beauty of pot shards, core sampling, and peat.

Friso Visser, Deputy Director / Education & Exhibitions, Museon, who showed us one of the largest samples of plastiglomerate found so far, now on display in the museum.

Justa van den Bulk, curator, Muzee Scheveningen, for introducing us to the collections that comprise both marine biology and local cultural history

Suzette Bousema for showing us her Future Relics project and leading a beachcombing expedition for plastics on a Den Haag beach.

Krijn Christiansen, for sharing the work of KCCN and advising us on the final projects.

Lua Vollaard, curator, Stroom Den Haag, for an inspiring lecture and workshop on curatorial tactics.

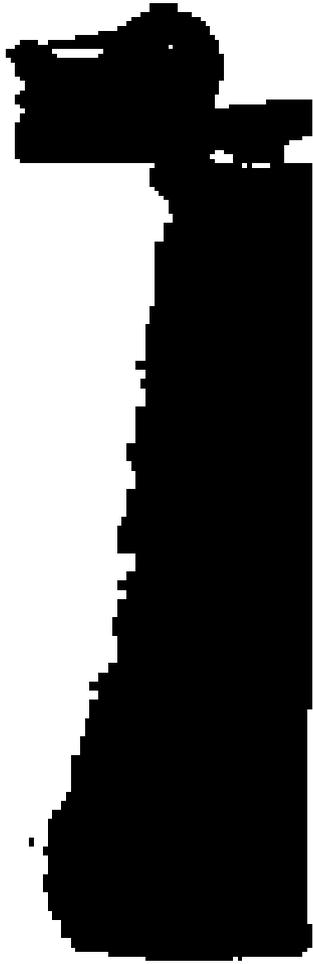
EKWC / European Ceramic Workcentre in Oisterwijk for hosting us.

Vera van de Seyp for the design of this booklet.

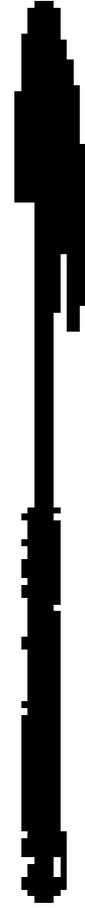
—

Ivor Borovecki
Alessandro Celli
Liselot Cobelens
Emilie Monty
Igor Siler
Violet Luu Bao Tran

Lighter



Biro



**BEACH
CLEAN**

52° 6'

UP

28.908"

N

4° 16'

23.484"

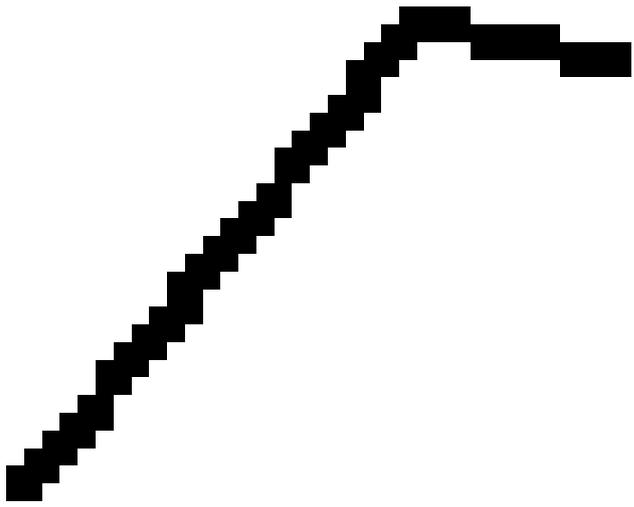
E





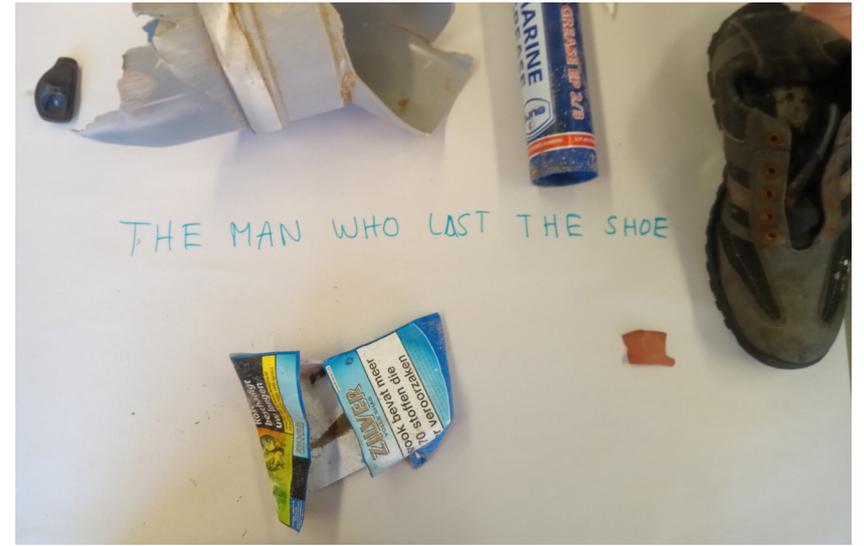


Drinking straw



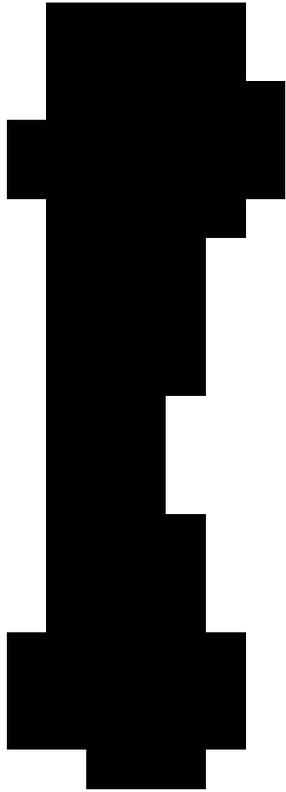


Plastic bag





Chicken bone



LEGO



**ALES-
SANDRO
CELLI**

**MA
INDUS-
TRIAL
DESIGN
KABK**

PERSONAL ARCHIVE

REPOSITORY STATUS	offline
ITEM	n. 08
COORDINATES	81650.000, 455130.000 (RD)
YEAR	2100
EXC. PERMISSION	none

DAY 22

I finally found something interesting in an abandoned excavation site, where an old arts educational institute unit used to be. When my ultrasonic scanner beeped at a small object 3.4 L-units under the ground, I started the automated coring work to extract the piece. I kept the dig dimensions quite small, to avoid drawing too much attention.

I found a heavily rusted aggregate of chips that easily fits in the palm of my hand, together with LED lights and other non-defined electronic components, joined together with what seems to be an old metal-based soldering technique.

My first guess is that it might be an old-fashioned bomb clock trigger, like the ones that were used in the early 21st century. However, in order to verify these first observations, I will need to perform the material recovery test, and take into account the deteriorating effect of the sand layer in which it was found.

DAY 23

I ran a bigger scan over a 46 μ u radius around the finding, and I found another 2 items similar in dimensions to the first one. While I am recording this e-diary, I am uploading my 3D scan to public archives

to check if anything similar has ever been found near my current location... — no results.

↳ travelling back to my unit to run material recovery tests.

DAY 27

Markus ran an offline material analysis for me, since I have no licences or government permission to perform excavations at this site and running an automated online test would have got me into trouble.

The examination revealed that the main components are made of steel, fiberglass and 'ABS' plastic. He told me that he had to run the procedure several times, as the metal parts were heavily rusted. Also dynamic thermal reconstruction has unveiled that the plastic components were once mechanically joined together but have considerably degraded due to the higher temperature of the sand below the ground surface.

↳ starting the digital restoration of the surface appearance with the 4D printer.

I am quite glad to have already found one of these plastic-electronic aggregates, since I started treasure hunting 22 only days ago. I am already imagining the valuable contribution my finding will make to knowledge, and considering which repositories will be interested in collecting it for posterity, hopefully in exchange for (a lot of) Currency too.

DAY 28

After some further investigation, I reassembled the object and I now feel confident enough to hypothesise that this device was used around the beginning of the 21st century to physically transfer data between different devices.

This I have been able to deduce through the square-shaped connector on one side of it. I was quite confused at first, as this component really looks like a small face with the rest of the body behind it, like a tiny robotic insect.

Also, a roughly printed two-dimensional hieroglyph is discernible on one of the plastic shells, but unfortunately it will take more time to restore the image through colour-particles recovery.

↳ starting colour-particles recovery.

DAY 33

After several days of failed attempts, I finally got what I was looking for: the owner of the device and the information it carried.

I scanned it through the Alphabets database to decode it, and it turned out to say the letters on its side spell out K-A-B-K. Since it didn't have further digital information embedded in it, I am assuming it was an analogue ID signature on the device, known at that time as logo.

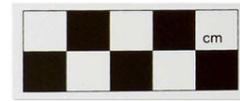
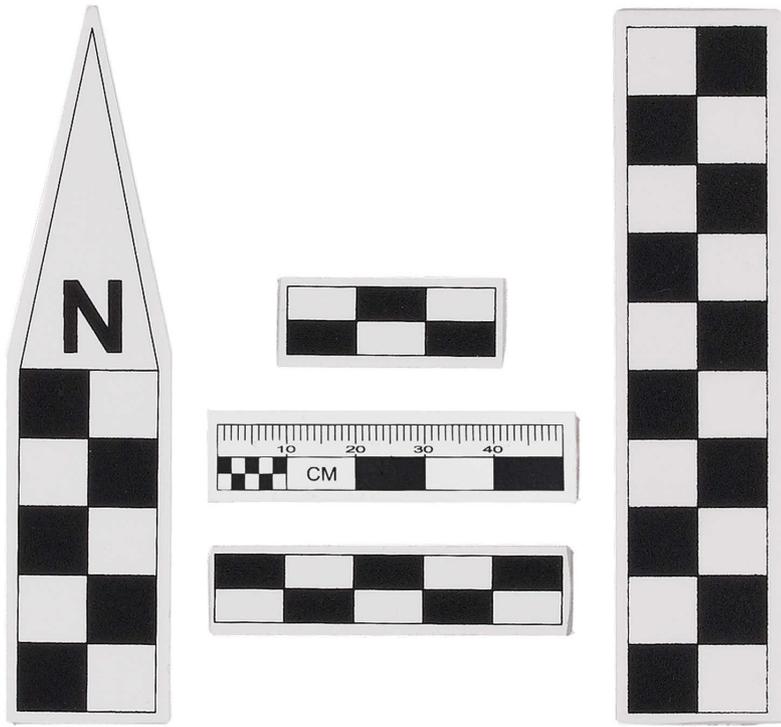
I also found a way to get my hands on a terminal; it's not that common today to find physical access to the data sharing infrastructure used in the early 2000s, the Cloud. After days of trial and error I managed to extract some of the data contained in it, and with

the help of my AI assistant some digital pixel-based images were recreated.

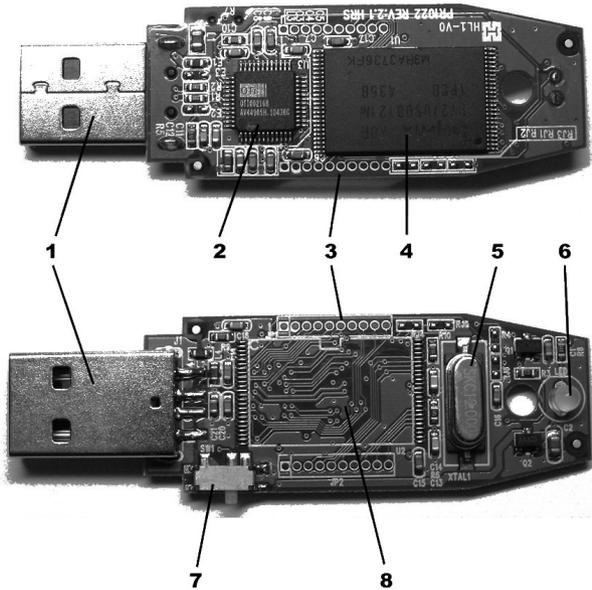
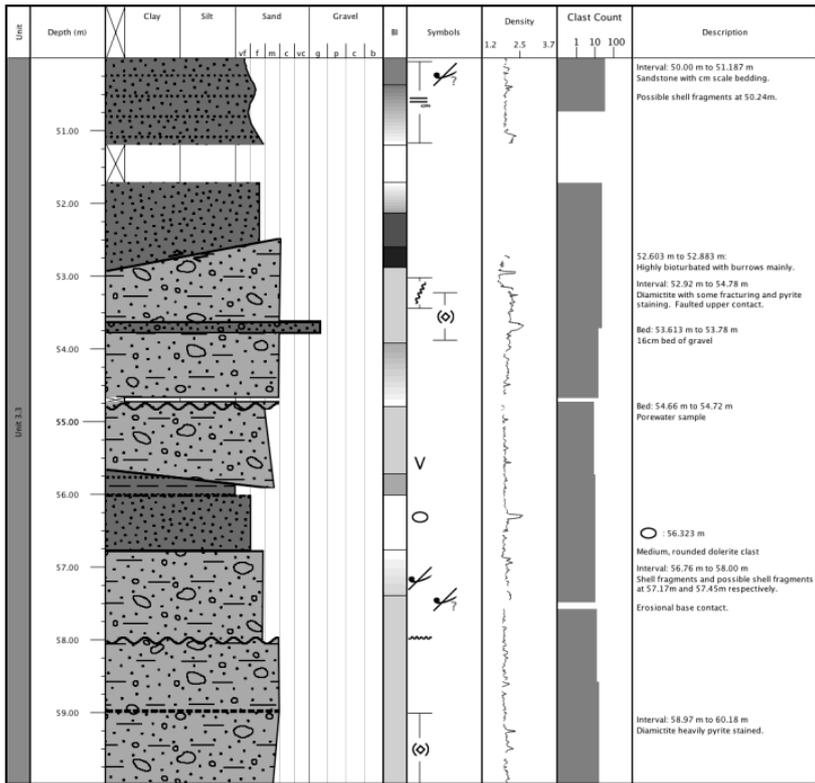
I am almost sure that one of the persons pictured in these photos was Ka B. K. him/herself/themselves. It's fascinating that people used to carry collections of pictures with them in these plastic tiny objects. Other files were in strange formats and the machine could only interpret them as audio files. I'm not entirely sure that this was their original state, since the soundscape that was generated sounds like something coming from outer space. However, there is some kind of data encoded in there; hopefully I will find out how to decipher it. For now, I will just enjoy the music...

Data recovery didn't turn out as well as I expected, since most of the files haven't been decoded yet, but I already got a glimpse of the context in which this technological artefact was used and of who the owner might have been.

Perhaps one day the entire data Profile of the owner will be restored, depending on how many of the files I will be able to decipher.







**FOSSILS
AND
MINERALS
ALS**

52° 4'

48.68"

N

4° 18'

36.486"

E



azurite



coltan



cassiterite



wolframite



manganite



gold



lepidolite



millerite



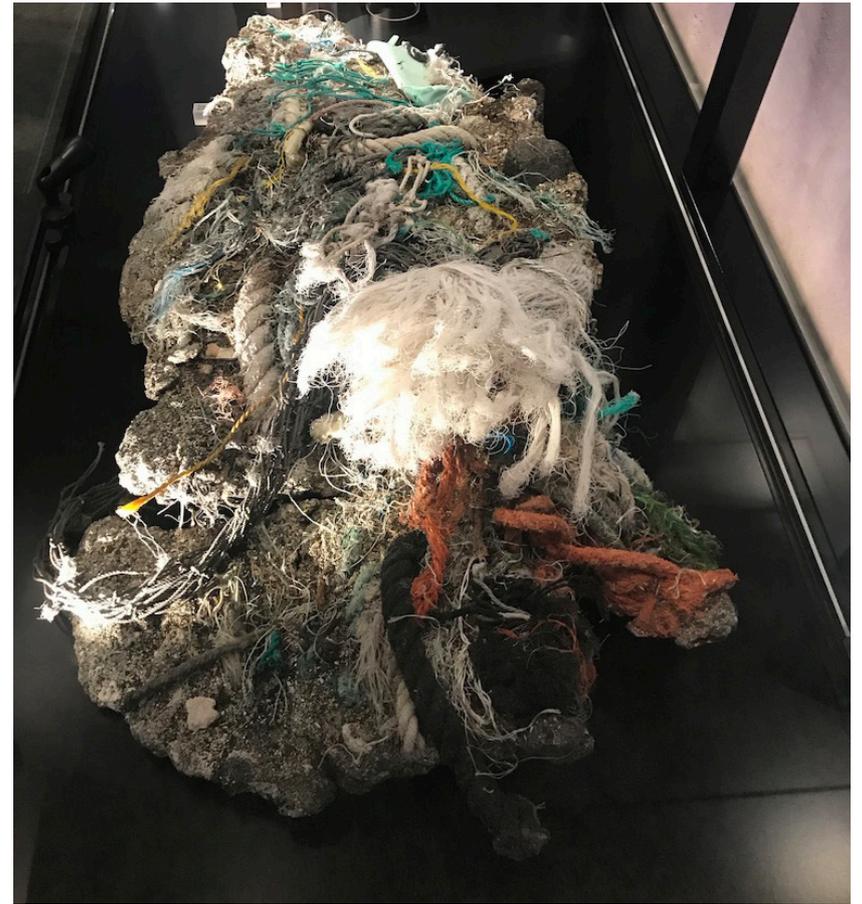
machalite

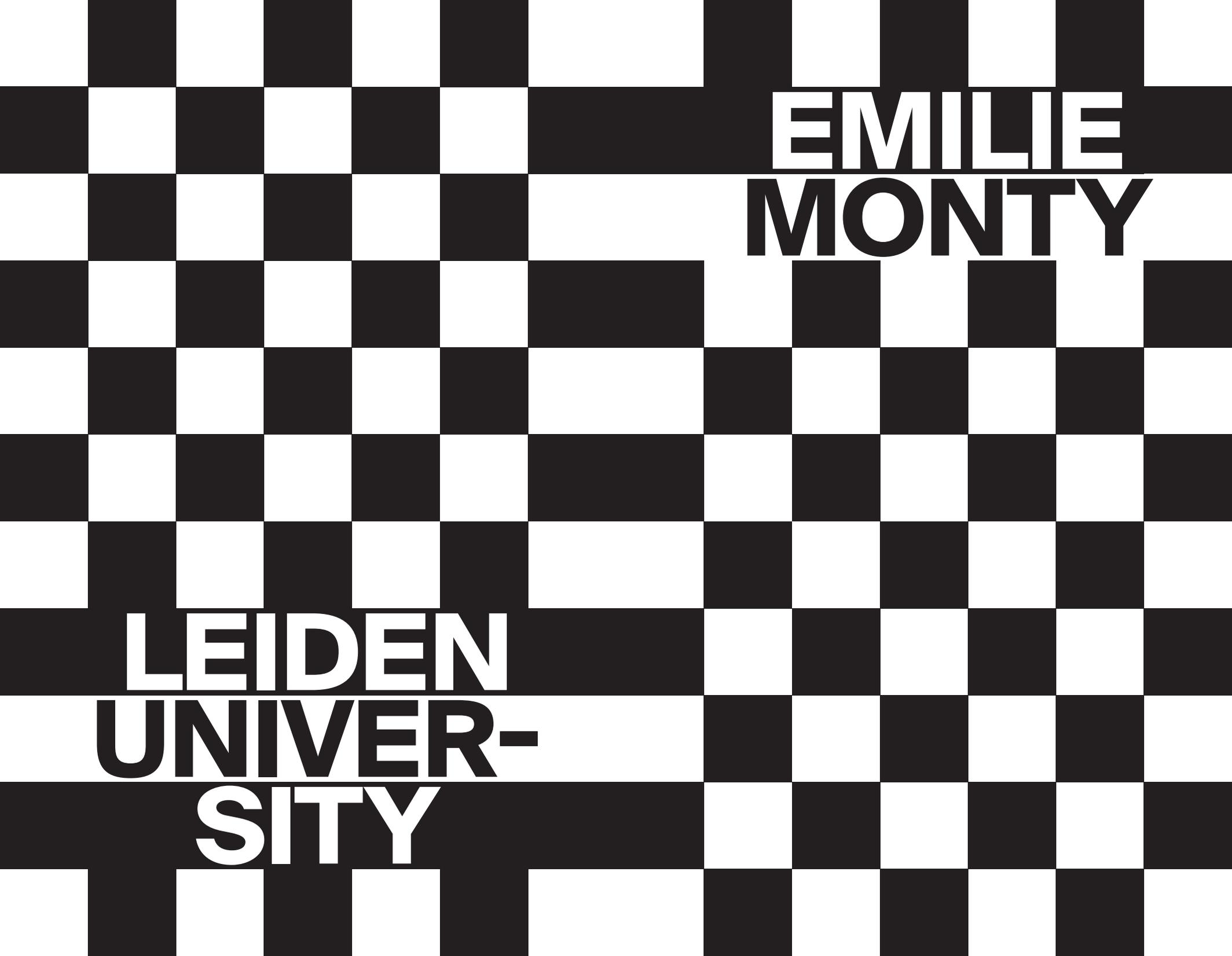


pentlandite



plastiglomerate





**EMILIE
MONTY**

**LEIDEN
UNIVER-
SITY**

The following is the transcription of a dictated entry in the daily verbal logs of Armeliga SourcyIn, head archeologist from the Institute of Lost Time, by AI drone iAssist in the year 2100.

DAY 1

We have chosen a site to excavate in the former municipality of The Hague, that is not currently underwater. It is located at 52.0816° N, 4.3194° E and is 200 chains by 300 chains. The iArchibot has dug down and found a horizontal layer of what appears to be a black fabric, approximately a finger width thick. The iArchibot has washed away the sandy sediment and soft soil and now we see that the fabric consists of a black mesh backing out of which many individual thin bright green fibres project upwards like hairs. What we are seeing appears to be only a section of something that was once much larger and a type of covering for the ground much like formerly used bitumen vehicle roads. Samples have been taken to our on-site bio-waste research team to test the substance for potential danger.

DAY 2

We have taken a day to mourn the 220 victims of the Lunar Craft2500 crash and will resume work again at 1300 tomorrow. In the meantime the iArchibot will be programmed to continue to dig out the great flood sediment and to demarcate our cross section.

DAY 3

The bio-waste research team has come back to us with a chemical analysis of our find. Its main components are polypropylene and rubber compounds. Now we know the material is carcinogenic, we have taken extra precautionary measures for the people coming into contact with it on site. This also helps us to date the artifact as pre-2035, when polypropylene and rubber were banned. We found a section of the material with the remains of a broad white line on the surface of the hair-like structures. This is made up of different components but mostly pigment and resin, materials that paint was once constructed of. It is not unlike the paint once used on vehicle roads. We assume that the paint was used to demarcate something but we are unsure what that could be.

The iArchibot has made another dig at the original site to create a cross section of the area and the section we found appears to be mostly intact. We believe this is because the water over part of it has preserved it. However, the section that we discovered that is above the water line has melted slightly under the heat of the sun.

DAY 4

The team has started to speculate on the original purpose of our find. Using 3D hologramatic mapping to account for the section that is partially under water we can see that it formed a giant rectangle with the remains of white lines at its edges. We wondered if it was used as a substitute for green parkland which disappeared in the early 2030s and led to the

Great Collective Doom of that decade. It may have also been used for recreational activities to boost morale and community whilst it was still cool enough to do such things outdoors and before the water came. However, we can only speculate as this is something that is very hard to comprehend considering that we now have forests, plants and crops contained in greenhouses on giant platform rigs with highly regulated ecosystems.

DAY 5

We have realised that this is the first discovery of its kind and have now received the funding to conduct further research. We have been given permission to excavate other areas within our jurisdiction to see if we can find more of the material. This will be an ongoing project with a contract of 3 years. We hope to build a better picture of what it was used for and why and to see if we can also use the material structure (not substance) in a way that may be helpful for our onboard orbiting communities.



52° 04' 54.2" N, 4° 19' 08.9" E

INGREDIENTS petroleum, brominated fire retardants, bolybrominated diethyl ethers, deca, enta & octa, brominated-ethanes, bisphenol A, polybrominated biphenyls, polyethylene terephthalate, bisphenol A, polyvinyl chloride, phthalates, polycarbonate, ethylene glycol, terephthalic acid, phthalates, resin.

52° 04' 53.6" N, 4° 19' 09.9" E

INGREDIENTS titanium dioxide, latex, polyvinyl acetate, zinc oxide, diatomaceous silica, styrenated acrylic binders, resin, acrylic polymer emulsion, acetone, ammonia, walnut oil, benzene, benzene, ethylene glycol, poppy seed oil, formaldehyde, methyl alcohol, olive oil, phenol, kerosene, linseed oil, ethylene acrylate, propylene glycol, quaternary ammonium compounds, trichloroethylene, safflower oil, vinyl acetate - acrylic copolymer, coal tars, ultramarine, chromium, cadmium, iron-oxide, phthalocyanines, gum arabic, methyl cellulose, alkyd polymers, epoxy polymers, thixotropic agents, algaecides, busan 1440, fungicide, acrylic polymers (resins), synthetic pigments: quinacridone, phthalocyanine and dioxazine, ethenyl ethanoate (vinyl acetate), propenoate (acrylic) ester.

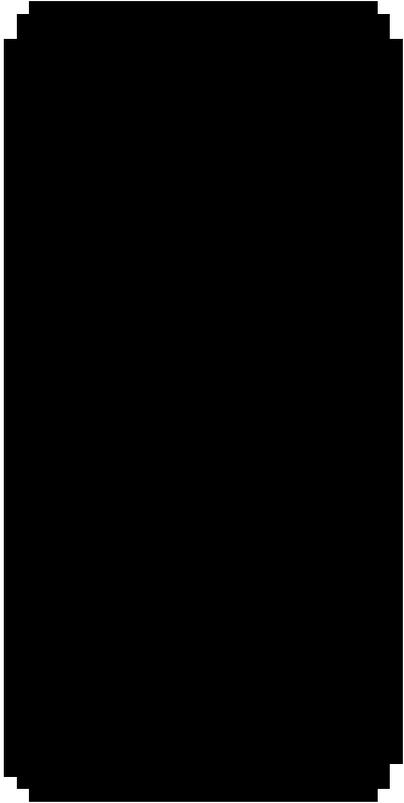
52° 04' 54.2" N, 4° 19' 09.5" E

INGREDIENTS polyethylene terephthalate, chlorofluorocarbons, ethylbenzene, butadiene rubber, polypropylene, copper, zinc, tungsten carbide, polyethylene terephthalate, ethylene glycol, terephthalic acid, titanium dioxide, propylene glycol, propyl alcohol, toluene, glyco-ethers, bromine, carbon black, polymeric thickening agents, benzyl alcohol, phenoxyethanol, oleic acid, alkyl alkanolamide.

↳ <http://bit.ly/3found>



iPhone



Fake grass/astro turf



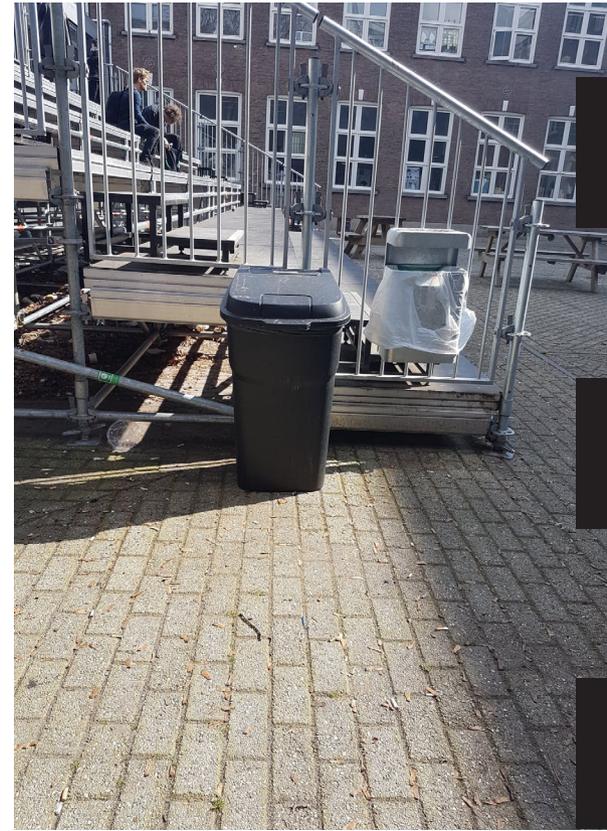
**WALK
AT THE
KABK**

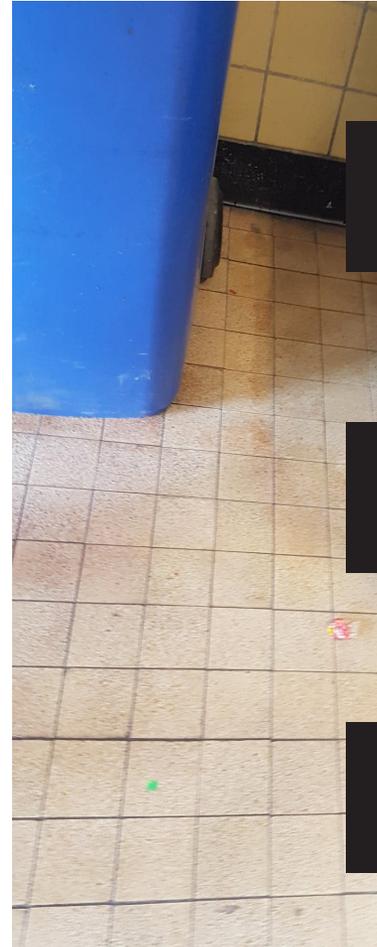
**52° 4'
48.684"**

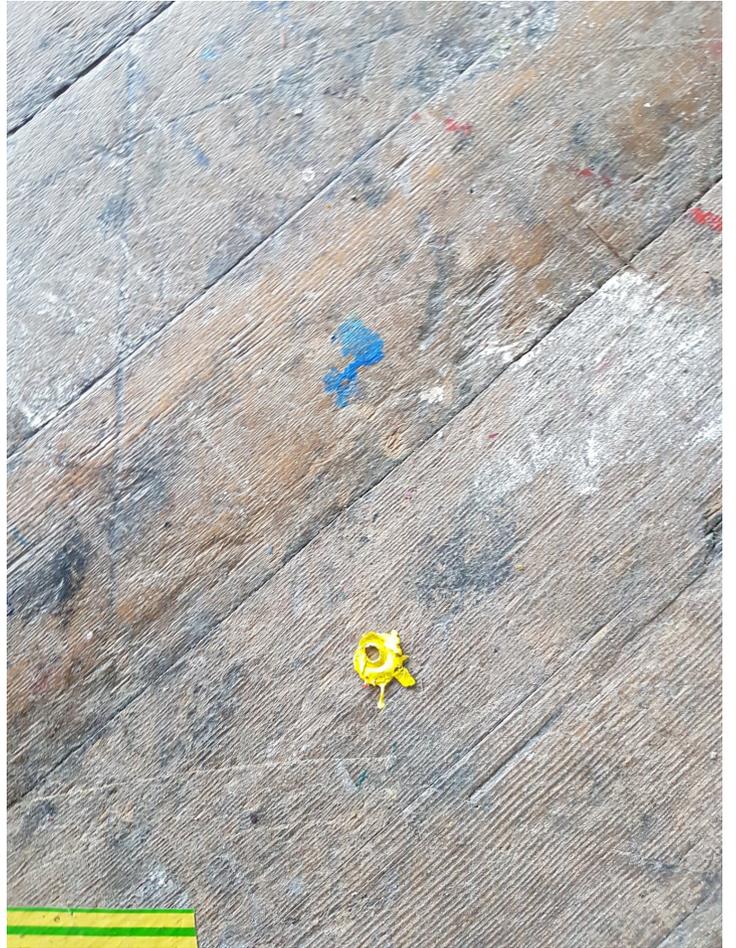
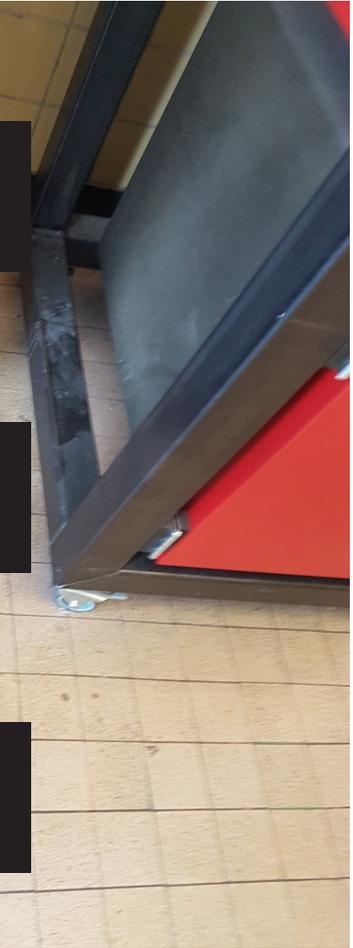
N

**4° 18'
36.486"**

E

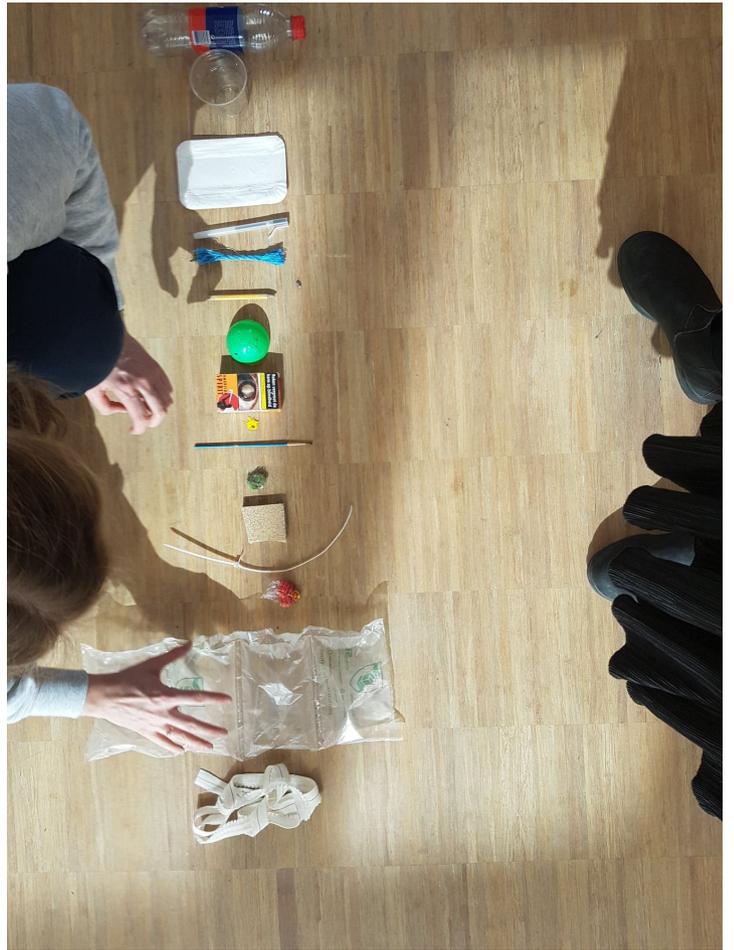


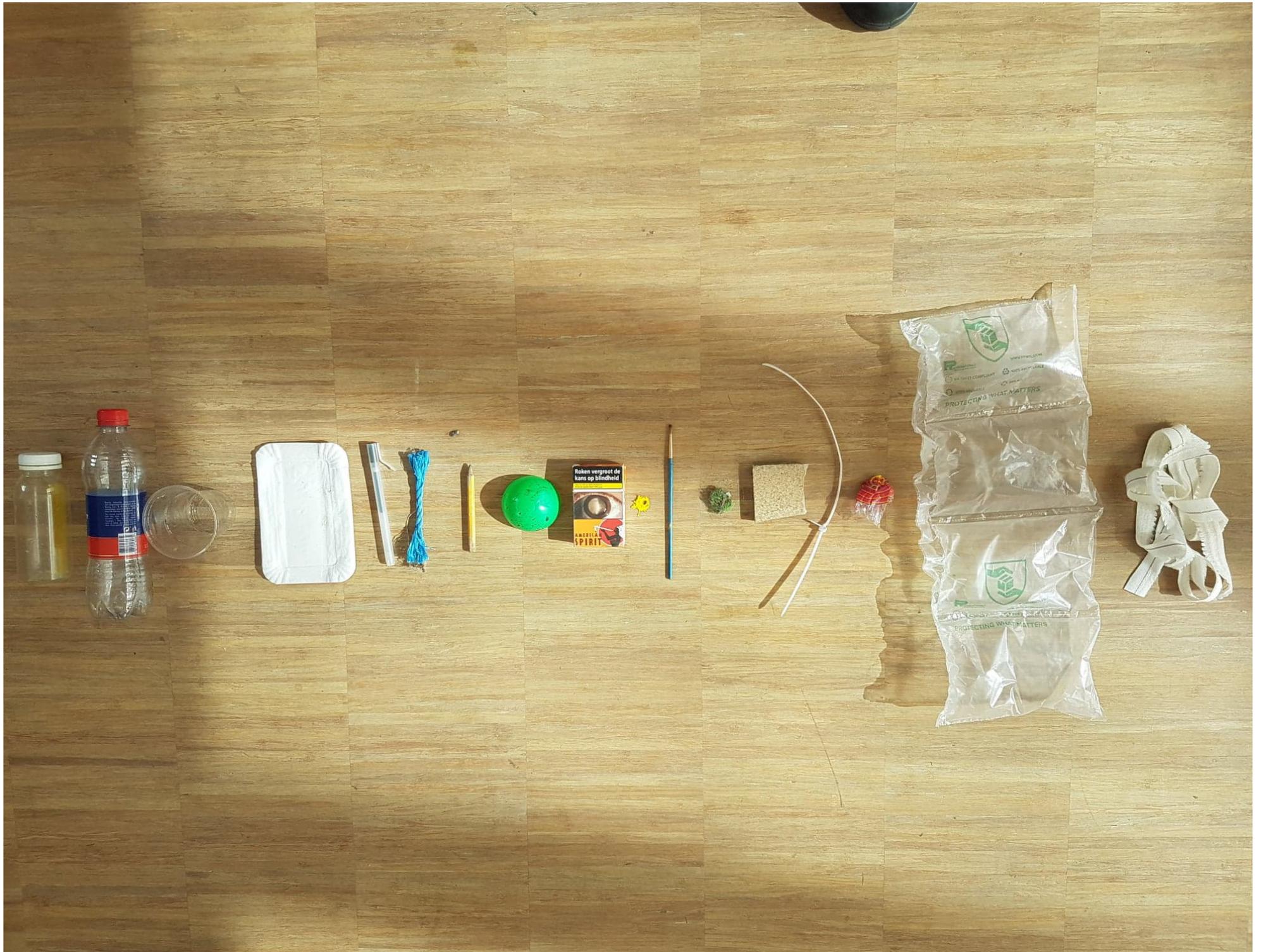












Car parts



Bitumen





**LISELOT
COBE-
LENS**

**BA
INTERIOR
ARCHI-
TECTURE
KABK**

Dear team 010,

On 40 May our divers found another object, 06157, with similarities to object 06156. The sea boat had to dive 2000 m under water to get to the harvesting spot.

As you know the area has been unlivable since 2050. But luckily the storms haven't destroyed everything; in fact there are plenty of relics here for us to examine. Finally, I think we will have a chance to understand what happened before the flood and maybe also why it happened in the first place.

As you predicted there is a radioactive storm coming our way. We will wait it out. As I write this brief, we are still 80 clicks away from the lab, but you can expect us sometime tomorrow. Please, prepare everything in the lab for our arrival and send the report to MK 4586. In the attachment you will find our initial report.

With kind regards,
Team 06

REPORT ON	Object 06157
REPORT	1
FOUND AT	52° 04' 54.5" N, 4° 19' 09.7" E
DEPTH	2000 m
FROM YEAR	2018
WRITTEN AT	40 May 2221 12:00
COMPILED BY	Team 06
ARTIFACT	06157

INTRODUCTION

The location of the site is at 52° 04' 54.5" N 4° 19' 09.7" E, the site of a former building known as KABK, today named as Underwater Archiosite452x. Based on research by KT (Kulvating Time) we believe that this building KABK (see 452x007) was one of the schools where students would have learned in diverse ways to think about and create new concepts for the future. We also believe that at this Archiosite452x there are more clues about how people lived in the years before the Great Flood.

OBSERVATION

It is in even better condition than Object 01020, currently exhibited in the OB. The results of the first test on the object reveal that it was made of 2 of materials – Plastic and Metal (our first find to date containing some Metal).

The object is long and cylindrical, approximately 3cm in diameter, like a sea snake. Our scans show that it is made of metal links coated in green plastic skin, and it can bend into a circle.

If we take a closer look at the head we see that this end is slightly thicker. More material has been

used here. Besides that we can recognize 2 cavities. The left one is slightly bigger than the right one (the tail). It looks as if the tail can connect to the head.

HYPOTHESIS

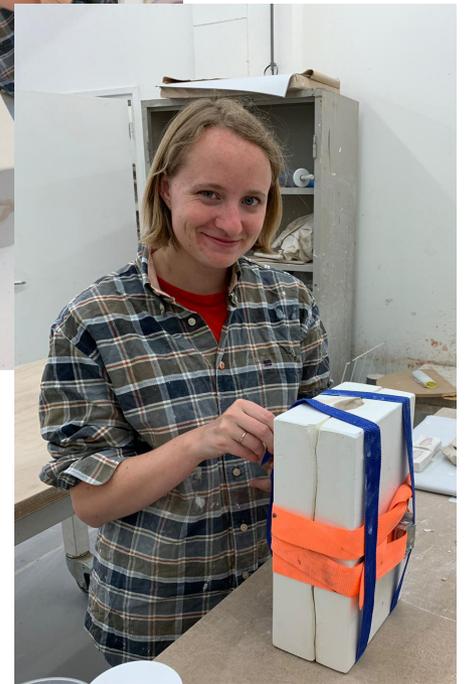
Based on our initial research, my colleagues and I believe that this object was used for ceremonies as a linking device between one object and another. Probably these ceremonies would have happened on a daily basis. Perhaps people who wanted to leave an object somewhere would have used this device to secure it to something else. They probably would have prayed to the gods to keep it safe while performing the securing ritual, and if it was still there when they returned, they would have offered thanks, and conducted the release ritual. Referring to pre-flood data, I have encountered multiple uses of the concept of 'locking' and I believe this object is connected to such a practice.

As we know, these early Anthropocenic, pre-flood peoples lived in a primitive and needy way, and did not enjoy the same connection to the world and each other as we have today. Back then they still 'owned' objects as a way to make them feel better about themselves. We also surmise that people did not trust one another and lived in fear that these owned objects would be taken from them. They did not yet know how to use DNA to link themselves to an object they needed to transport. So it seems they spent a lot of materials and energy on making, acquiring and securing these owned objects.

If this is indeed a 'locking' object, it will make a valuable contribution to knowledge, not only in terms of the materials which we can study but also for what it tells us about these strange historical cultural practices.







LETTER TO AN OLD FRIEND

O old grey lover
It is time to say goodbye.
We met 3 years ago,
And every week we saw each other.

Having each other close and tight.
Has now changed.

There is now every time a cold air flow,
Chilly and uncomfortable.

O old grey lover
I know you are broken,
It is shown.
We had some amazing adventures,
And I will always remember them.

But now

We have to move on.

GREEN MONSTER

It used to be that every time
I went away
And left you behind
You kept things safe

I trusted you.
But last time it was different
You lied to me
And because of that
Our relationship is broken

IT WAS A HOT SUMMER

Together we tried to stay out of the sun.
To keep our heads cool.
And survive the hottest hours of the day.

You were always there to provide me with the
moisture I had lost.
Our lips touching.

Some would say it was love at first sight
I'm still not sure but it was

Intimate

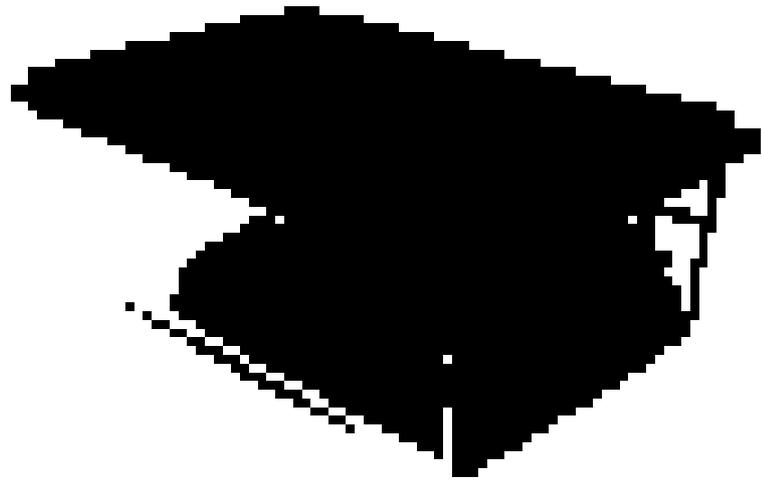
Then on June 4 our lives

Split
Suddenly I forgot you.
And couldn't recognize you anymore

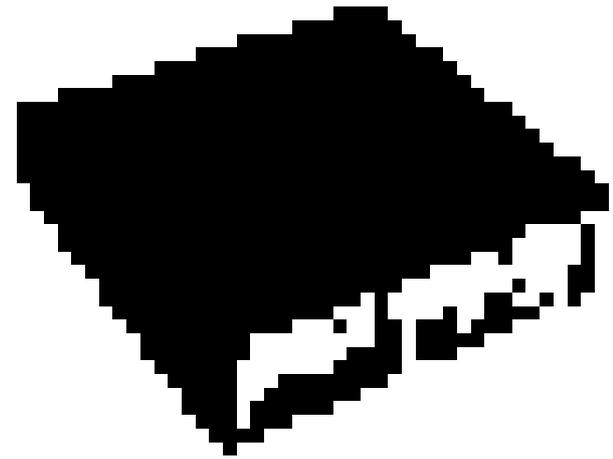
I just hope one day you will find your way back to me.



Tupperware



Concrete



**FUTURE
FOSSIL
CERA-
MICS**

**51° 34'
51.95"**

N

**5° 11'
18.69"**

E







Credit card

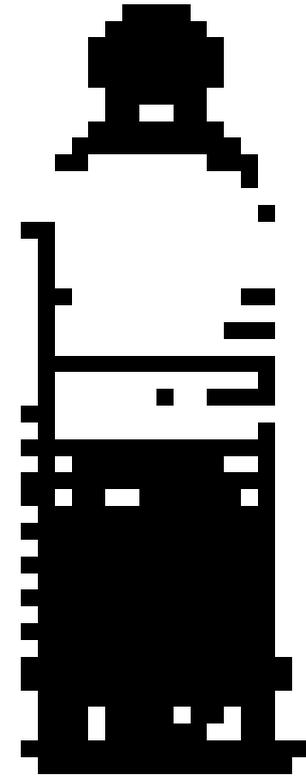


Microplastics

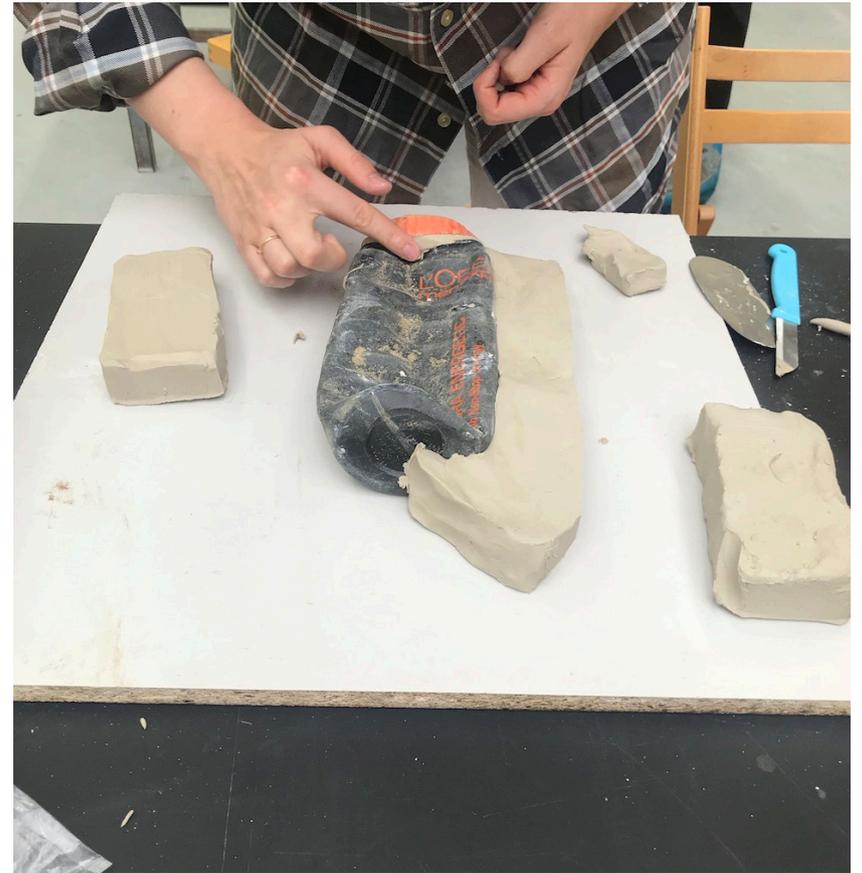
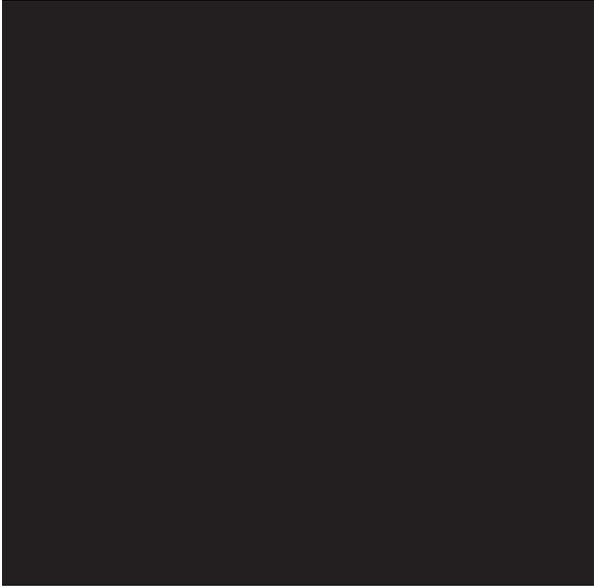


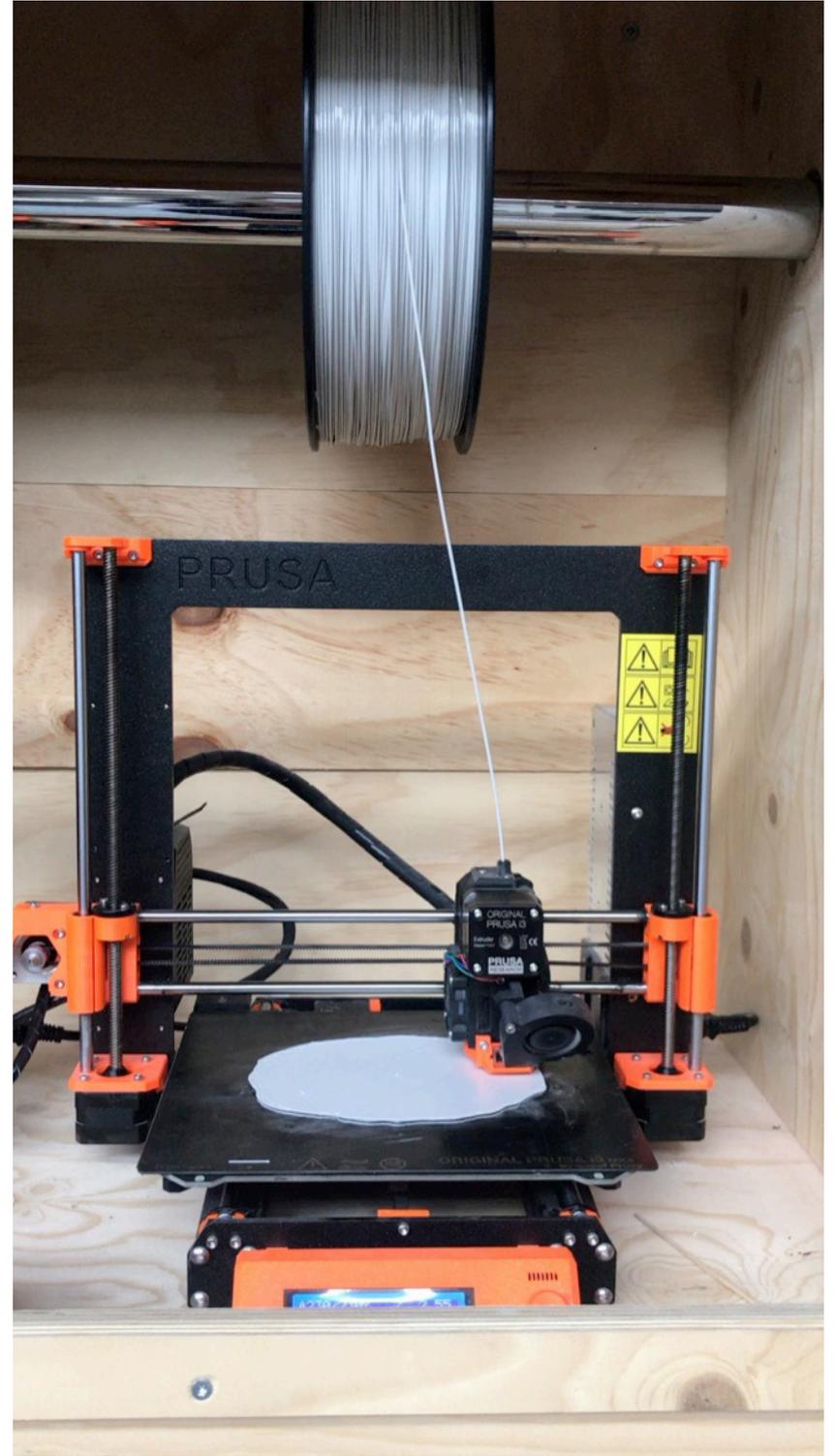
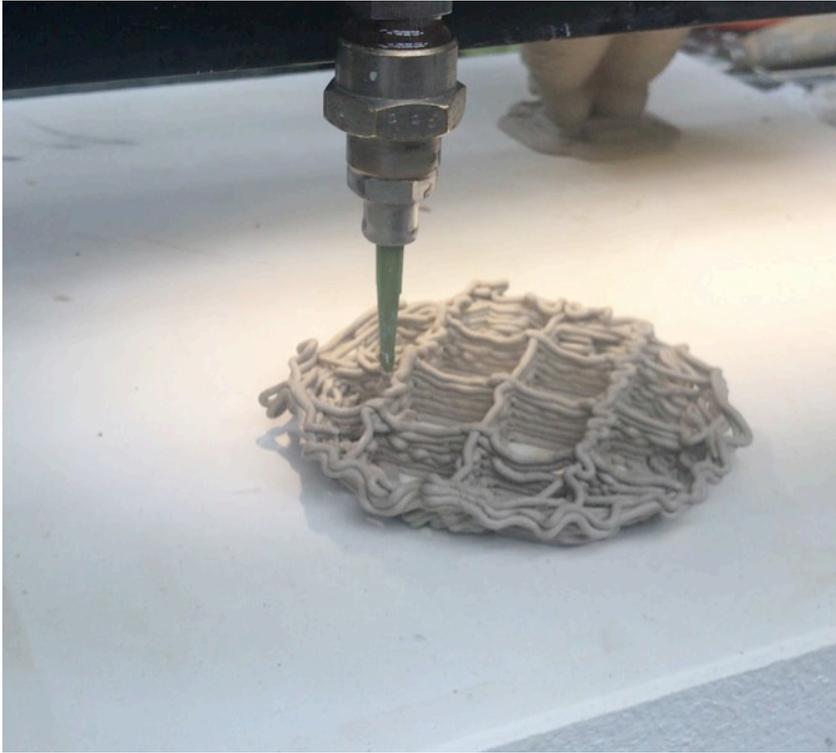


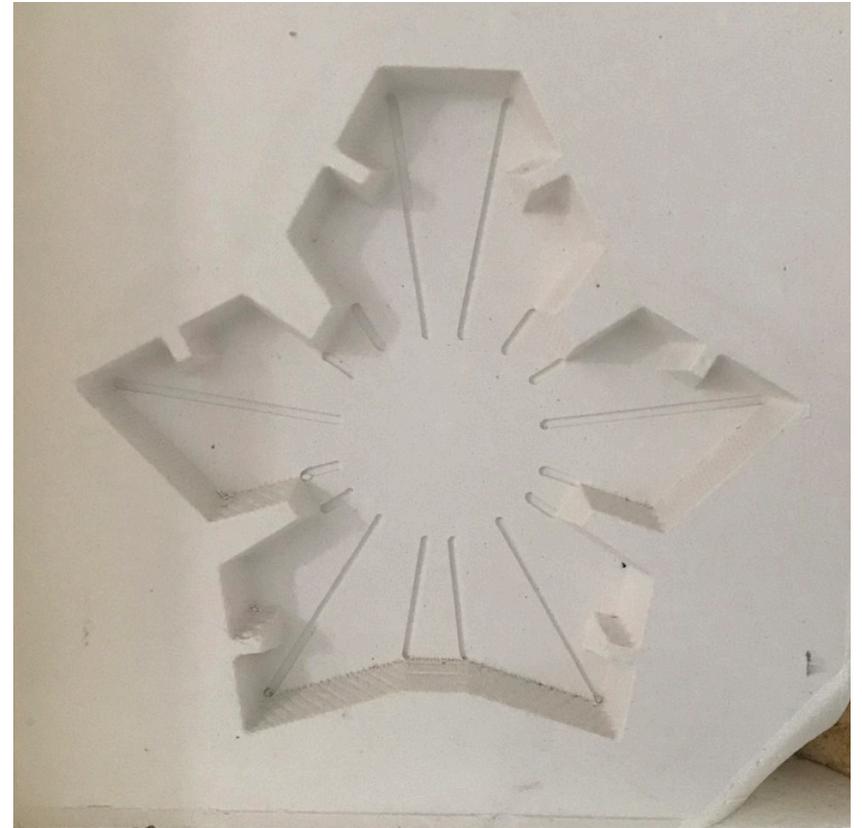
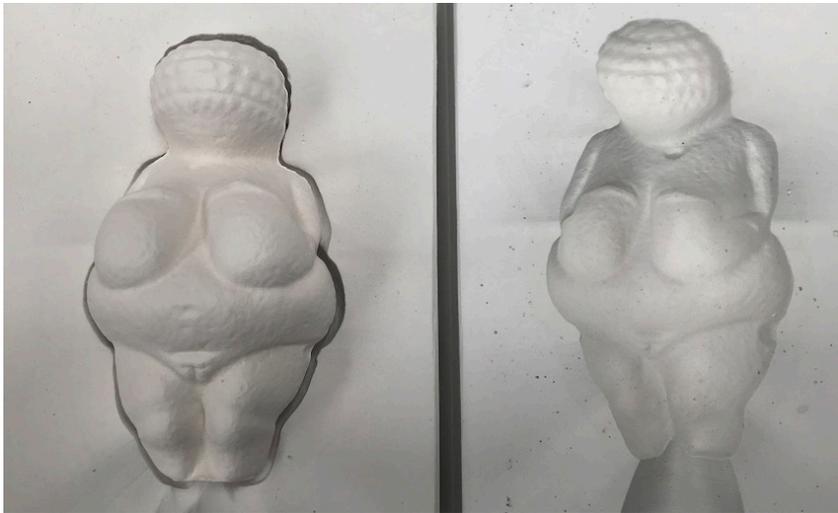
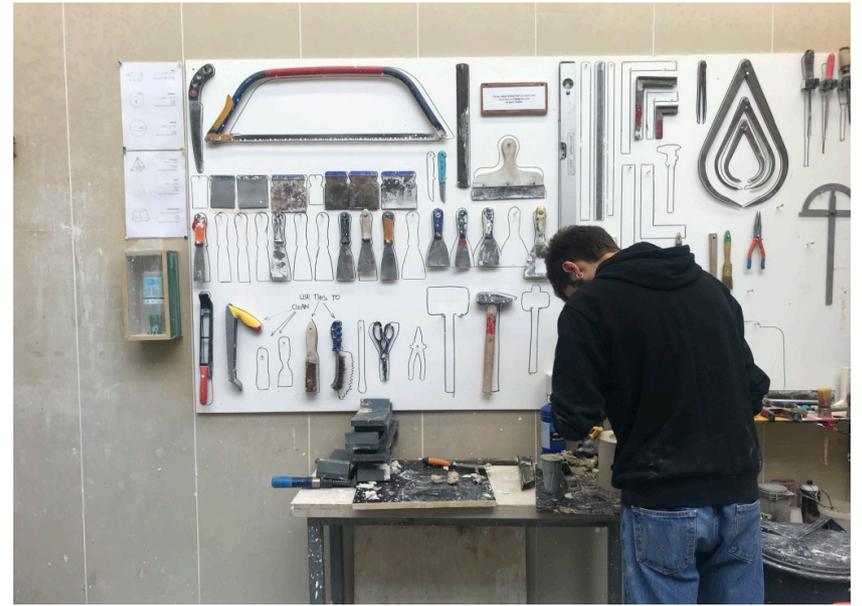
Water bottle



Post it note



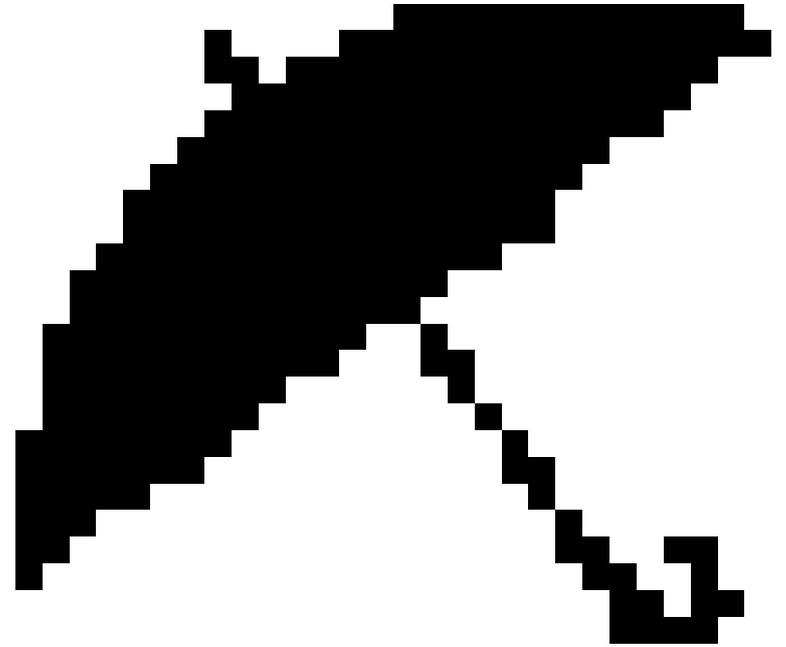








Umbrella



USB stick







**IVOR
BOR-
OVECKI**

**BA
PHOTO-
GRAPHY
KABK**

DATE 29-5-2100
COORDINATES 52° 4' 54.156" N, 4° 19' 7.626" E

The team of the Den Haag archeological department, led by Dr. Albert-Jan Pluimers, discovered a 'mass grave' of hard drives dating from the dawn of the Anthropocene after a routine check-up of the now-underwater dunes in the Scheveningen Beach area – a territory that has been expanding due to the rise of the water level and which now serves as a spontaneous and natural underwater collection of commodities from the past.

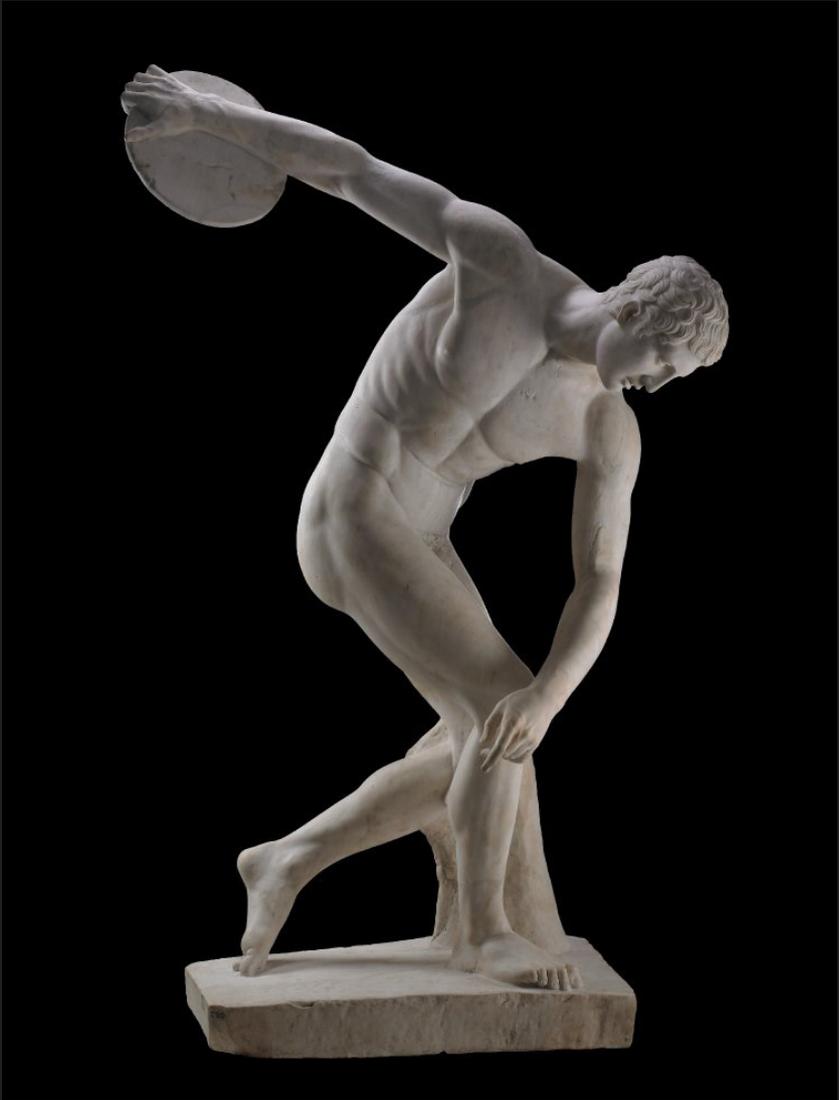
– Albert-Jan Pluimers
audio log transcription (5:23 min)

'After careful examination of the relics found underwater, we discovered the oldest hard drive dates as far back as 2019 which could mean that the information kept on these devices is inaccessible because of the outdated technology used in the encryption of its data. Is it possible that this discovery is in fact meaningless due to the extreme technological development that our society has undergone since the creation of these data containers? If so, mankind really is a victim of its digital industrial revolution that has been spiralling out of control ever since the rapid development of Artificial Intelligence and the robot race. Furthermore, the hard drives could also be physically damaged because of their decades-long exposure to water, which causes the occurrence of rust on the metal connections of the logical board, rendering it non-functional. Luckily, my team and

I managed to find a way around both the physical, and the power-related limitations of the hard drive memory units and have gained access to almost 500 terabytes of data. A terabyte was a measuring unit for digital information commonly used at the beginning of the 21st century.

The team was surprised to discover that the drives contained family vacation photographs from several of the cities and monuments that were destroyed in the Digital Information War, such as the Parthenon in Athens and the Eiffel Tower. The question we should ask ourselves is: What is the actual significance of these images? They are interesting to us from the perspective of historical documentation and the preservation of memory, but how can they further the development of human knowledge if all of this information had already been known? After the DI War, tourism ended due to the extreme emotional and economic hardships endured by all social groups who once inhabited this planet.

Maybe the importance can be found lying within the physical dimensions of the object, rather than in its intrinsic binary code, since hard drives, cloud storage and wireless transfer connections, are all relics. These past innovations show us how rapidly technology was developing at that time and how hard it was for the regular consumer to stay in touch with these digital abstractions'.





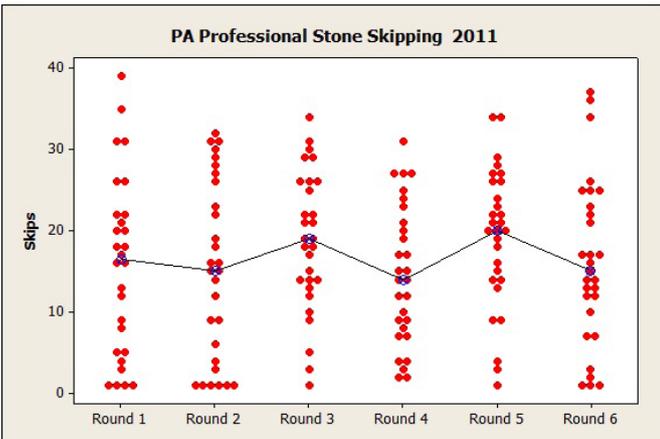
Real Presence

How to Skip a Stone

The Art of MANLINESS

<p>Pick the right stone: flat, uniform thickness/thinness, fits in your palm, and no heavier than a tennis ball. Too heavy and the rock won't skip off the water.</p>	<p>Hold the stone between your thumb and middle finger, with your thumb on top, and your index finger hooked along the edge.</p>	<p>Stand facing the water at a slight angle. With rock in hand, pull your arm back like you're going to throw a sidearm pitch.</p>
<p>As you throw the rock, cock your wrist back. Right before the release, give your wrist a quick flick. This will create the spin needed for the stone to skip across the water.</p>	<p>Throw out and down at the same time. For maximum skips, the stone should enter the water at a 20 degree angle. Scientists have found this to be the optimal angle for stone skipping!</p>	<p>Have fun skipping stones with your kiddos!</p>

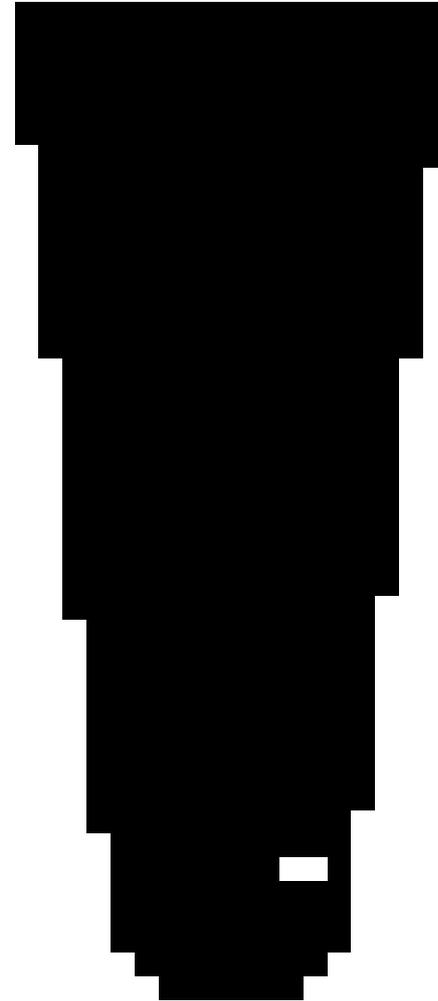
© Art of Manliness and Ted Slampyak. All Rights Reserved.



Chair



Tube of acrylic paint



KCCM

WORK

PRESENTATION

TATION

52° 4'

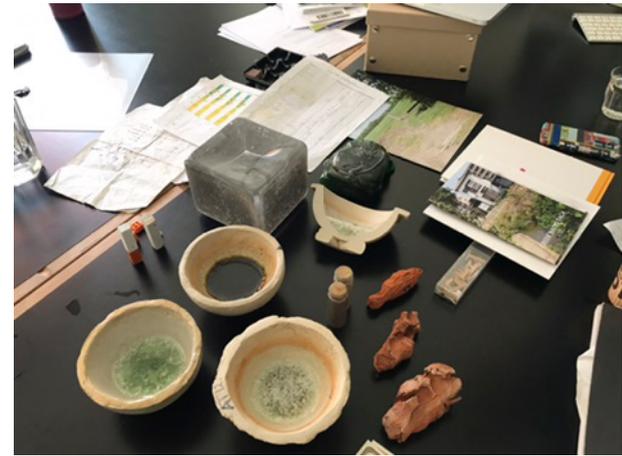
48.684"

N

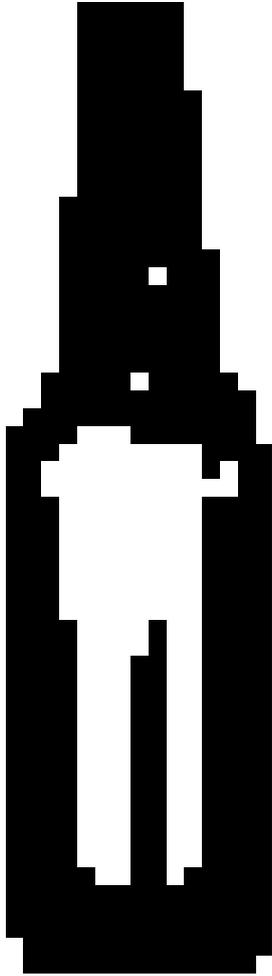
4° 18'

36.486"

E



Glass beer bottle



Lid of can of spray paint





**IGOR
SCHIL-
LER**

**BA
PHOTO-
GRAPHY
KABK**

It's Y 2100. My exchange at KABK has long-since passed and my physical body is no longer on this planet. But the things I brought with me from Serbia have remained deep in the sandy soil of The Hague. Before I had moved, I carried a certain resistance towards my home country. Yet, Serbia has undoubtedly shaped me as a person in many ways which now from this distance seem crucial and irreplaceable.

When my brother visited me, during my exchange, I told him to bring me food from Serbia. He came with a suitcase full of sugar snacks in all forms and shapes. I was so happy to eat these little pieces of my childhood. He also brought two Serbian breakfast staples: yogurt and margarine. Oh, how happy I was to drink real yogurt again and start my day how I used to. After the feast, I saved the packages in my drawer. I never looked at them again, but I knew that they were there. These packages contained in them time and distance. What I didn't realise is how everything that my brother brought included some kind of plastic.

Now, in Y 2100 an aspiring archaeologist is leading a dig in the Grote Markt area, where I used to live. They are finding plastic packages of products that are not in their manuals. A Balkans expert is able to give them further information. They are shocked at how many ingredients now banned for human consumption are listed on the packages of these products.

They are also learning that in Serbia, even though a package was designed to be disposed of after use, families would save them and give them another use. A plastic yogurt cup could be a measuring cup and a margarine tub could be used to store ingredients. There is much to learn about Balkan cultural traditions through these pieces of plastic that I chose to store rather than throwing in the trash. For example, the amount of sugar used in packaged snacks in Balkans was higher than in most other regions of the world, and the colours used in advertising and on packages, you don't find anywhere else. So now my nostalgic plastic snack trash is being collected and analysed alongside Roman coins and Byzantine weapons; they are all relics together.

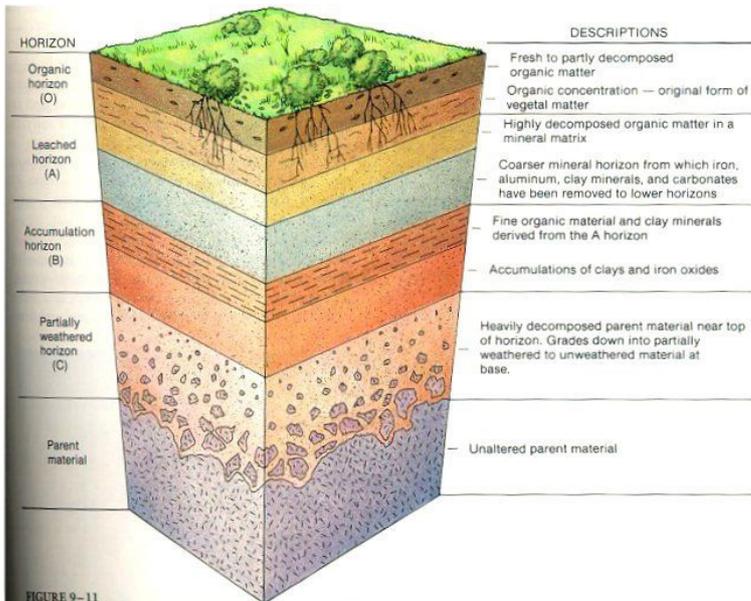
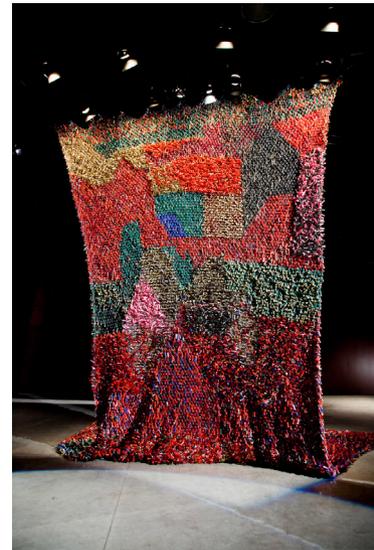
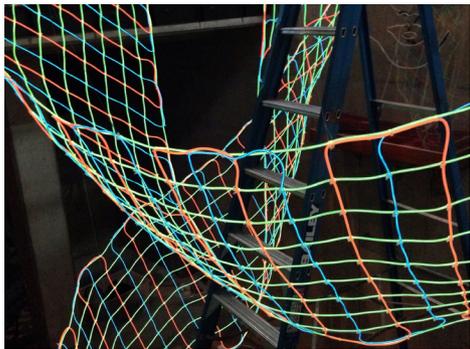
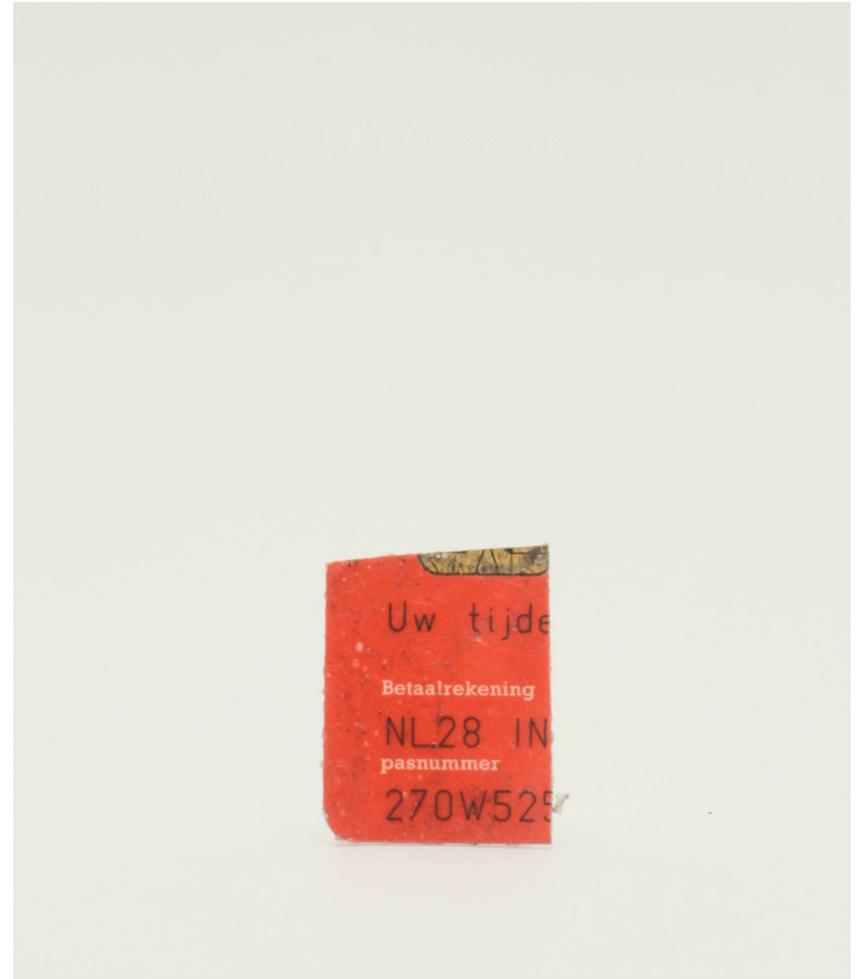


FIGURE 9-11
Cross section of a soil in the northeastern U.S. showing horizons.





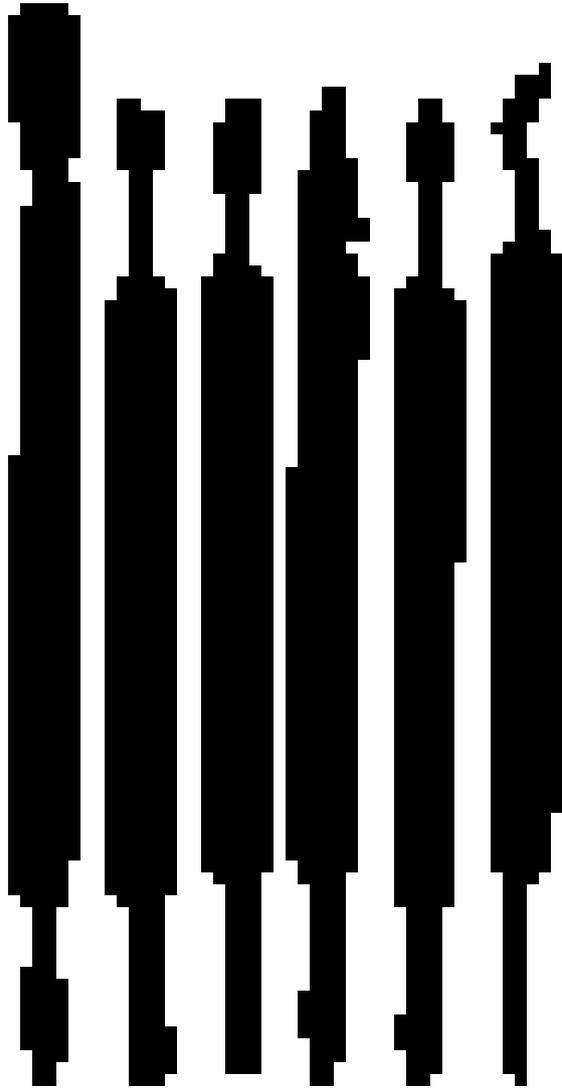




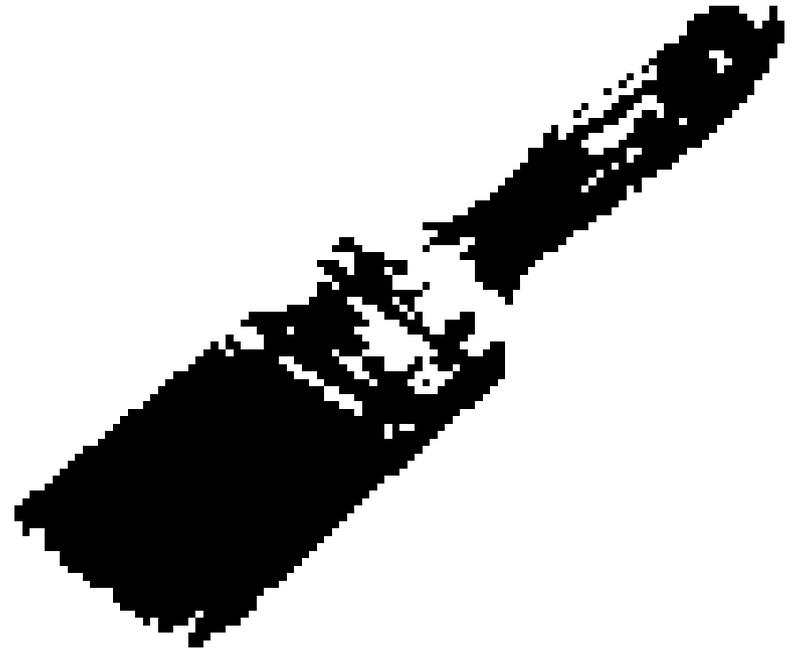




Ceramics tools



Archaeological digging and cleaning tools



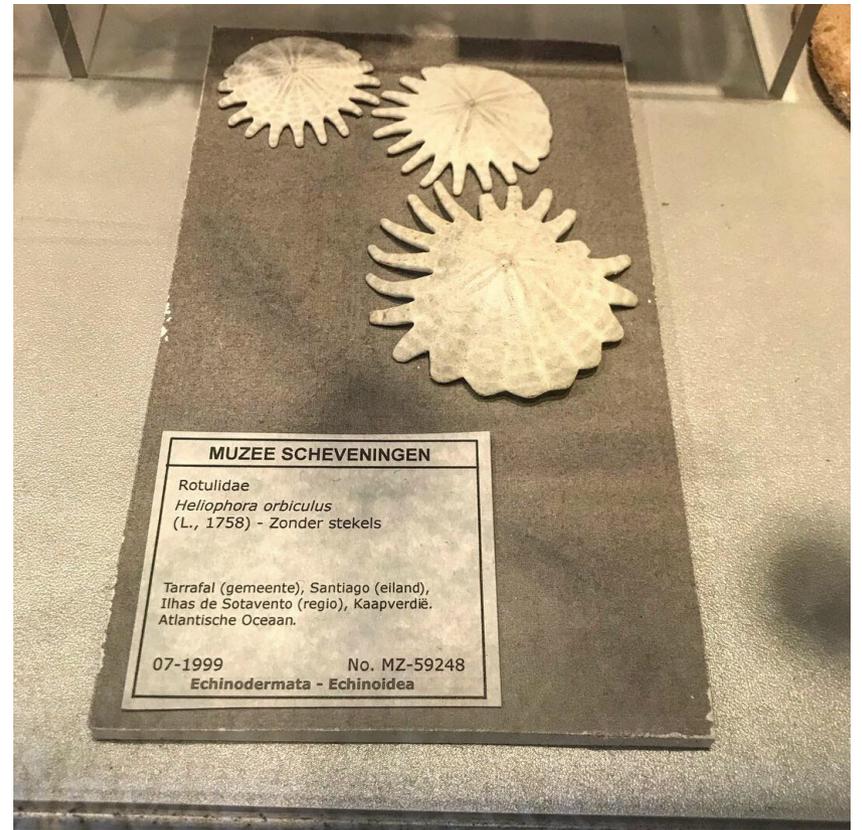
**SCHEV-
VENING-
EN
MUSEUM**

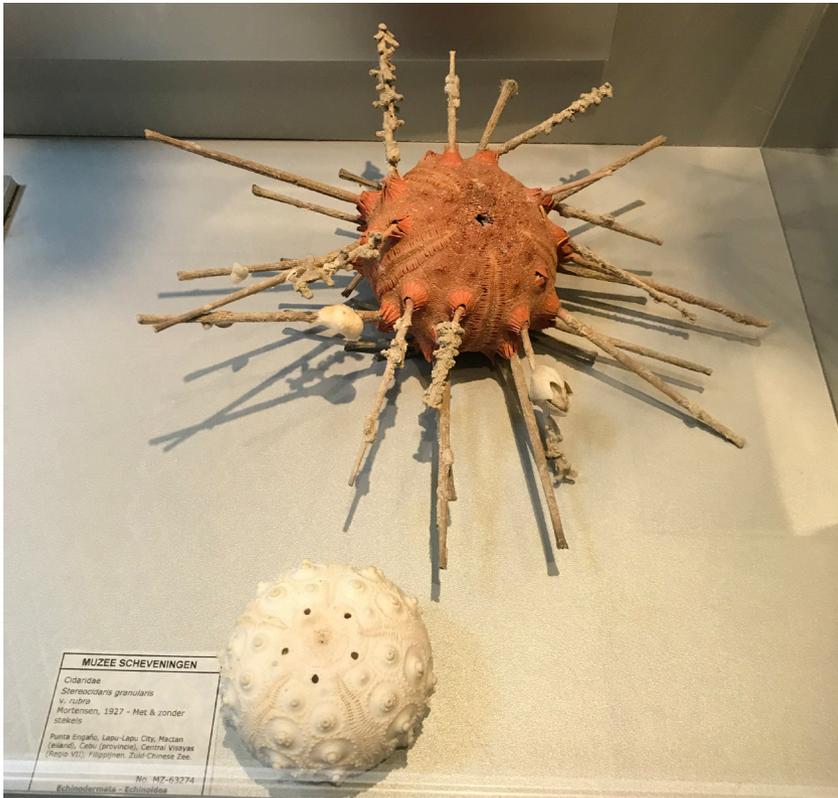
**52° 6'
22.349"**

N

**4° 16'
30.975"**

E





MUZEE SCHEVENINGEN
 Cidariae
Stereocidaria granulata
 v. *rubra*
 Kortmann, 1927 - Met & zonder
 stekels
 Punta Engaño, Lapu-Lapu, City, Mactan
 (eiland), Cebu (provincie), Central Visayas
 (Regio VII), Filippijnen, Zuidoost-Azië
 No: MZ.6.9274
 Echinodermata - Echinodidea



**VIOLET
LUU BAO
TRAN**

**BA
INTERIOR
ARCHI-
TECTURE
KABK**

Dear Jacqueline,

Last week my virtual dog and I were enjoying our usual afternoon walk along the Prinsessegracht, when she came running back to tell me about this weird looking object that she discovered.

It was a disc-shaped object, off-white, with streaks of red, and emitting a sticky, almost oily substance. My dog was very much displeased by its smell and texture, yet I found it intriguing. I ran a couple of on-site tests and discovered some exciting pointers. The main chemical component of the object is polypropylene (PP), a type of plastic that was widely used in the past. This one was classified as commercial PP, so it must have been mass-produced. The chemical profile of PP indicated that it has a large thermal expansion, 72 - 90 (10⁻⁶ m/m K), leading to my theory that the object when actually in use would have been much smaller. I looked around the site a bit and found a mixture of different active chemicals: a high percentage of activated carbon just underground, combined with a relatively low amount of zinc chloride and TEOS, and a surprisingly large amount of used coffee grounds. I think these coffee grounds have been acting as an adsorbent and the zinc chloride and TEOS were assisting the process of carbonising. The activated carbon seems to have contributed to the degradation of the object. I know you've done some research into similar decomposition processes so I wanted to get your take on this.

We found the thing on the site of a former art academy. I managed to find some records in the city archive and found out that the art school had several workshops. The blueprint of the building shows

that there was a colour lab for textile dyeing and a metal workshop located next to each other. As zinc chloride and TEOS used to be used in textile dyeing and soldering, I suspect that this is the source of these chemicals that I found.

However, I still could not figure out the original form of the object. Luckily, my friend James came to the rescue. Remember him? He developed that new photogrammetry program which can detect the chemical structure of any deformed object with just a photograph, which then allows user to reconstruct the original shape. It is a fantastic program and it helps me tremendously (there are a couple of bugs since the program is still in beta phase but I will keep you updated once it is ready for public release). It seems as if my thing was some sort of plastic tube with a diameter of 1cm, and 15cm long, and one opening cut diagonally, to make a point. The reddish colour apparently came from a different component, initially a thin layer of PP wrapped around the tube to make stripes.

I am still trying to work out what such an object would have been used for, but I'll run through the city online archive again today. Meanwhile, I have sent you the hologram of the object and I look forward to your feedback.

Cheers,

Norman

Dear Norman,

First of all, thank you for your note, I was indeed intrigued by the discovery of such artefact. My team has been terribly busy for the last couple weeks on an excavation near Wassenaar. Lots of interesting findings. I will fill you in when I see you. However, some colleagues managed to have a look at the site you mentioned, and I must say, the amount of PP that they unearthed within a one-square-meter radius was enormous. Since this excavation (Cutting A) was meant for the research on the object that you and your dog found last week, we decided to keep the digging rather shallow, 1m by 1m and 0.5m deep. Nonetheless, cutting A also reveals a lot of interesting artefacts so our team is planning a second cutting. I am happy to let you know that all surrounding construction has been halted, after quite a bit of to and fro with the Head of Den Haag Municipal Archaeology Department.

Looking closer at the hologram of your object, I believe it was what was called a 'drinking straw', a device to help you suck up liquid when drinking. Sounds redundant, but this object was invented in 1888 and was used a lot during the 20th and early 21st century. In fact, the use of this object became an epidemic that really damaged the marine ecosystem. In spite of that, I couldn't, at the time, figure out what the use of the thin layer of PP that was strapping around the drinking straw as it almost seems decorative and unnecessary. Yet, there's an inscription on the surface of the thing. The rendered image from that photogrammetry was rather blurry but gave enough information for me to run it through

the meta search and decoding program and it turns out to say 'Gongcha'. This piece of information led me to a Taiwanese tea company named Gongcha (fig. 1) that opened their first store in The Hague in 2020.

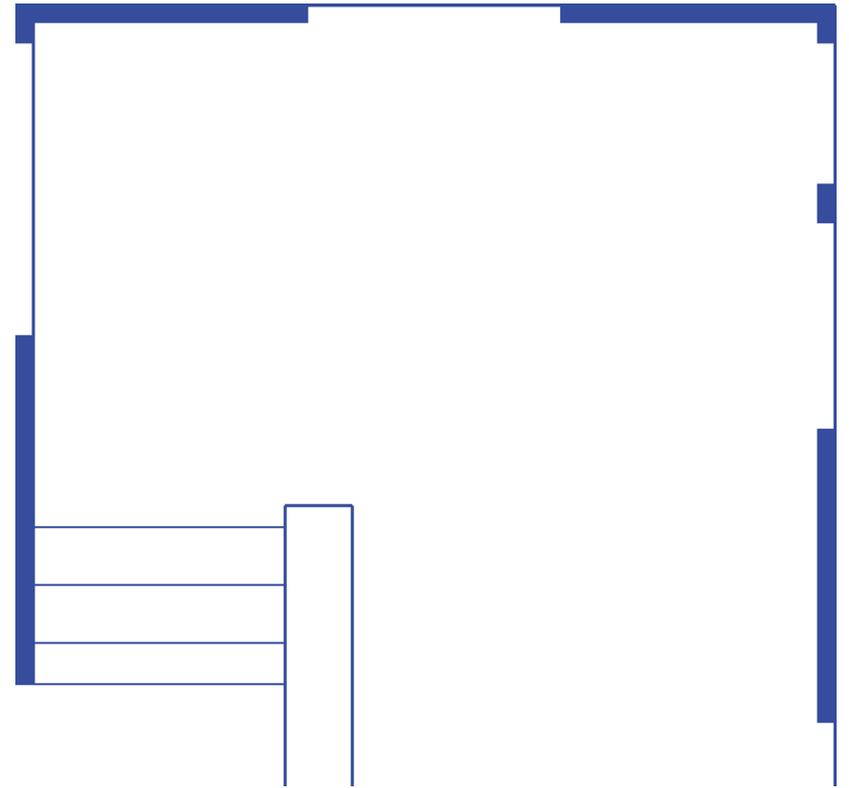
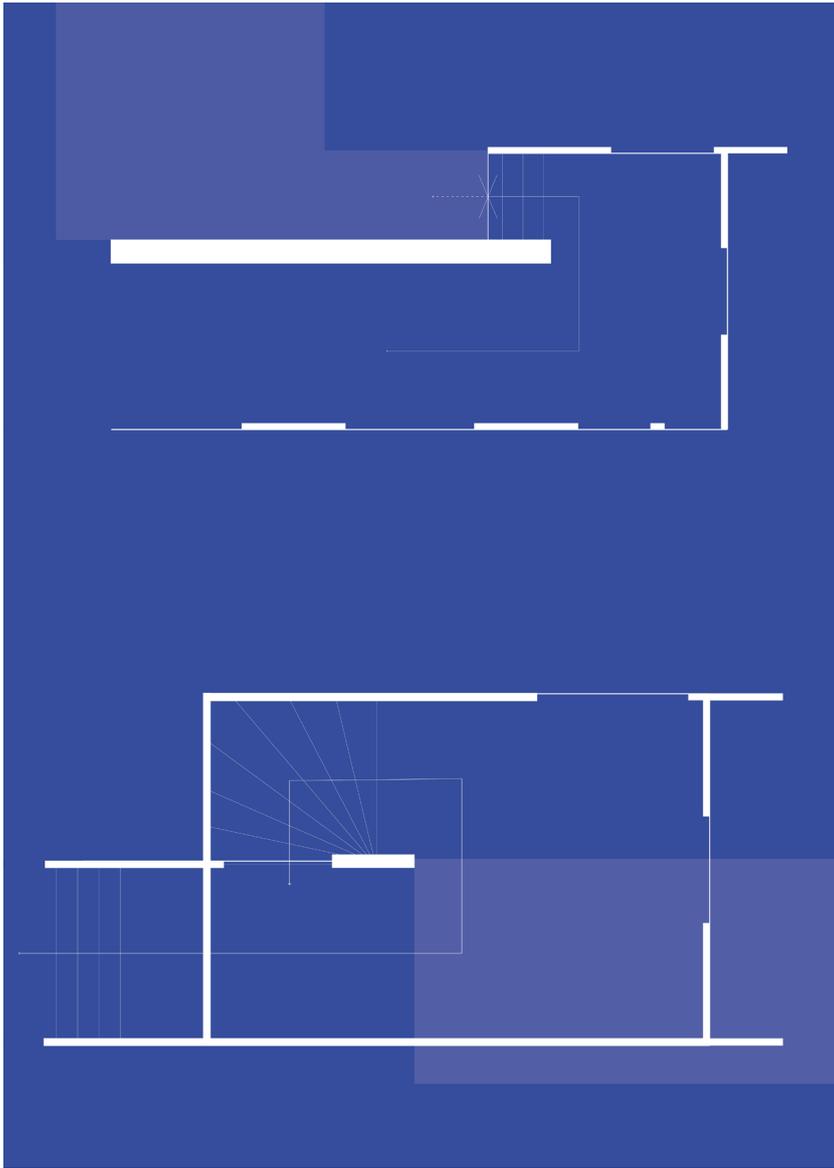
The store was actually a couple of blocks away from the location of the old art academy where you found the artefact. Now, what was really fascinating to me is that the drinking straw object had many variations, and this one in particular was made bigger in radius, in comparison to the average drinking straw, in order to be able to suck up tiny little balls known as 'tapioca pearls', made from cassava starch. One end of the drinking straw was cutting diagonally in order to be able to poke through the heat-sealed top of a cup, which is, in fact, the thin layer of PP that we detected.

But don't be so surprised by these peculiar artefacts since the global epidemic of plastic waste that happened during the last two centuries has formed such a thick layer on the Earth surface. (see purple top layer, fig.2) You can clearly see at the cross section drawing of C, our location of investigation, that the plastic group has become thick enough to be classified as a significant stratal layer.

Anyhow, we shall have a good extension cut into the site by next week. If you want to join and help us with some sorting that would be of great help since the ground is rather contaminated with fabric dyeing chemicals. I'll send you the exact schedule later this week!

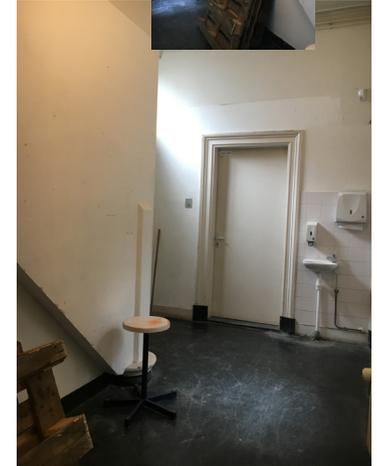
Kind regards,

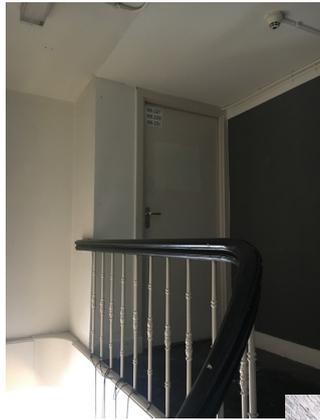
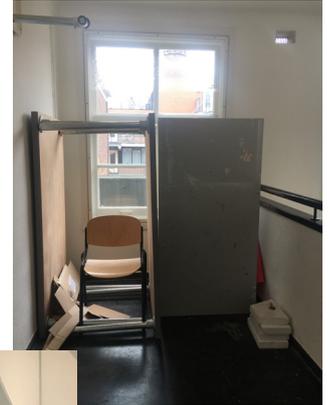
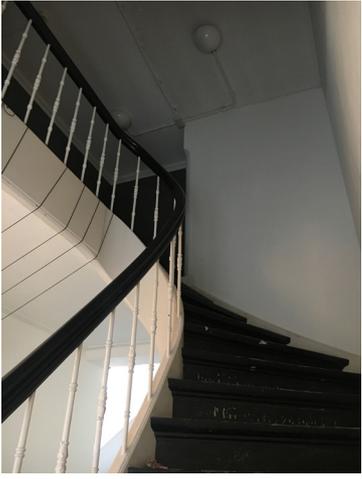
Jacqueline











52° 4'
55.632"

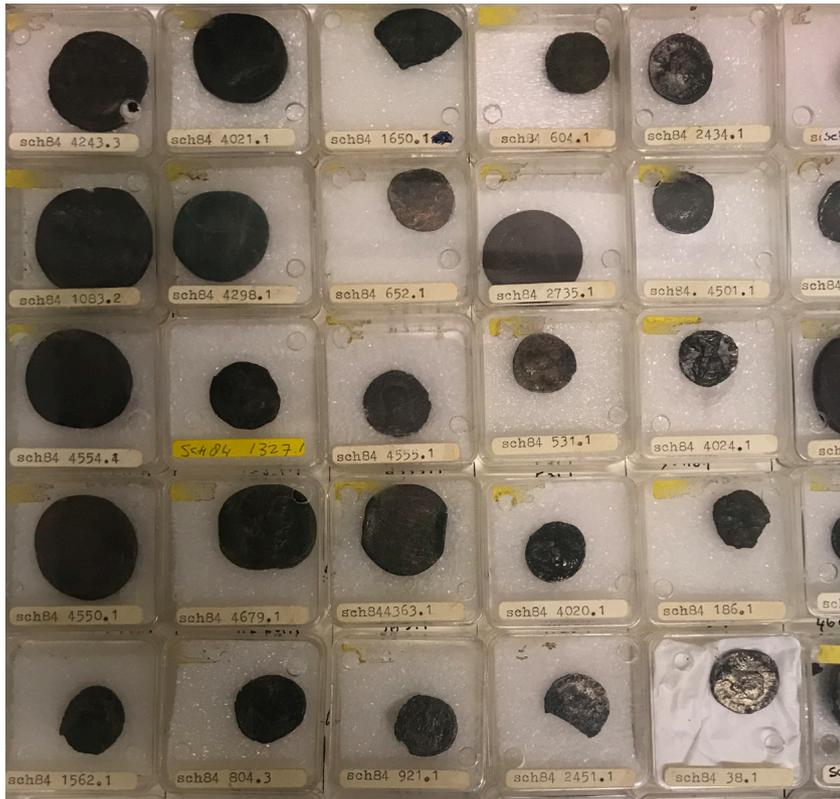
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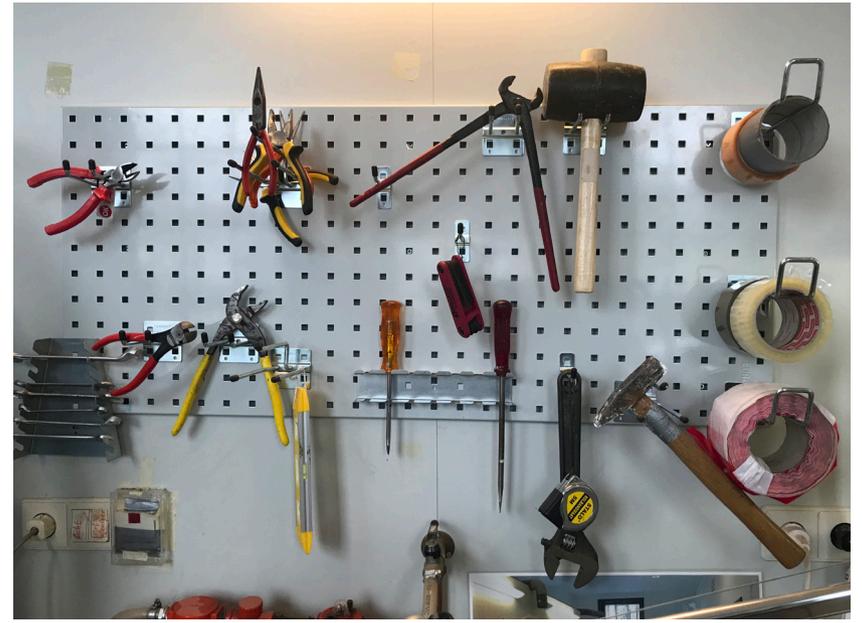
4° 17'
37.540"

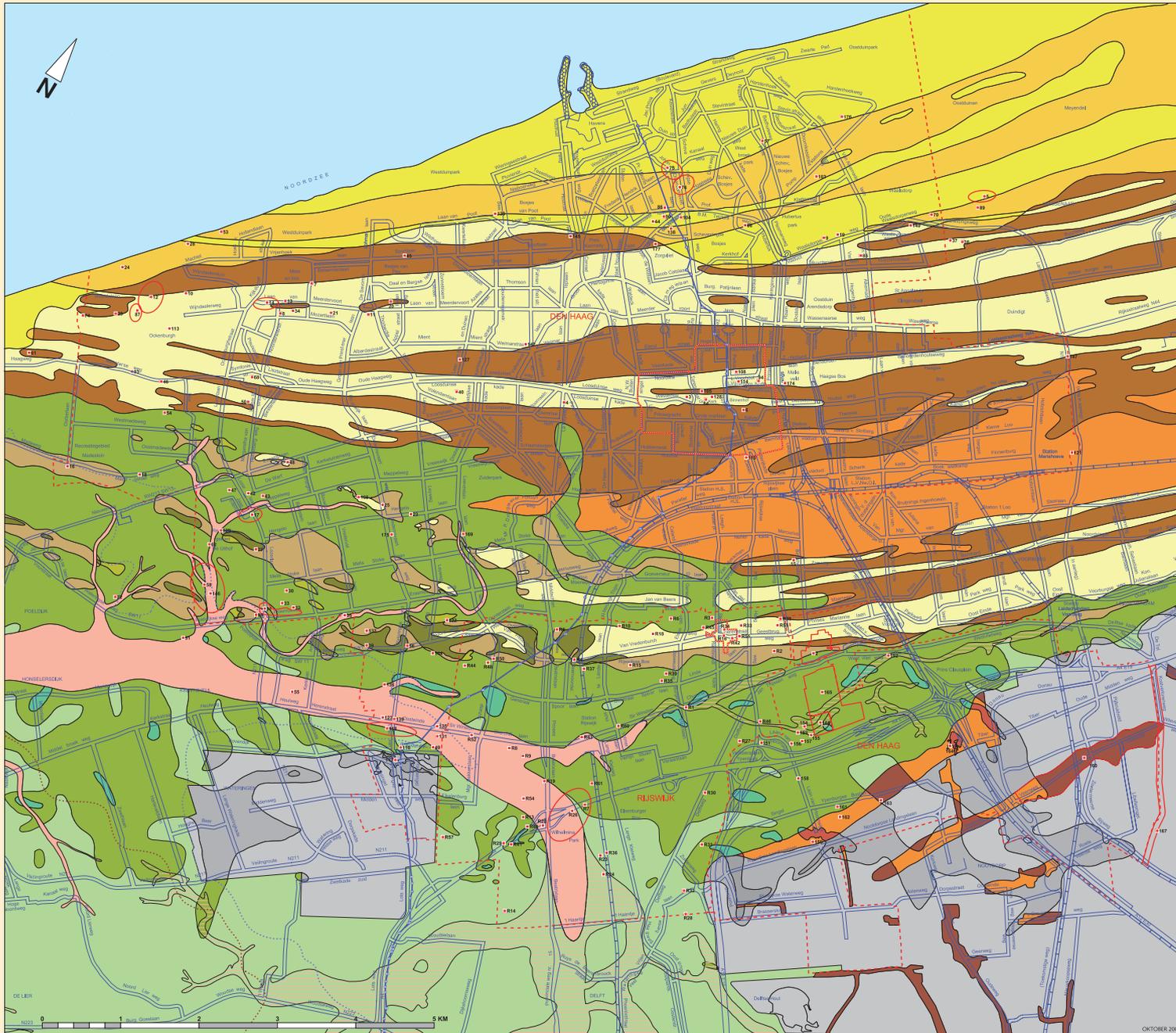
E

**MUNICI-
PAL AR-
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MENT
THE
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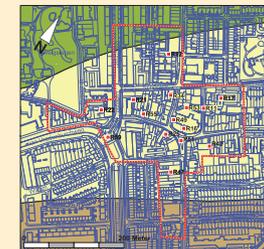




Overzicht Den Haag en Rijswijk 1 : 25.000



Stads Kern Den Haag 1 : 12.500



Dorps Kern Rijswijk 1 : 5000

Legenda

- 1 Vindplaats Den Haag
- R1 Vindplaats Rijswijk
- Vindplaats vlaklocatie
- Stads Kern (17de eeuw)
- - - Gemeentegrens
- Profiel-lijn met boomnummers

Legenda geologie

Laagpakket van Walcheren aan maaiweld of onder stadsophogingsdek (hoofdzakelijk zand)

- 1: Laagpakket van Walcheren op Hollandveen of Laagpakket van Wormer, en waar de top van de zandafzettingen van het Laagpakket van Wormer en/of de Laag van Rijswijk dieper liggen dan 5 m -NAP
- 2: Laagpakket van Walcheren op Hollandveen of Laagpakket van Wormer en/of Laag van Rijswijk, en waar de top van de zandafzettingen van het Laagpakket van Wormer en/of de Laag van Rijswijk ondieper liggen dan 5 m -NAP
- 3: Laagpakket van Walcheren op Hollandveen, op Laag van Ypenburg, op Laag van Rijswijk of Laagpakket van Wormer
- 4: Laagpakket van Walcheren op Hollandveen, op Laag van Voorburg, op Laag van Rijswijk
- 5: Laagpakket van Walcheren, op Laag van Voorburg
- 6: Laagpakket van Walcheren, op Laag van Rijswijk en/of Laagpakket van Wormer

Formatie van Nieuwkoop aan maaiweld of onder stadsophogingsdek (hoofdzakelijk zand)

- 8: Hollandveen op Laagpakket van Wormer, en waar de top van de zandafzettingen van het Laagpakket van Wormer en/of de Laag van Rijswijk dieper liggen dan 5 m -NAP
- 9: Hollandveen op Laagpakket van Wormer, en waar de top van de zandafzettingen van het Laagpakket van Wormer en/of de Laag van Rijswijk ondieper liggen dan 5 m -NAP
- 10: Hollandveen, op Laag van Ypenburg
- 11: Hollandveen, op Laag van Voorburg

Laagpakket van Wormer aan maaiweld

- 12: Afzettingen van Wormer aan maaiweld, en waar de top van de zandafzettingen van het Laagpakket van Wormer of de Laag van Rijswijk dieper liggen dan 5 m -NAP.
- 13: Afzettingen van Wormer aan maaiweld, en waar de top van de zandafzettingen van het Laagpakket van Wormer of de Laag van Rijswijk ondieper liggen dan 5 m -NAP.
- 14: Laag van Ypenburg, eventueel bedekt met een dunne laag van het Laagpakket van Wormer

Laagpakket van Schoor aan maaiweld of onder stadsophogingsdek (hoofdzakelijk zand)

- 15: Laag van Den Haag, dikker dan 2 m, op oudere afzettingen van het Laagpakket van Schoor en Laagpakket van Zandvoort
- 16: Laag van Den Haag, dikker dan 2 m, op Hollandveen, op oudere afzettingen van het Laagpakket van Schoor en Laagpakket van Zandvoort
- 17: Laag van Voorburg, met eventueel een deklaag van de Laag van Den Haag, dunner dan 2 m

Ancering
Geel ondiep: Laagpakket van Walcheren (Gantel Laag), met een beperkte insijding (getijpiketten) in de onderliggende afzettingen, restant van het Hollandveen, hoofdzakelijk nog onder de geulbass aanrijwig

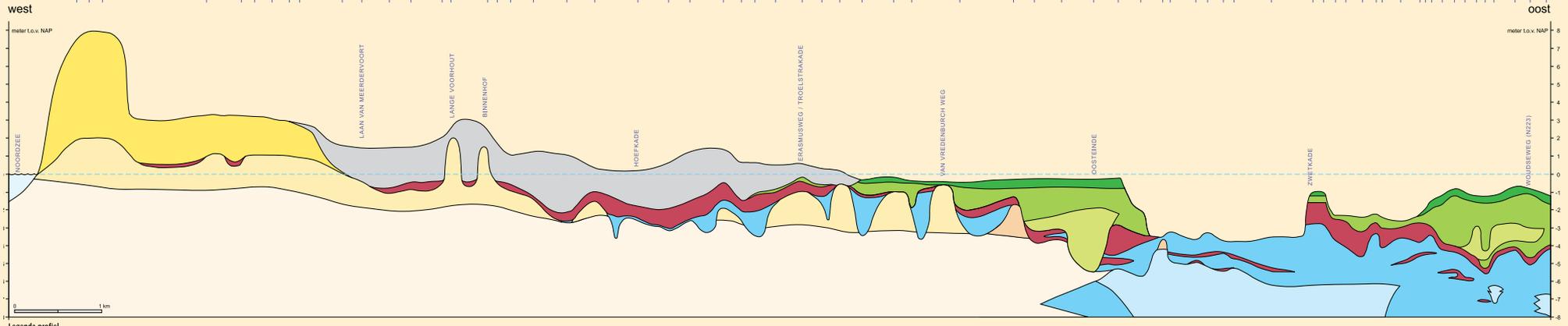
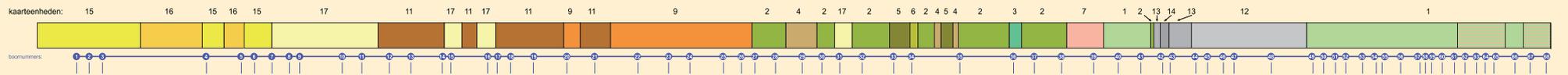
Verbreidingslijnen

Verbreiding HV-spit: Maximale verbreiding van een Hollandveenlaag ('veenspit') binnen het Laagpakket van Laagpakket van Walcheren (oude geologische kaartenheden met codes die een toevoeging *1, *1.3a, *1.3b, *3, *3.3a, *3.3b hebben)

Verbreiding Poeldijk: Maximale verbreiding Poeldijk Laag (indicatief) (oude geologische kaartenheden met codes die een toevoeging *3a / *3b hebben)

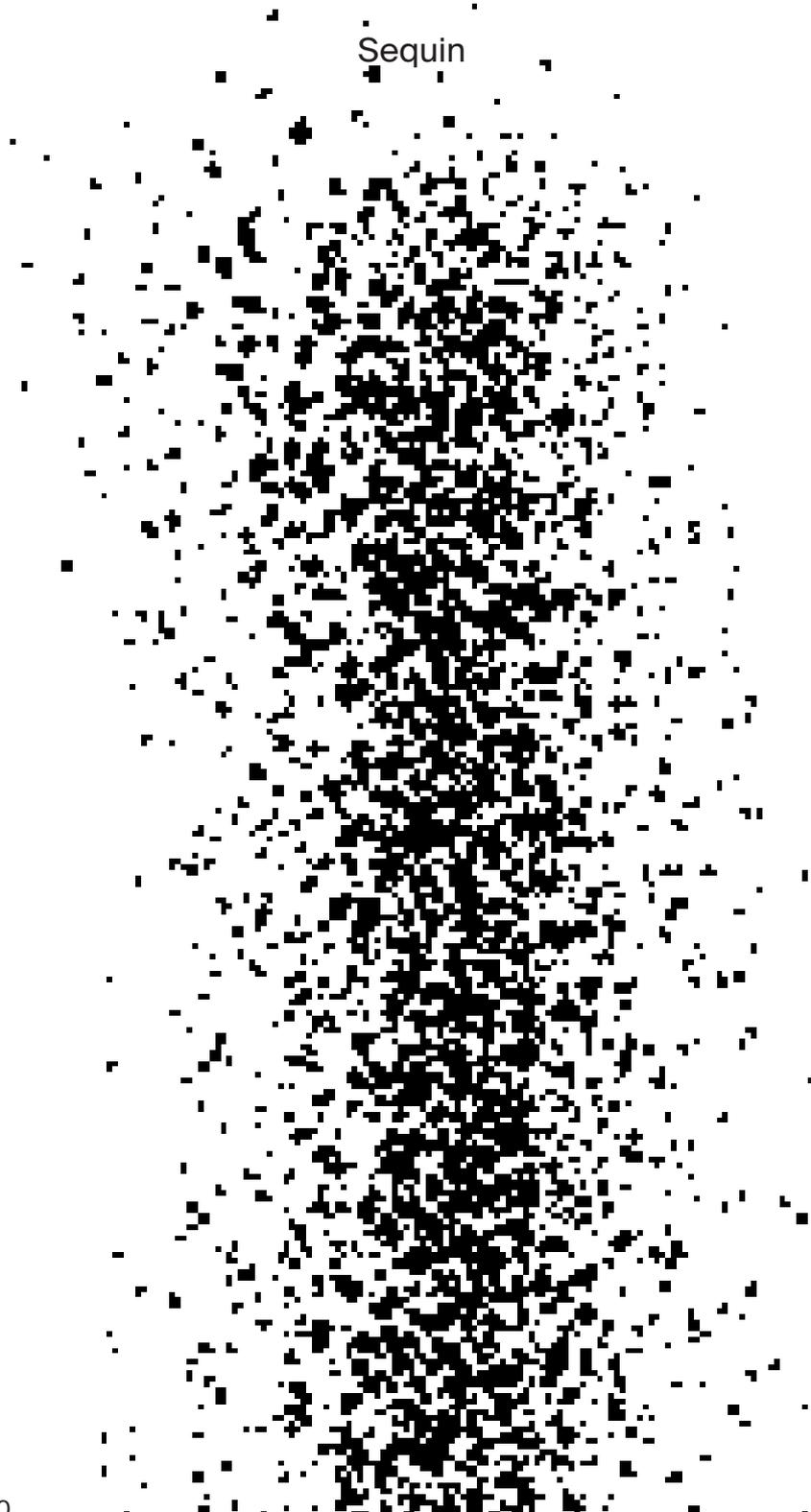
OKTOBER 2007

Het geologische profiel



- Legenda profiel**
- | | | |
|---|--|---|
| A Laag van Den Haag (voorheen Jonge Duinen) | E Laag van Poeldijk (voorheen Duinkerke II / III Afzettingen) | J Laagpakket van Wormer afzettingen, kleiige afzettingen (voorheen Afzettingen van Calais) |
| B Laag van Voorburg (voorheen Oude Duinen) | F Gantel Laag, kleiige afzettingen (voorheen Duinkerke I Afzettingen) | K Laagpakket van Wormer afzettingen, zandige afzettingen (voorheen Afzettingen van Calais) |
| C Laag van Ypenburg (voorheen Oude Duinen) | G Gantel Laag, zandige afzettingen (voorheen Duinkerke I Afzettingen) | L Stadslag |
| D Laag van Rijswijk (voorheen Strandzanden) | H Hollandveen | |

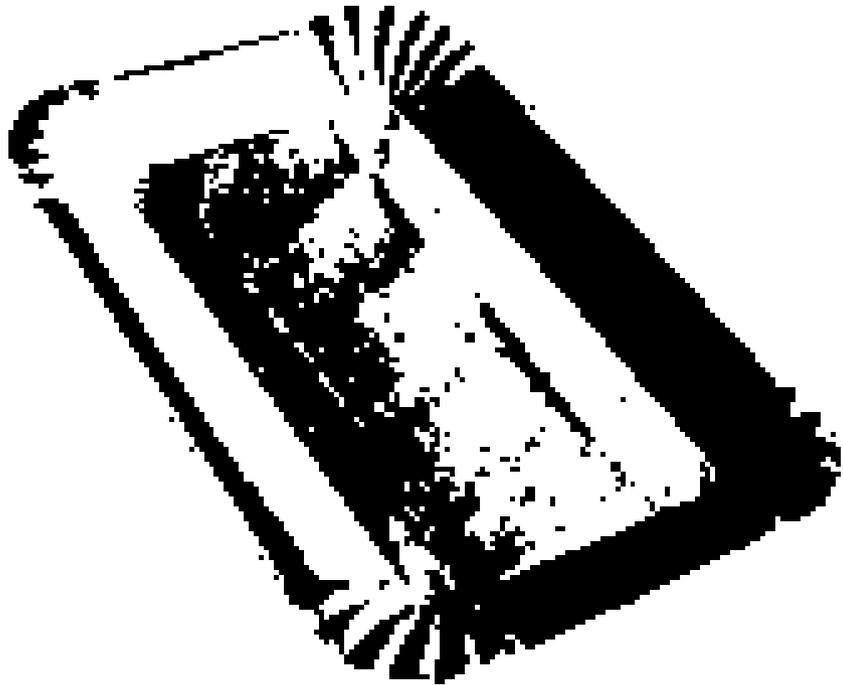
Sequin



Button



Croquette plate



Plastic tooth pick



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at the Royal Academy of Art The Hague.

Print run
/ 30

The Hague, 2019

