

UNLIKELY BEDFELLOWS

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INTRODUCTION

This almanac is in response to the studio brief “The Unlikely Bedfellows” where two improbable characters will come together to live and collaborate in some way. The chosen characters are Gail Bradbrook, who is one of the co-founders of environmental group Extinction Rebellion, and Ken Quantick who is a Brighton bin man. These two come together to have a symbiotic relationship, planning a large scale protest scheme while residing in Brighton. This scheme will include themes of excavation, retention, re-using and recycling. They will be building a series of protests spots in Brighton, that will be disguised as bird baths in parks and secret gardens. Due to the secrecy of the project, the making will take place underground, underneath where they live, and tunnels will be dug and used for transportation, and the bird baths will be made using the excavated material.

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CHAPTER 01 : THE REBELS

This chapter is about getting to know the characters in depth. Through the process of flat laying a selection of their personal items, and in some cases stories written about them. This is in order to investigate them further, finding links and patterns in their own lives and also to find out about their similarities in order to work out how they will come together.

REBEL #1 : GAIL BRADBROOK



Gail Bradbrook is one of the co-founders of Extinction Rebellion, which is a global environmental movement. Bradbrook is known for her rebellious nature, with a long track record of being arrested for her protest stunts. For example in 2018 Gail was arrested for vandalising government property. She smashed the glass entrance to the Department of Transport in London with a hammer and a chisel. This was to protest against the HS2 Rail project chopping down Ancient woodland. She wants too force the Government to act on climate change.

REBEL #2 : KEN QUANTICK

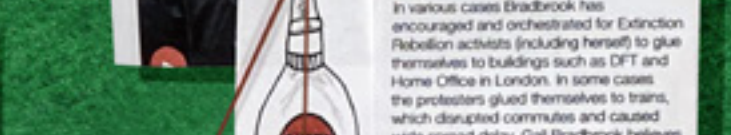
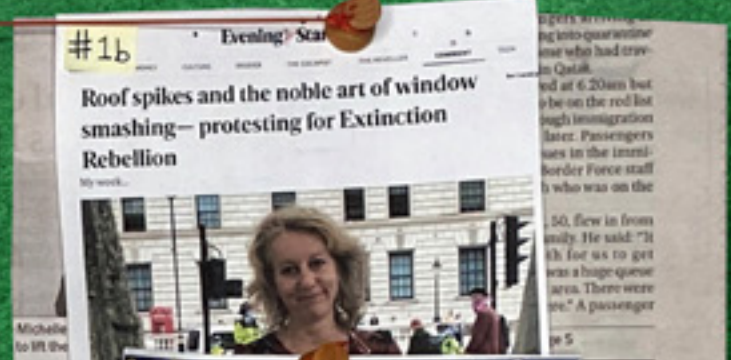


Ken Quantick is a local Brighton bin man who is passionate about the environment. He was in a news story that hit national press. He blew the whistle on Veolia who are responsible for Brighton's Recycling. They instructed him to take 8 tonnes of people's recycling to the incinerator in Newhaven every day. He actually salvages some of the recycling before it goes to the incinerator. He takes it home where he recycles it himself into sculptures and also creates his own bespoke building materials.



#1a HAMMER
On the 15th of October 2019 this steel hammer with a red and black handle, was used along with a chisel by Gail Bradbrook in order to smash the glass facade above the entrance of the Department of Transport in London. Bradbrook was arrested for her act of vandalism and civil disobedience.

#5 PSYCHEDELICS 'AYAHUASCA'
Ayahuasca was consumed by the suspect in food doses on a psychedelic retreat in Costa Rica, 2016. There she prayed using psychedelic medicine and claims to have spoken to her higher self. This experience allegedly led to her prayers being answered word for word just a few weeks after returning to the UK, when she met Roger Hallam. Ayahuasca is a hallucinogenic mix of two plants, banisteriopsis caapi, which is a rainforest vine, and psychotria viridis, a small bush plant. They can be found in tropical areas of the world. The different chemicals in the two substances work together to become a 'psychedelic' 'medicine' that supposedly heals trauma and helps connect people to the spirit world.



#2a SPANISH FEATHER CARAVINA
Suspect has been seen and photographed on multiple occasions wearing just one real sparrow feather earring. Physically it is approx 6cm long and is soft and flows in the wind at her protests with beads hiding the connectors to the hook that attaches to her ear. In terms of colouring, it is a variety of brown hues. She allegedly chooses to wear this to express her love for animals who are particularly affected by climate change. She claims that she had an abundance of sparrows in her garden as a child, but now there are next to none which saddens her.



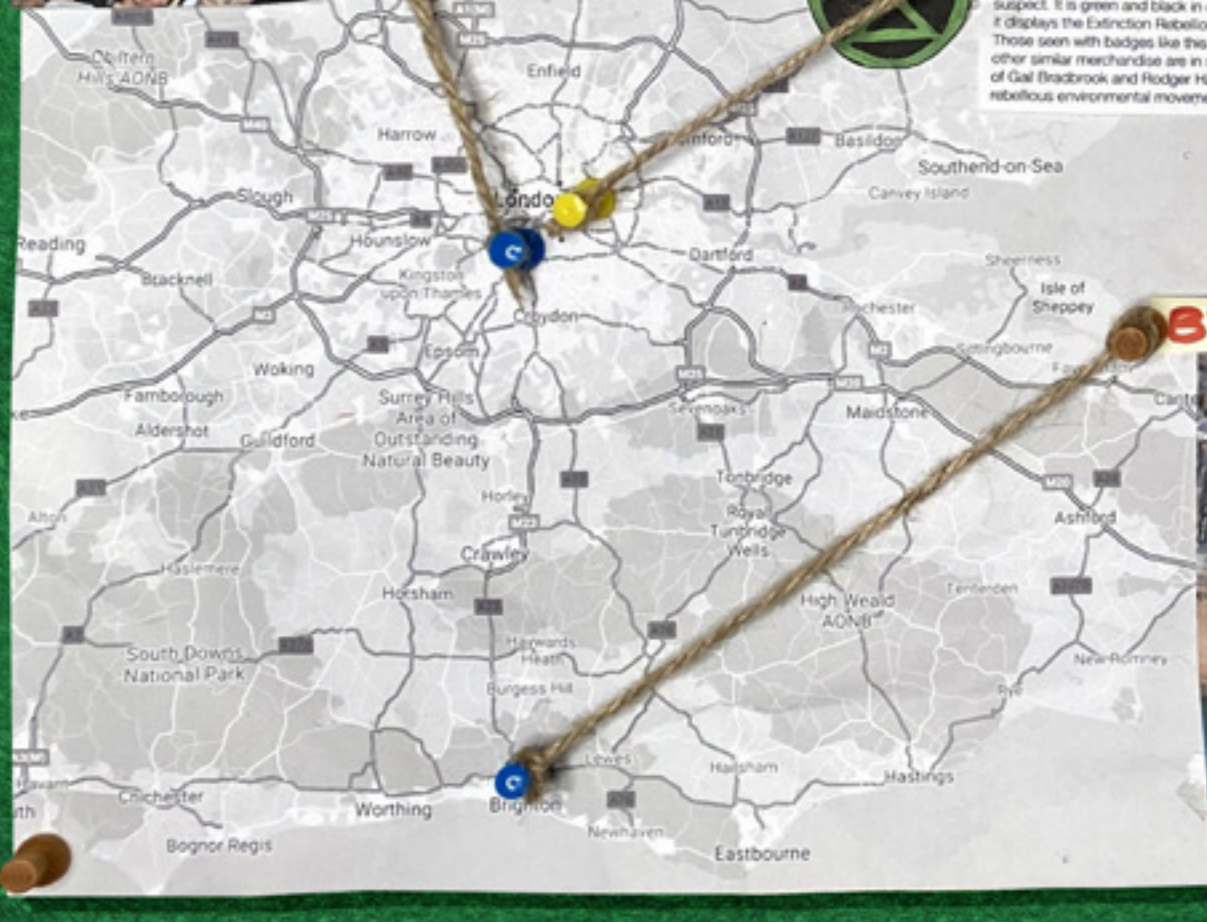
#4a SPRAY PAINT
This 400ml aerosol bottle of black spray paint was used in an act of vandalism by suspect Gail Bradbrook. On the 12th of November 2018 Extinction Rebellion attempted to amp up publicity through a series of direct actions at the Department of Business, Energy and Industrial Strategy in London. This included Bradbrook climbing up above the main entrance and spray painting the words "fuck off" onto the glass before being arrested.



#3a FANNYPACK
This old school black fanny pack for waist bags is usually worn by suspect during demonstrations to hold her personal items. Unlike handbags and backpacks, waist bags do not have to be carried so it keeps her hands free to carry campaigning equipment for example banners and flags, it also avoids rain on the back.



#11a SUPER GLUE
In various cases Bradbrook has encouraged and orchestrated for Extinction Rebellion activists (including herself) to glue themselves to buildings such as DfT and Home Office in London. In some cases the protesters glued themselves to trains, which disrupted commuters and caused wide spread delay. Gail Bradbrook believes that the delays caused by Extinction Rebellion are a small price to pay for change. The bottle itself holds 50ml of super glue and is white with a bright red label.



MOTIVES
- NONVIOLENT CIVIL DISOBEDIENCE TO COMPEL GOVERNMENT ACTION ON CLIMATE CHANGE.

#15 ACCOMPLICE
Roger Hallam is a Welsh environmental activist and is the other co-founder of Extinction Rebellion. The fellow academic met Gail in 2016 after her return from psychedelic retreat in Costa Rica.

#9 HANDCUFFS
"to many peoples surprise, Gail Bradbrook and her fellow activists "cant get arrested quick enough." In fact one of their aims for the demonstration is for mass arrest in order to bring to government attention the severity of climate change and that people are willing to be arrested for their children's future.



#10 MEGAPHONE
Bradbrook is usually spotted addressing a crowd of protesters with this megaphone. It is also used by her to speak her points to anyone that will listen during the marches. It is a white megaphone with a black rim and chord. This is a piece of evidence that was found inside Bradbrook's Sainsbury's bag. It is the same megaphone that she misused during the chaos of the Extinction Rebellion demonstration in Brighton last January.

#12 BAG FOR LIFE
Suspect fingerprints were discovered on the surface and on the items inside her yellow and orange Sainsbury's bag for life that she left behind at the Brighton demonstration in January 2020. This bag was used to store her weapons of vandalism and disruption. Items included a hammer, a can of spray paint, a megaphone, and a bottle of super glue.

REBEL #1 : GAIL BRADBROOK

#1a



HAMMER

Images 1c are of Gail Bradbrook committing the act of vandalism at DFT before being removed and arrested. She caused £27,500 worth of damage to the bullet proof glass. Bradbrook said: "I do this in the spirit of what Emmeline Pankhurst called 'the noble art of window smashing'." After using this hammer to smash the glass facade, Gail Bradbrook made a speech whilst stood above the DFT entrance. Some of her words included, "I did this for the beautiful pear tree at Cubbington Woods, 250 years old they have no rights. I do this in fierce love of the 108 ancient woodlands threatened by HS2, this climate crime of a project." She committed the crime as an act of love for the trees that are at risk of being chopped down and replaced with railway lines. Presumably it is important for Gail to enjoy nature when she at home. This wish could be fulfilled though the designing of green spaces such as a garden, courtyard and/or balcony with planting areas.

- Object 1a - Drawn by author.
- Image 1b Bradbrook, Gail. 2019. "The Noble Art Of Window Smashing— Protesting For Extinction Rebellion". Standard.Co.Uk. <https://www.standard.co.uk/comment/comment/roof-spikes-and-the-noble-art-of-window-smashing-protesting-for-extinction-rebellion-a4540211.html>
- Screenshots 1c, information and quotes - Adams, Joel. 2019. "Extinction Rebellion Founder Climbs Onto Department For Transport". Mail Online. <https://www.dailymail.co.uk/news/article-7574339/So-BAN-Extinction-Rebellion-founder-climbs-entrance-Department-Transport.html>
- Mills, Jen. 2019. "XR Founder 'Caused £27,500 Damage To Bullet-Proof Department Of Transport Glass'". Metro. <https://metro.co.uk/2019/11/15/extinction-rebellion-founder-gail-bradbrook-damage-glass-department-transport-11163528/>

#5



#4 PSYCHEDELIC AYAHUASCA

Ayahuasca is described as a 'mind alerting drug' and is often used as a healing device. In a speech Bradbrook said "Its like being utterly present to life, 0 love. It feels like you can fill that space with power instead of love" She was looking for 'codes of social change', She said, "Prayers of social change and I was praying for guides, and allies and to know that people would have my back." Just weeks after her return from the Costa Rica retreat, she was contacted by Rodger Hallam, the fellow co-founder of Extinction Rebellion. They had an initial 4 hour meeting where they shared information and data. At the end of the discussion Gail said that "he tapped on my note pad and said well basically Gail, what I've just given you here are the codes for social change." She went on to say that "if he hadn't of used those words I wouldn't have realised that the prayers had been answered, ayahuasca is mysterious and her gifts come later." Gail Bradbrooks partake and belief in these areas of life tells that she is willing to do unconventional and risky things in order to try and help save the planet and all the life in it. This could translate to her home as she could use it for the protest.

- Object 5 - Drawn by author. Information - Quotes - "Gail Bradbrook - A Personal Story Of Psychedelics, Ceremony And My Journey In Extinction Rebellion". 2019. https://www.youtube.com/watch?v=92ZqEneOFs8ab_channel=Channel4News

Information

- Knight, Sam. 2019. "Does Extinction Rebellion Have The Solution To The Climate Crisis?". The New Yorker. <https://www.newyorker.com/news/letter-from-the-uk/does-extinction-rebellion-have-the-solution-to-the-climate-crisis>
- Butter, Susannah. 2019. "Extinction Rebellion'S Co-Founder On Bringing London To A Standstill". Standard.Co.Uk. <https://www.standard.co.uk/lifestyle/london-life/extinction-rebellion-co-founder-gail-bradbrook-interview-a4196266.html>
- "What Is Hallucinogen Ayahuasca?". 2016. Abc.Net.Au. <https://www.abc.net.au/news/2016-09-28/what-is-hallucinogen-ayahuasca/7442714>

#10



MEGAPHONE

The megaphone in Gail's case is a symbol of leadership. She uses it to lead large crowds of Extinction Rebellion protesters. Her leadership characteristics may imply that she will be in charge of a team, who will be making 'props' for the protest in her home.

- Object 10 - Drawn by author.

#11a



SUPER GLUE

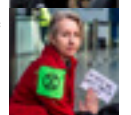
The fact that Gail Bradbrook super glues herself to government buildings in protest, shows the fact that she is willing to endure some pain and invest lots of time into a cause. This mentality could be played on further by turning her home into a space for protest planning and preparation.

- Object 11a - Drawn by author.
- Image 11b "Extinction Rebellion Activists Glue Themselves To Dft And Home Office". 2019. The Guardian. <https://www.theguardian.com/environment/2019/oct/08/extinction-rebellion-activists-give-themselves-to-home-office-and-dft>
- Image 11c taken from - hire?, Dr. 2019. "Dr Gail Marie Bradbrook: Compassionate Revolutionary... For Hire? - News From Nowhere". Nowhere.News. <https://nowhere.news/index.php/2019/04/01/dr-gail-marie-bradbrook-compassionate-revolutionary-for-hire/>

#11b



#11c



#2a



SPARROW FEATHER EARRING

During a speech Gail Bradbrook discussed her love for sparrows, "I absolutely fucking love sparrows. House sparrows were in packs in my parents' garden. Since the seventies, British house-sparrow populations have declined by half. Every time I think about it, I want to cry. I miss them so deeply," Gail's passion for sparrows, birds and nature in general could be accommodated through the design of a space where she can relax with nature. This could be in the form of an outside area with bespoke garden features that attract local wildlife, such as bird tables/baths and feeding areas. Taking this a step further, she could act on her passion for birds by creating some form of landscape for them where humans and birds can come together. This could be a part of her protest plan.

- Object 2a - Drawn by author.
- Image 2b taken from - (News), and Live). 2019. Extinction Rebellion Was Started By A Group Of 12 At A House In The Suburbs After The Co-Founder Took 'Psychedelic Medicines'. <https://twnews.co.uk/gb-news/extinction-rebellion-was-started-by-a-group-of-12-at-a-house-in-the-suburbs-after-the-co-founder-took-psychedelic-medicines>
- Quote taken from - Knight, Sam. 2019. "Does Extinction Rebellion Have The Solution To The Climate Crisis?". The New Yorker. <https://www.newyorker.com/news/letter-from-the-uk/does-extinction-rebellion-have-the-solution-to-the-climate-crisis>

#7a



EXTINCTION REBELLION BADGE

This badge was worn by Gail Bradbrook in image (7b) when she got arrested for using the hammer (1a) to smash the DFT office in London on the 15th of October 2019. The badge has the Extinction Rebellion logo on it and is worn by people who support them.

- Object 7a - Drawn by author.
- Information - "Life Inside Extinction Rebellion: 'We Can't Get Arrested Quick Enough'". 2018. https://www.youtube.com/watch?v=jAH3lQwHkGag&ab_channel=TheGuardian
- Image 7b taken from - "The Wild, Ambitious, Madcap Environmental Activism Of Extinction Rebellion". 2020. ELLE. <https://www.elle.com/culture/career-politics/a31943954/extinction-rebellion-environmental-activism/>

#7b



#12

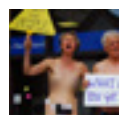


BAG FOR LIFE

This bag that was used by Gail to carry her weapons of vandalism, represents her environmental consciousness. Although one could argue that the irony is that the bag for life will probably end up in being put in landfill eventually and is not actually sustainable.

- Object 12 - Drawn by author.

#13



NAKED PROTEST

Gail lead a naked protest back in 2017, before the Extinction Rebellion days. They were protesting outside Gloucester's Shire Hall, against the Javelin Park incinerator. She has since partook in more naked protests, for example outside the House of Commons public gallery. This is another indication of her daring character and willingness to do anything for change.

- Image 13 and information taken from - "Gloucestershire Mum 'Godmother' To Group Bringing London To A Standstill". 2019. Gloucestershire Live. <https://www.gloucestershirelive.co.uk/news/gloucester-news/london-protest-extinction-rebellion-bradbrook-2710501>

#14



GAIL BRADBROOK MUGSHOT

This mugshot was created by the author through collaging a picture of her and a mug shot background. This was in order to set the police investigation scene.

- Image 14 taken from - Mills, Jen. 2019. "XR Founder 'Caused £27,500 Damage To Bullet-Proof Department Of Transport Glass'". Metro. <https://metro.co.uk/2019/11/15/extinction-rebellion-founder-gail-bradbrook-damage-glass-department-transport-11163528/>

#15



ACCOMPLICE - RODGER HALLAM

Gail Bradbrook met Rodger Hallam just after she got back from her psychedelic retreat (5). He 'answered her prayers' and together they came up with Extinction Rebellion, where they encourage mass civil disobedience in the hope that the government will start acting on climate change.

- Image 15 taken from - Rodger Hallam. 2019. Theaustralian.Com.Au. <https://www.theaustralian.com.au/inquirer/cyanide-co2-whats-the-diff-hallam-loses-the-plot/news-story/cf4371204c230e536eb01104b94850b>

#3a



FANNY PACK

This fanny pack or waist bag is worn by Bradbrook at Extinction Rebellion events in order to free up her hands so she can use them for speaking into a megaphone, or holding a banner or flag. Inside the small bag she carries with her personal, essential items such as her phone, house keys, wallet and sometimes a small bottle of superglue if she is planning on gluing herself to buildings. Her rebellious, hands on approach may start to suggest the design and function of her home.

- Object 3a - Drawn by author.
- Image 3b is Gail wearing the fannypack. Taken from - "Extinction Rebellion's Gail Bradbrook (In Conversation)". 2020. Soundcloud. <https://soundcloud.com/upstreampodcast/extinction-rebellions-gail-bradbrook-in-conversation>

#8a

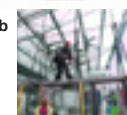


SPRAY PAINT

Gail used this bottle of black spraypaint (8a) to write the words "fuck off" onto the glass entrance of government property (8b), The Department of Business, Energy and Industry Strategy. Shortly after the act of vandalism, she was arrested. As you can see in image (8c) she is cooperating well with the police, walking off with them, seemingly happy with a smile on her face. This shows her willingness to be arrested and take risks for the cause. This trait in her means that when designing for her, sticking rules and norms is not nesecary.

- Object 8a - Drawn by author.
- Screenshot 8b taken from video - "Life Inside Extinction Rebellion: 'We Can't Get Arrested Quick Enough'". 2018. https://www.youtube.com/watch?v=jAH3lQwHkGag&ab_channel=TheGuardian
- Image 8c taken from - hire?, Dr. 2019. "Dr Gail Marie Bradbrook: Compassionate Revolutionary... For Hire? - News From Nowhere". Nowhere.News. <https://nowhere.news/index.php/2019/04/01/dr-gail-marie-bradbrook-compassionate-revolutionary-for-hire/>

#8b



#8c



#4



EXTINCTION REBELLION FLAG

Gail Bradbrook uses flags and banners like this one to campagin, but in the future she may be looking to make something bigger, and more eye-catching for the general public and the press to help raise awareness for a specific cause, possibly to do with bird populations declining. It could be proposed that within Gails home she could have a secret space to work on bigger projects.

- Image 4 taken from - "Extinction Rebellion Flag At The Rally. Community Members From Across...". 2021. Getty Images. <https://www.gettyimages.dk/detail/news-photo/extinction-rebellion-flag-at-the-rally-community-members-news-photo/1204210353>

#9



HANDCUFFS

The handcuffs are a symbol of her desire to get arrested. Proof of this is in image 8c above. The fact that she is actively trying to get arrested may mean that sometimes she will need somewhere to lay low between courtcases etc. This space would have to be hidden and secluded, maybe even underground. Also somewhere she can plan events, have meetings and prepare any elaborate contraptions for protests.

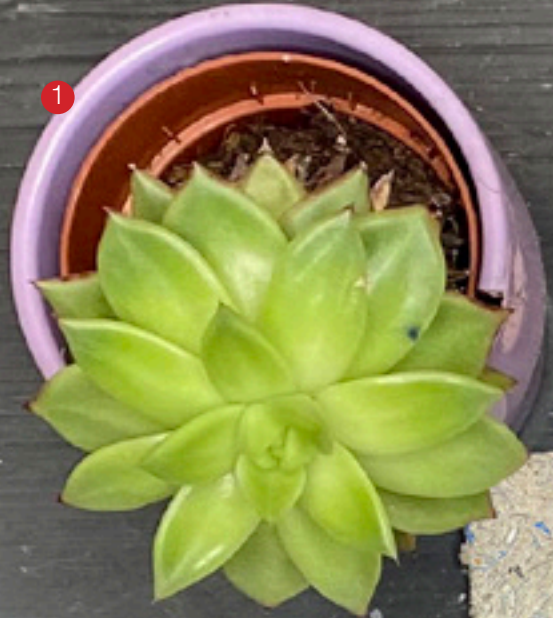
- Object 9 - Drawn by author.
- Information - "Life Inside Extinction Rebellion: 'We Can't Get Arrested Quick Enough'". 2018. https://www.youtube.com/watch?v=jAH3lQwHkGag&ab_channel=TheGuardian



BRIGHTON INCIDENTS

Extinction Rebellion have done countless protests in Brighton, a few have been mapped on the interrogation board. It is unclear as to which Gail actually attended with her living in Stroud. However she is now moving to Pelham Square to carry out specific demonstrations in Brighton.

- "News | Extinction Rebellion Brighton". 2021. Extinction Rebellion Brighton. <https://xrbrighton.earth/news/>



③ 1/2 cup PLASTIC
1/2 cup SAND
1/2 cup CEMENT

④ 1 cup SAND
1 cup CEMENT
1 cup PLASTIC
2 spoons BLUE
DYE



1 cup PLASTIC
1 cup SAND
1/2 cup CEMENT
too much water



② (half)
plastic
sand
cement



REBEL #2 : KEN QUANTICK

#1

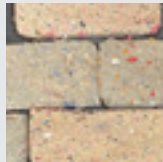


PLANTS

Ken is a keen gardener, so object #1 is a plant. Physically this object is a small plant in a purple pot, but it is there to represent his green fingered side. This factor of Kens character is a large aspect of his life as he enjoys it and therefore spends a lot of time in his garden. In terms of the design, this begins to imply that the garden is an important space for Kens downtime, and could include both planting areas and areas for him to relax in.

- Photographed by author.

#2



RECYCLED PLASTIC BRICKS

These are bricks that Ken has been making in his kitchen. They are made out of shredded plastic waste, sand and concrete. The plastic is Brighton's recycling that he salvages before it goes to the Newhaven incinerator. He takes it home where he recycles it himself into sculptures and creating his own building materials. He shreds the plastic in a high speed blender and mixes it with the sand and cement to create his own bespoke bricks. His passion for making begins to imply that a space for Ken to create is key. Some form of workshop would be suitable.

- Bricks made by author.

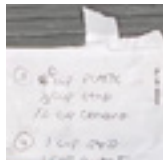


LOCAL WORK STUDIO'S BRICKS

These construction waste bricks by Local Work Studio inspired Ken's plastic bricks. The concept of intercepting waste streams into their projects is what is especially interesting, creating new, bespoke materials out of waste, while having a positive impact on the environment through re-purposing waste that would normally go to land fill, or in Ken's case, the incinerator.

- "Projects Archive - Local Works Studio". 2019. Local Works Studio. <https://localworksstudio.com/projects>

#3



SCRAP OF AN ENVELOPE WITH NOTES

These are the notes Ken keeps of the different ratios of the plastic, sand and cement for his bricks. They are written in messy handwriting on the back of a used envelope. He is trying out different mixtures to see what looks and works the best. Experimenting with how much plastic can be added without affecting the strength of the brick. This also suggests that Ken needs a space to experiment such as a workshop.

- Notes written by author.

#4

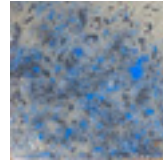


BLENDER BLADE

This object is the blade of Ken's high speed blender. It appears as though it has just been used, with residue of shredded plastic all over it. The blade is quite small and not very sharp, due to its conventional use of making smoothies and soups. This means that it takes quite a while to shred the plastic as it is much harder than what it was made for. This could suggest that Ken needs a more productive system of shredding the plastic on a larger scale, for example an industrial plastic shredder or a garden shredder.

- Photographed by author.

#5



RECYCLED PLASTIC TILES

These are decorative tiles that Ken made out of plastic waste, clay and bio resin. Like the bricks, the plastic is recycling saved from the Newhaven incinerator, but with the tiles he only used the very fine fragments of plastic using a sieve to catch unwanted larger pieces. He rolled out and cut tile shapes out of white clay. When the tiles were dry he sprinkled the plastic fragments on before sealing it with a clear bio resin. These are also currently being made in his small kitchen, his creativity suggests that he will need to have a sufficient space dedicated purely to his making and also his passion for salvaging recycling from work to give it a longer life cycle.

- Tiles made by author.



FLOTSAM, BRODIE NEILL

The inspiration for the tiles came from this bench, created by Brodie Neill out of recycled plastic that was salvaged from the ocean. It was cast as one whole piece as the plastic fragments got added to a black bio resin. This method is positive as it cleans the oceans and gives the plastic a new use. It is an extremely strong material that can be manipulated, which means it can be adapted to work on almost anything.

- "Projects - Brodie Neill". 2018. Brodie Neill. <https://brodienell.com/projects/>

#6



HIGH SPEED BLENDER

This is the blender that Ken uses to shred the plastic for his bricks and tiles. It is a green, medium sized Nutribullet that is made to blend up food at a high speed. It is not however made to shred plastic, which could end up being dangerous for Ken. Aside from the health and safety risk, the blender can only blend and hold very small amounts of plastic at a time, making it extremely time consuming to shred large quantities of plastic. This begins to suggest that Ken will need a larger, more productive system of shredding, imbedded into the design of Extinction Rebellion's underground workshop.

- Photographed by author.

#7



CONTAINER OF SHREDDED PLASTIC

This object is a white container filled with shredded plastic. It is there to depict the process that Ken goes through to create his building materials. Once he has shredded the plastic recycling in the Nutribullet, he needs somewhere to store it before it gets added to the sand cement mix. So there a space for this storage will be necessary in the design. Although through the design there might be alternate materials in the mix replacing shop brought sand and cement. Possibly using the materials available in the actual site for example chalk and clay.

- Photographed by author.

#8



CIGARETTE ENDS

This object is a drawing of cigarette ends, drawn with marker pens onto an old scrap of cardboard. It was made in this way to show kens artistic flare, and at the same time his environmental side, of wanting to recycle and reuse waste. The subject of the drawing is depicting his habit of smoking. This is telling that the garden will have further importance to him so he has a nice place to smoke.

- Drawn by author.

#9

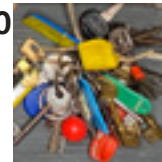


DOG LEAD

Number 9 is a drawing of a dog lead, obviously alluding to the fact that he has a pet dog. This lead has been drawn onto a cardboard scrap, with a big black marker pen. The object was made in this style to show Ken's rough and ready edge. The fact that he owns a dog also means that he would need sufficient outdoor place. Currently he has a small garden, maybe this could be extended by joining Gail and Kens gardens together.

- Drawn by author.

#10



BUNCH OF KEYS

These are Ken's extensive bunch of keys. Being a Brighton binman, Ken has generic keys to restricted access areas in the city. This factor will become useful to Gail as she has plans to utilise Brighton's secret spaces for Extinction Rebellion gatherings and protests.

- Photographed by author.

#11



VAN KEY

This object is a Volkswagen van key. It is there to represent Ken's professional occupation of being a bin lorry driver for Brighton and Hove city council. He has worked with them for over 14 years and is very much dedicated to his job, but would also like to do something more creative full time, this is where Gail could fulfil that wish by recruiting him to work for her.

- Photographed by author.

#12



PAINT BRUSHES

These are some old and battered paintbrushes that ken had laying around his house. These are used by Ken to create art in his free time. He uses lots of different mediums to made all kinds of art from painting and drawing, to sculpture and building materials, both decorative and construction.

- Photographed by author.

SUMMARY REPORT



Through the process of flat laying each of the character's personal items, their similarities and how these two will come together has become more apparent.

Firstly, it is clear that **they share a passion for the environment**. Gail demonstrates this through her direct actions of protest. While Ken shows this through both his whistle blowing on Veolia, and the fact that **he salvages rubbish from the incinerator and recycles it himself** into sculptures and **building materials**. Ken is a skilled artist in his own right, and **Gail wants to harness his skills** for Extinction Rebellion protests and publicity, and Ken is happy to get involved.



Ken is also very useful to Gail due to his knowledge of Brighton. Being a binman, he has lots of **generic keys** that give him **access to restricted areas** in the city. Some of these areas are **secret and private gardens**, which are perfect for Extinction Rebellion protest spots.

Their plan is to create secret protest spots in Brighton, the fact that they will be **secret** means that they will have to be **disguised** as something else. This is where the **sparrow feather earring** becomes important. What if they could **create nature corridors** in the city for **bird populations** to have **safe spaces**. These spaces would become **secret protest spots**, disguised as bird landscapes. They will need a space to make these bird baths/podiums.



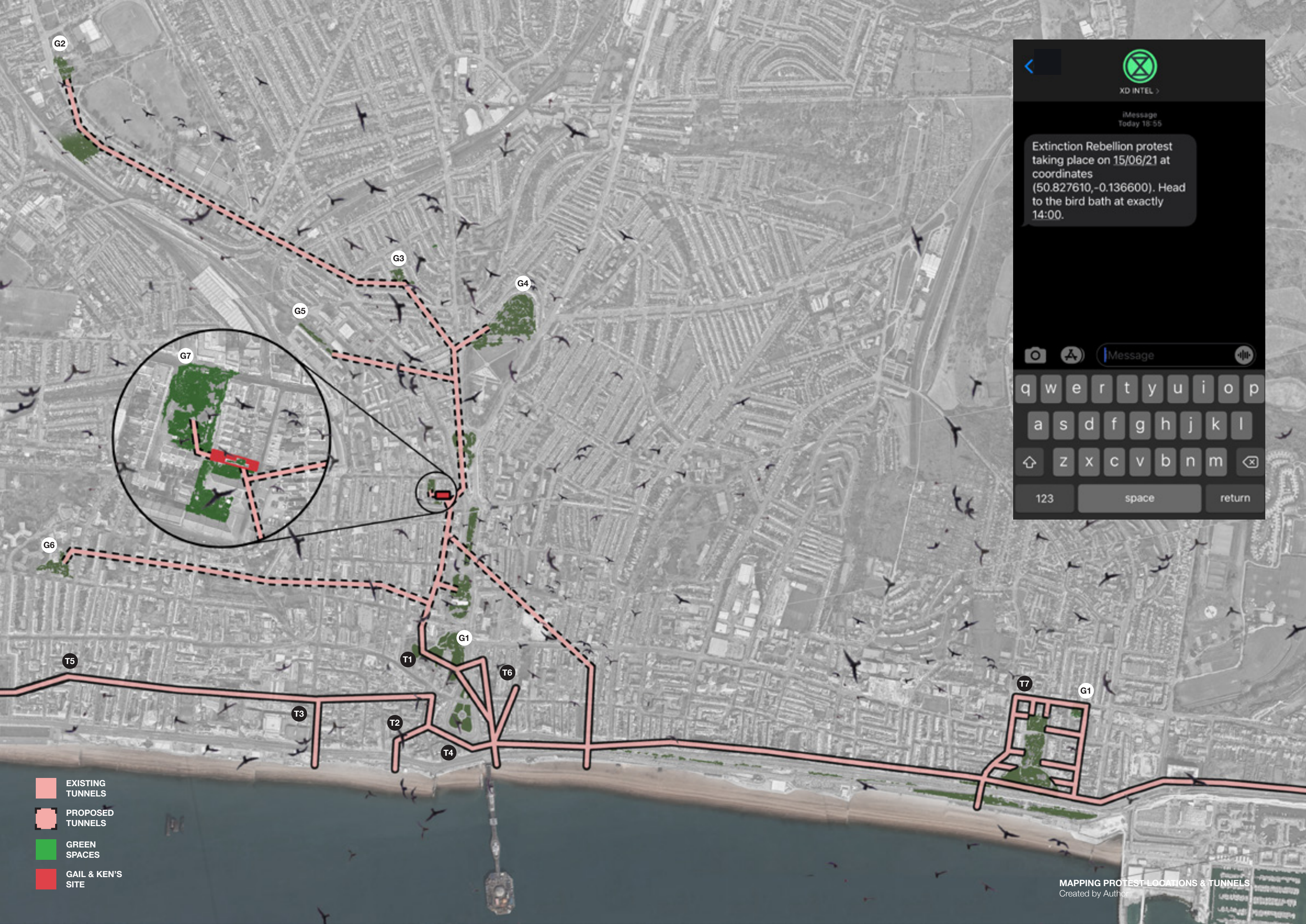
This is why the most central element of the design will be a **secret workshop, underground** from where they will temporarily live. This is where they will **plan** and **create** the **rebellion**.


As well as the workshop, their gardens (which back on to each other) are important. This is because Gail and Ken also share a love for nature. For example Gail's love for nature is apparent due to her protest against HS2 Railway chopping down ancient woodlands. Ken's love for the outdoors is also clear, for example his passion for gardening. Ken also smokes and has a pet dog so the garden is a key part of his day to day life.



CHAPTER 02 : IDENTIFYING SITES & TUNNELS

This chapter is about identifying suitable protests sites to build the bird baths and tunnels for transportation. Some of the sites are secret/private gardens, and some of them are more public green spaces like parks. Some of the tunnels mapped are existing, and some are proposed.




XD INTEL >

iMessage
Today 18:55

Extinction Rebellion protest taking place on 15/06/21 at coordinates (50.827610, -0.136600). Head to the bird bath at exactly 14:00.

Message

q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123 space return

- EXISTING TUNNELS
- PROPOSED TUNNELS
- GREEN SPACES
- GAIL & KEN'S SITE

IDENTIFYING PROTEST SITES & TUNNELS

GARDENS

- G1. SECRET GARDEN KEMPTOWN**
 Today Kemp Town's Sussex Square houses have been renovated mainly into flats, but back in the day they all would have been single family homes. The Secret Garden in Kemp Town is an example of one of the shared gardens that **these houses had access to via underground tunnel (T7)** from each house. In 1830 this garden used to be around three times larger than it is now and belonged to 32 Sussex Square, whose owner was Lawrence Peel, the brother of Robert who founded the Metropolitan Police. It became a "pleasure garden" containing an outdoor kitchen and tennis court. It has been owned by Anthony Dale Since 1950, and today it is an extremely private sculpture park with a variety of water manipulation sculptures. It opens yearly for Brighton Festival and also gets used for special events like exhibiting large scale artworks by emerging artists colourful, use of contemporary architectural plants, flint wall.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 160, 161)
 - @Andymustard Instagram Post (Photo) #ThisisBrighton - Gramho.Com". 2019. Gramho.Com. <https://gramho.com/media/203799842455896100>.
- G2. PRESTON MANOR WALLED GARDEN**
 Preston Manor Walled Garden is a secret historic kitchen garden.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 242, 243)
- G3. THE CASCADE**
 The Cascade is Brighton's only waterfall which is situated at The Rockery on London Road.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 250, 251)
- G4. IRELAND'S GARDENS GATEWAY**
 Ireland's Gardens Gateway is the remains of a pleasure garden on Union Road.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 192, 193)
- G5. BRIGHTON GREENWAY**
 Brighton Greenway is an inner city scape between Brighton Station and New England Road.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 118, 119)
- G6. BODHISATVA KADAMPA MEDITATION CENTRE**
 The Bodhisattva Kadampa meditation Centre is a Buddhist village in Hove.
- Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 118, 119)
- G7. Pelham Square**
 Pelham Square is the nearest green space to the site where Gail and Ken will be staying.
- "Check Out This 5 Bedroom Terraced House For Sale On Rightmove". 2019. Rightmove.Co.Uk. <https://www.rightmove.co.uk/properties/74966934/#/>.

TUNNELS

- T1. ROYAL PAVILION BASEMENT AND TUNNELS**
 Until recently, the secret basement corridors and tunnels underneath the Royal Pavilion were not really common knowledge to the public. The Pavilion was built in 1787 as sea side retreat for King George VI who was Prince of Wales at the time. The underground was where his 126 members of staff would be making sure that everything ran smoothly and all out of the King's sight. The tunnels ran the full length of the house and beyond, the servants would pop up out of a tiny stone staircase in different rooms and disappear back down them. The underground corridors were lined in Dutch glazed tiles and filled with systems to run the building above. For example alot of the pipe work was part of an old steam heating system. Later on in 1821, more tunnels were built. One was 60m long and connected The Pavilion to King George's Horse stables, which is now known as Brighton Dome. George supposedly also used the tunnels to sneak in his mistresses.
- info - Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 90, 91)
 - t1b <https://brightonmuseums.org.uk/discover/2013/04/09/so-is-this-one-of-the-secret-underground-passages/>
- T2. UNDERNEATH THE OLD SHIP HOTEL**
 The Old Ship Hotel is known for its underground bar, but there are actually more tunnels connecting it to the beach.
- Image - "Brighton's Only Underground Bar, Hidden Beneath A Seafront Hotel | Ellie & Co., Inc". 2019. Ellie & Co., INC. <https://www.elliandco.co.uk/2019/02/cellar-cocktail-bar-old-ship-hotel-brighton.html>.
 - Information - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- T3. THE TEMPEST INN TO THE BASEMENTS OF WEST STREET**
 Nearby The Old Ship Hotel, right on the sea front is The Tempest Inn. It has a tunnel connecting it to the basements of West Street. Due to the proximity T2 and T3 it has been assumed that they connect along the way.
- Information & image - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- T4. UNDERNEATH TONI & GUY, EAST STREET**
 A man named Andrew Pusey explored a tunnel underneath Tony & Guy on East Street. He said that "Then in 1986 I was working in the Reject Shop (62-63) East St, my manager brought some plans of the building down to the basement, we noticed something strange with the front wall of the building so we set about knocking a hole in it. What we found shocked us, it was a large underground vaulted chamber with lots of smaller arches inside. This got me wondering what else was under Brighton's streets."
- Information & image - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- T5.** Rob Simmons 11/01/2018
 "There are 2 tunnels I know about. 1st is under the Royal Sovereign Pub Preston Street which runs toward Brunswick Sq. The Tunnel was bricked up in early 2003 after the pub being Refurb. the 2nd tunnel is located at 10 Richmond Place. My family lived there in the early part of the 20th Century and used to tell story's about how the tunnel was haunted by a white lady, it was said it led to the Royal Pavillion."
- "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- T6.** Adrian J Andrews 4/05/2018
 "I have several of these tunnels on my Ghost Tour of Kemp Town. The first we encounter is a blocked up tunnel in the cellar of the King's Arms, George Street that seems to run towards the sea. The Marlborough Hotel (Princes Street) allegedly has two. One linking it to the Pavilion and another linking it to the old 'Queen's Head' in Steine Street. (Now Bar Broadway). The latter has THREE! One to the Pavilion, the one linking it to The Marlborough (both were brothels) and a supposed smuggler's tunnel heading off to the beach. Finally, the Marine Tavern (13 Broad Street). I have seen this and the King's Arms personally. Again, it's bricked up and like the one at the King's Arms, a body is buried inside it."
- "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.

Through mapping green spaces around the site it is possible to gage the best locations for protests in a range of public and private spaces. Kens generic keys will be used to access the private areas. Mapping the existing tunnels in Brighton shows what possible secret routes could be taken and extended on. The map assumes that all the existing tunnels connect at some point / could be connected to create routes from Gail and Ken's site to the protest points. Co-ordinates are sent to Extinction Rebellion members/followers via text message and when they get there they will know where to meet because they will be looking out for the bird baths.

CHAPTER 03 : EXCAVATION, DECONSTRUCTION, CONSTRUCTION

The purpose of this chapter is to learn about excavation, deconstruction, and construction for designing subterranean spaces. Looking at precepts for processes and techniques on how to excavate in secret, and construct deconstructed elements.

EXCAVATION



Rory Hooper in the Protest Tunnels in Euston, by HS2 Rebellion, 2021, London. <https://news.co.uk/news/eco-warrior-swampy-underground-hs2-tunnel-protest-euston-contractors-dig-860340>

PROTEST TUNNELS

Environmental activists secretly dug and occupied protest tunnels near Euston Station in London at the beginning of this year. Like Gail Bradbrook, they are protesting against the new HS2 Rail, which is a high speed railway line between London and Birmingham. The HS2 Rebellion group claim that it is the *“most expensive, wasteful and destructive project in UK history”* and that it is *“set to destroy or irreparably damage 108 ancient woodlands and 693 wildlife sites.”*⁽¹⁾

Some of the people behind the operation were Dan Hooper, also known as Swampy, and his son, Rory Hooper. Swampy is a well known British environmental activist who first became famous for digging tunnels to stop a road project back in 1996.

He was the last one to leave after spending a week underground. The outcome was that due to the negative media coverage the project didn't end up going ahead. This was the hope for the protesters at Euston.

The network of tunnels was discovered by police on the 26th of January. The last person to leave the tunnel on the 26th of February spent 31 days down the 30 metre tunnel. The reason tunnels are sometimes used as a form of protest is because it *“forces contractors into an embarrassing cat-and-mouse game underground, bringing costly delays. The record for a tunnel hold-out in the UK is six weeks.”*⁽²⁾

Swampy's son Rory Hooper who is 16 years old, stayed in the tunnel for 22 days. He left in order to save the supplies for the others including his father so that they could stay for longer.

Food supplies - they started out eating fresh food like salad and bread, then moved on to eating stuff like tinned food and nuts.

The tunnel is being supported by wooden planks in a square formation. This is one example of how to reinforce tunnels after excavating the earth.

Tools - In the photo you can see that there is a folding shovel. This is what they would be using to excavate. Assuming that they chose to use a folding shovel for ease of transporting it through tight spaces underground.

SWAMPY & SON, EUSTON



The entrance to the tunnels was through a shed in Euston Square Gardens.

- "HS2 Protest: Final Activist Removed From Euston Tunnel". 2021. BBC News. <https://www.bbc.co.uk/news/uk-england-london-56209311>.



The tunnels are supported by wooden frames.

- Elvin, Sian. 2021. "How Did A Band Of Eco-Warriors Manage To Dig Tunnel Network In Central London". Metro. <https://metro.co.uk/2021/01/27/how-did-hs2-protesters-manage-to-dig-tunnel-network-in-central-london-13971212/>.



They used buckets to transport the earth.

- Elvin, Sian. 2021. "How Did A Band Of Eco-Warriors Manage To Dig Tunnel Network In Central London". Metro. <https://metro.co.uk/2021/01/27/how-did-hs2-protesters-manage-to-dig-tunnel-network-in-central-london-13971212/>.

This recent case study of protest tunnels being dug and occupied tells that it is a viable form of protest that is both effective and doable with a small team of people. This is a similar strategy to Gail and Ken's Extinction Rebellion tunnels and the methods used in these protest tunnels are transferable. For example the tools they used to excavate and the actual construction of the tunnels using timber supports that stay there.

• Quote (2) "Swampy Is Back Living Underground In HS2 Tunnel Protest - As Contractors Try To Dig Him Out". 2021. News.Co.Uk. <https://news.co.uk/news/eco-warrior-swampy-underground-hs2-tunnel-protest-euston-contractors-dig-860340>.

• Quote (1) - "HS2 Protest: Final Activist Removed From Euston Tunnel". 2021. BBC News. <https://www.bbc.co.uk/news/uk-england-london-56209311>.



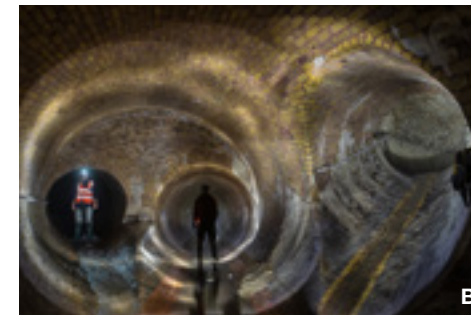
London's Victorian Sewers, Created by Sir Joseph William Bazalgette, 1870, London, <https://www.urbex.tour.com/en/urbex-travel/london-sewers-and-manchester-drains/>

TUNNEL INTERSECTIONS

London's sewers used to run into the rivers, with poisonous waste ending up in the Thames. The city started smelling and it got named the Great Stink. In 1855 the future Prime Minister Benjamin Disraeli famously said *"That noble river, so long the pride and joy of Englishmen has become a pool reeking of intolerable horror, the public's health is at stake."* At the time the Thames was carrying the sewage of 2 and a half million people towards the North Sea but due to it being a tidal river it kept coming back. In 1858 the Victorians engineered the solution of putting the rivers of London underground in these tunnels, then built on top of them. This solution worked remarkably well and got rid of the great stink, and all the disease that is associated with having open waste. All these tunnels lead to the River Thames which is why its so filthy. To this day these

sewers support the whole of London. London's sewer network was designed in the late 19th century by Sir Joseph William Bazalgette, the chief civil engineer of London's Metropolitan Board of Works. The Victorian engineering was designed so well that hundreds of years later they still stand seemingly untouched by the elements. The images are the crossroads of the tunnels, where the sewage and rainwater mix. What is interesting to use for design inspiration is the different types of tunnels and how they interact and connect to one another. The tunnels are different shapes, for example egg-shaped, circular, horseshoe and vertical walls with arch roof. Egg-shaped tunnels were used because the water will move quickly through the sewer and at a speed where it could carry solids.

- Air vents for ventilating the tunnel.
- Circular tunnels.
- Upside down egg shaped tunnel to allow water to flow.
- The tunnels have a dip at the bottom for water flow.



• London's Victorian Sewers, Created by Sir Joseph William Bazalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>

• London's Victorian Sewers, Created by Sir Joseph William Bazalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>

• London's Victorian Sewers, Created by Sir Joseph William Bazalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>

- "Joseph Bazalgette - Wikipedia". 2021. En.Wikipedia.Org. https://en.wikipedia.org/wiki/Joseph_Bazalgette.
- "Tunnel: 3 Types And Classification Of Tunnel And Purposes". 2015. Civil Knowledges. <https://www.civilknowledges.com/tunnel/>.
- "London Sewers And Manchester Drains - Urbex Tour". 2018. Urbex Tour. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>.
- How The Victorians Built Britain. 2020. Video. London: Channel 5. <https://www.my5.tv/how-the-victorians-built-britain/season-1/saving-the-nation-s-health>

VICTORIAN SEWERS, LONDON



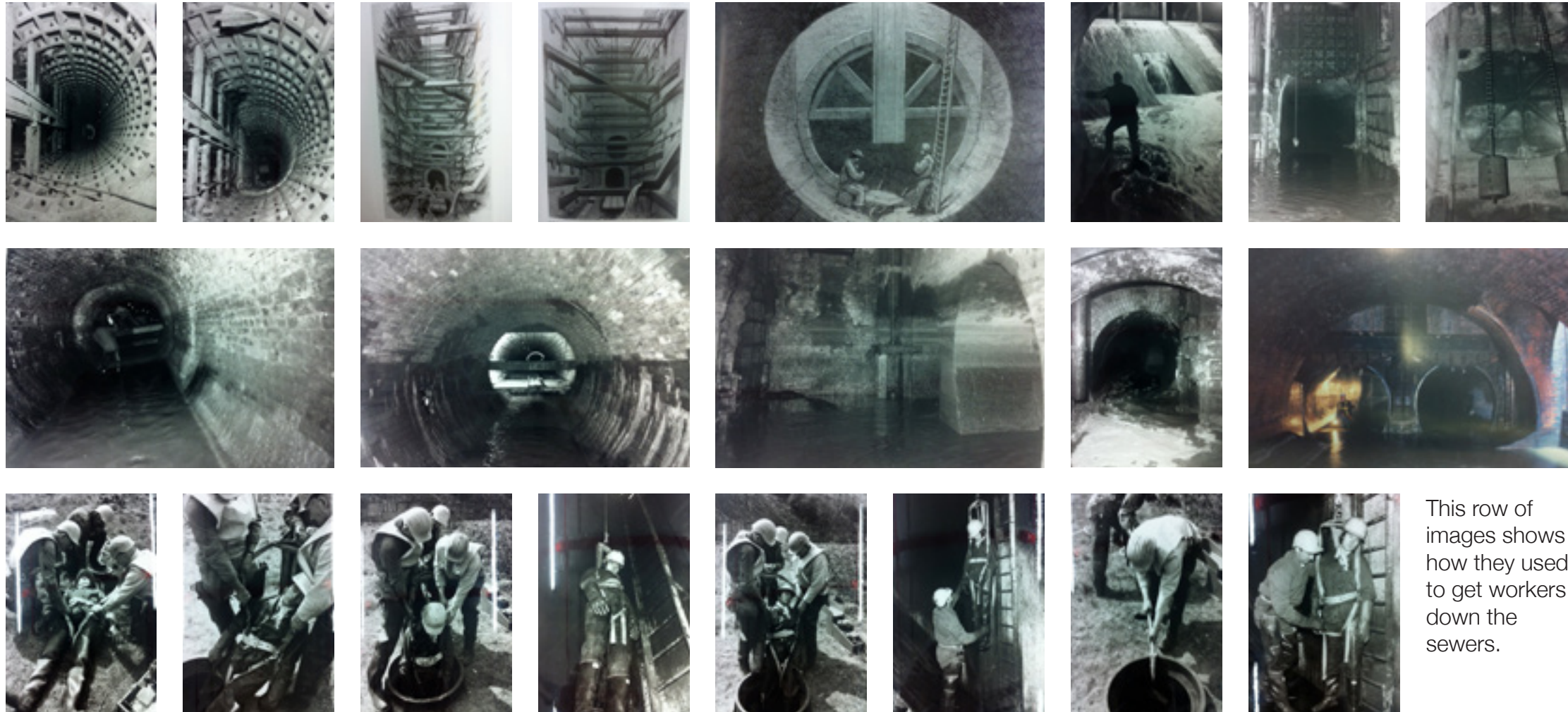
Testing tunnel intersection forms through casting various tube shapes together. A, B, and C are sectional models that have been cut at different points. D is a perspective view experimenting with light before being cut open. This process has helped to visualise the possible forms and intersection of Gail and Ken's Extinction Rebellion Tunnel network. Model H was a different approach to casting using plastic waste in the cement mix in the same way that Ken makes his bricks.

• Models made by author.



CONSTRUCTION

VICTORIAN SEWERS, LONDON



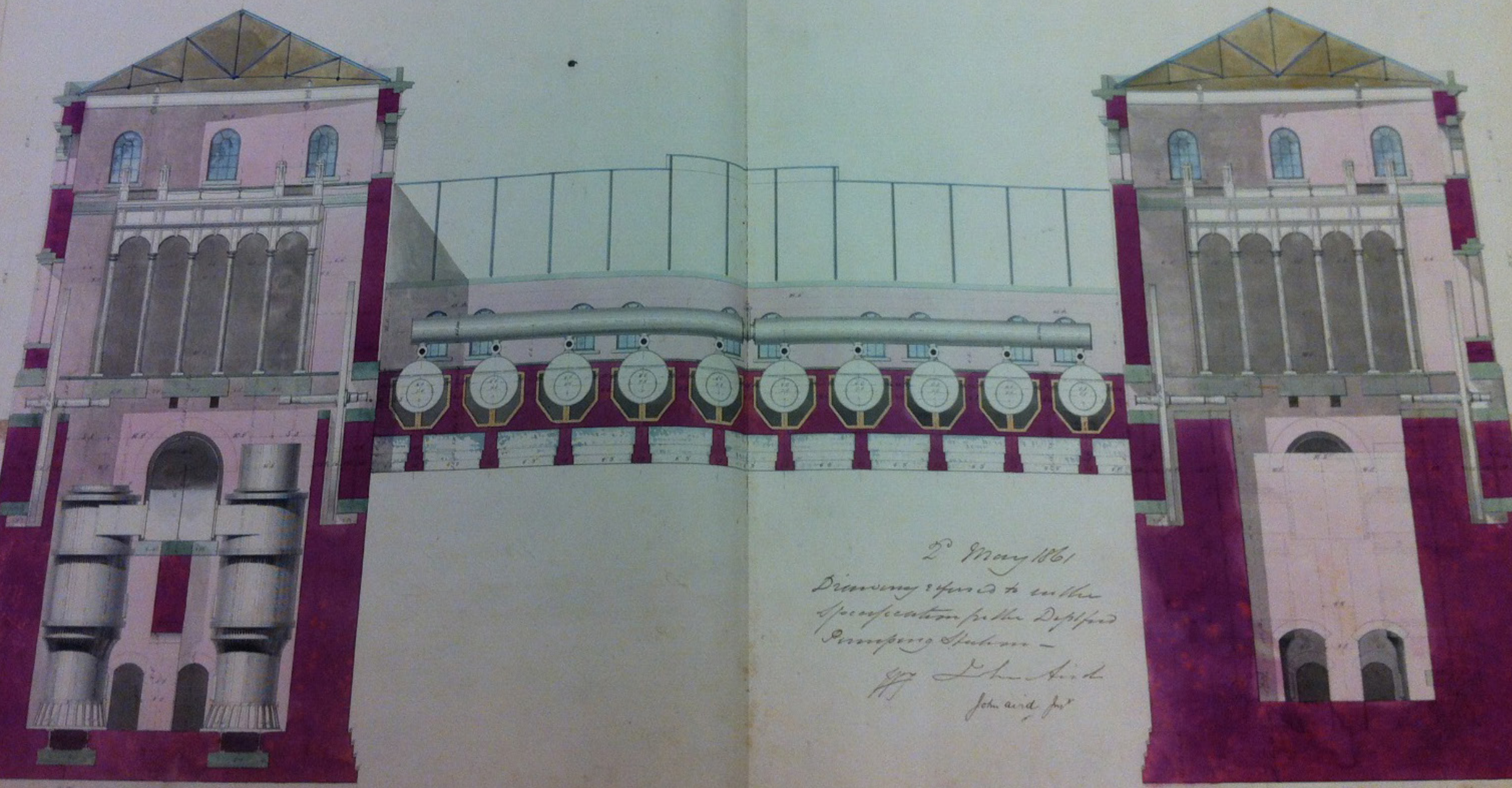
This huge network of sewers was constructed back in the 1850's so before the time of tunnelling machines. They used basic tools such as pick axes and shovels to excavate the earth, and would dig the equivalent of an Olympic sized swimming pool every day. They were able to work this quickly on a large scale because they had so many men digging. For the excavation the Extinction Rebellion tunnels and workshop, the process could be replicated but on a much smaller scale due to the secrecy of the project. The London sewers were constructed by hand, using timber frames as supports and guides to lay the bricks. Due to the arch being a self supporting structure, these timber frames would after be removed leaving just the brick work. This process would also be adapted to the Extinction Rebellion tunnels, using the timber available within the existing site to construct supporting frames that could be used as a permanent feature rather than a temporary construction element.

This row of images shows how they used to get workers down the sewers.

Timber frames were used as temporary works. They would first dig the trench, then put the timber frames in place and lay the bricks on top of them. When the mortar gluing the bricks together dries the frames can be taken away as the arch is a self supporting structure.

• LONDON METROPOLITAN ARCHIVES, GCL Photo Library, GLC. 1964. London.

METROPOLITAN BOARD OF WORKS DEPTFORD PUMPING STATION



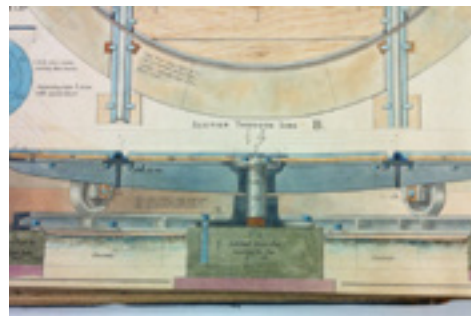
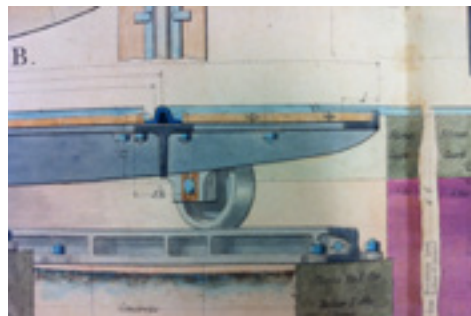
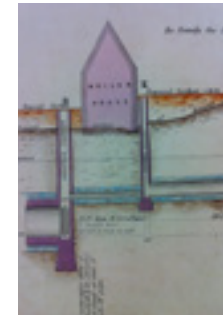
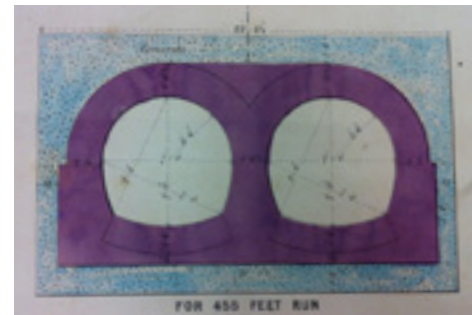
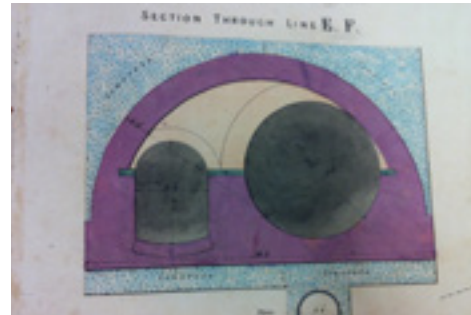
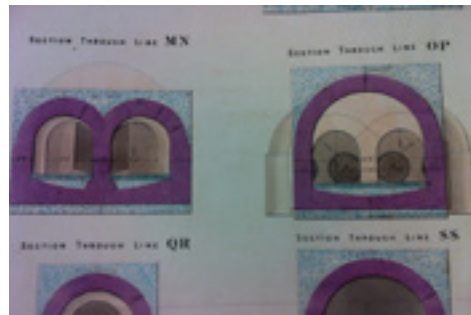
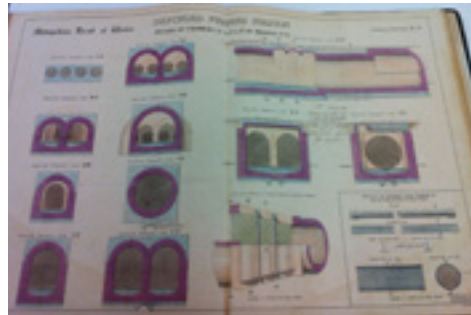
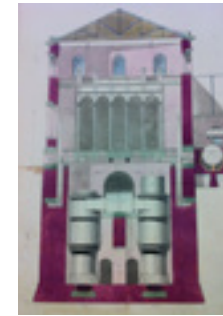
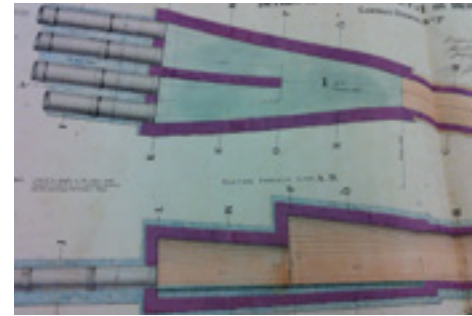
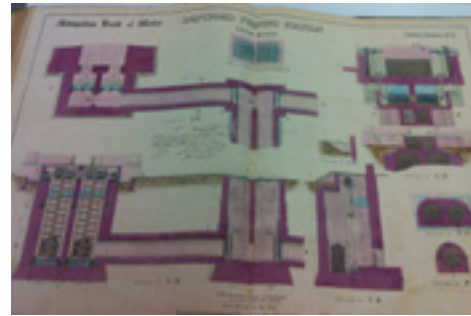
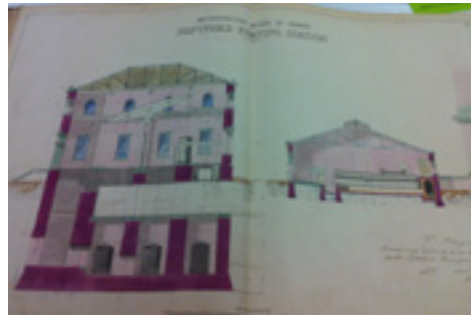
2^d May 1861
 Drawing referred to in the
 Specification for the Deptford
 Pumping Station -
 J. H. Smith
 John Aird for

Scale 1/4" = 1 Foot



ORIGINAL DRAWINGS 1964

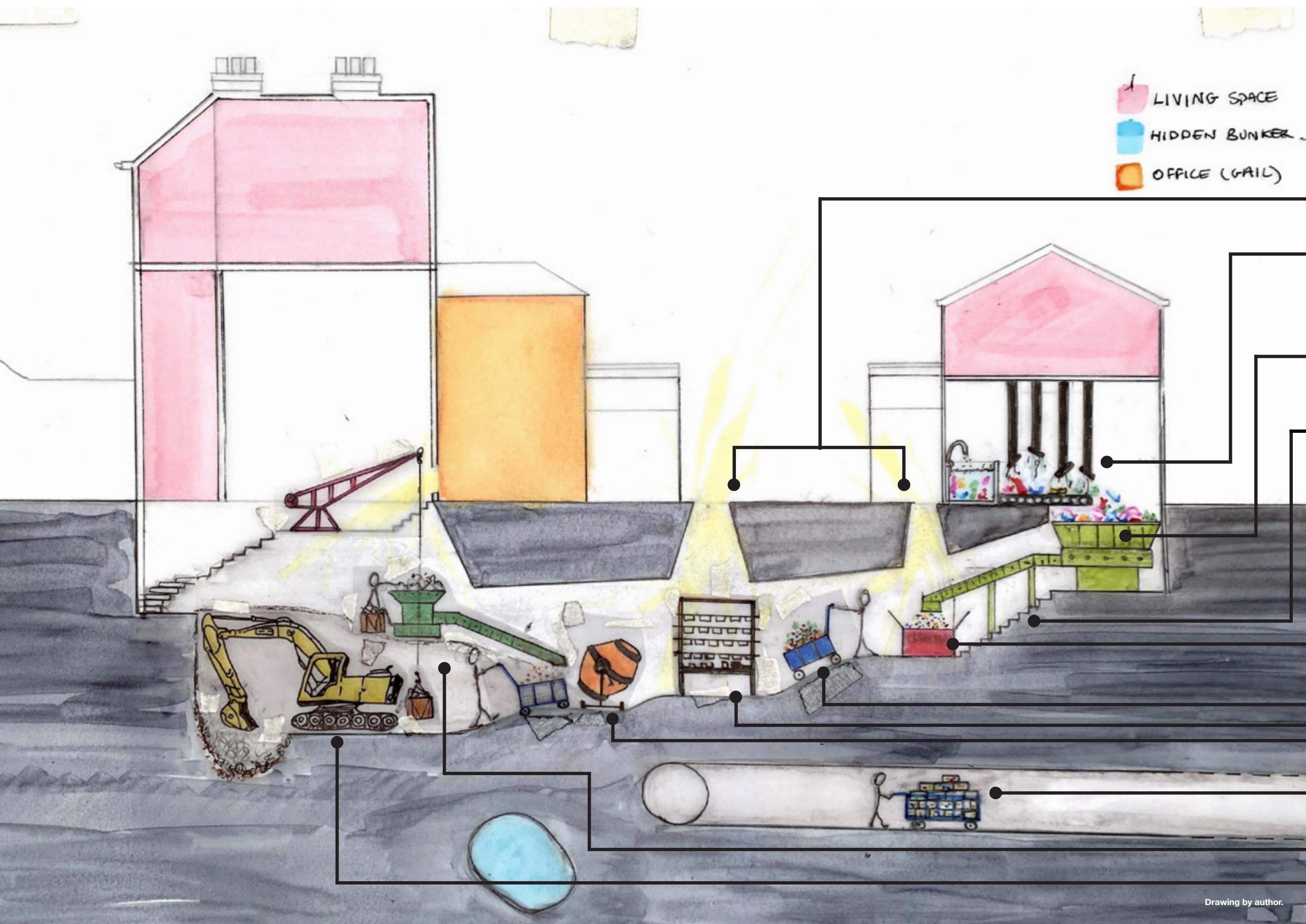
VICTORIAN SEWERS, LONDON



These are photographs of the original hand drawings made in 1964, from the London Metropolitan Archives. They are contract drawings of Deptford Pumping Station and some of the connecting sewage networks. The pumping stations are built in normal buildings with inconspicuous facades, while inside there is heavy machinery pumping gallons of water through London's sewers. These drawings are helpful in looking at how these tunnels and chambers can be drawn technically and with use of bold colour. Also the fact that on the surface they are disguised as normal buildings much like Gail and Ken's house, then when drawn in section you can see that it has been excavated deep into the ground.

- LONDON METROPOLITAN ARCHIVES, Main Drainage Metropolis, Metropolitan Board of Works. 1964. "Deptford Pumping Station". Contract Drawings. London.

- LIVING SPACE
- HIDDEN BUNKER
- OFFICE (GAIL)



PROGRESS DRAWING

- Light shafts cut the ground line to allow natural light to flood the underground workshop.
- Plastic comes in through Ken's house. It gets washed, then goes on a conveyer belt to dry under the dryers, before ending up falling into the basement where it gets caught in a plastic shredder.
- Plastic shredder that chops up large pieces of plastic. Sending it down a shoot running along the stairs to the next stage.
- Steps cast into the excavated ground.
- Plastic shredder that shreds the plastic into even finer pieces so they are ready to be added to the mix.
- Shredded plastic gets transported in a wheeled container to be mixed and moulded. An alternative to this could be a rail that runs along the floor with a gradient so that less man power is needed.
- Set of moulds to make bricks out of the excavated earth and plastic. Situated at the heart of the space underneath the main void in the ground / skylight.
- Mixer to mix the plastic and the earth together before it gets added to mould.
- Bricks taken off site via tunnel.
- Hoist is bringing excavated materials up into the machine that crushes it so that it can be used to make bricks. This material is then transported to the centre to be mixed and moulded.
- Digger excavating earth on one side.

This is a progress drawing of Gail and Ken's workshop design. Gathering the elements that they would ideally need for their project so that the stages of the process are spatially clearer. The problem with this drawing is that it does not take into consideration the secretive nature of the project. The fact that it will not be discrete to get a digger into the property, as well as any noise it would produce. Also the other large machines such as the plastic shredders. Each of these elements will need to be rethought out with secrecy in mind, to allow the protest project to go forward without anybody becoming suspicious. Further research will be carried out into tunnelling in secret.

EXCAVATION & PRODUCING BIRD BATHS



1961
1961
1961

SECRETIVE TUNNELLING

TUNNEL 29, BERLIN

When The Berlin Wall was built in 1961, it split the East and West of Berlin overnight and subsequently also separated family and friends from each other. Tunnel 29 was a tunnel built underneath The Berlin Wall. It gained this name due to the fact that 27 people escaped from East Berlin's harsh dictatorship to the West in 1962.

Joachim Rudolph, one of the people behind Tunnel 29 had already escaped across the border to West Berlin and was making a new life for himself, when he was approached by a group engineering students. They asked him if he would help them rescue their friends in the East, and he agreed. They wanted to tunnel underneath the wall...

They found a suitable location in the West to start digging from. It was an old plastic straw factory and the owner allowed them to use his water supply and electricity for their mission as he too had escaped from the East. So one night they went to the factory with just a hammer and a chisel, and went down to the cellar and made the first blow. They hit the floor repeatedly until suddenly it broke open. They pulled back the pieces of **concrete**, and underneath there was a **layer of screed**. By smashing the screed away with hammers they finally got to the **clay**. It was hard clay which made getting through it difficult. They chipped off smaller pieces then larger pieces until they were breaking off massive sections.

When they were deep enough they were able to start digging horizontally towards the East.

The tunnel was 1m x 1m so **they were digging lying on their backs horizontally** with their feet facing the direction that they're digging, **using their feet to dig the earth out with the shovel**. They would dig with their feet until they had a **small pile of earth**, then slide onto the hands and knees and put all of the clay **into a cart**. Then it would get taken along and hoisted up into the cellar.

Apparently digging was the worst as it caused their whole bodies to ache, especially their hands.

They needed more crew and equipment therefore were looking for funding. Thats when...

One of the most controversial decisions in the history of TV news, was a top American news network agreeing to fund a group of students building a tunnel under the Berlin Wall.

They used the funding to buy **steel** to make a **rail** for the cart, **wood to hold the Earth back**, spades, wheelbarrows, & pickaxes. They could then also recruit more diggers to speed up the process. They managed to find 12 people willing to dig underground.

...BUT HOW DO YOU BUILD A TUNNEL IN SECRET?

NO MACHINES

Incase they are heard and found out.

He also had the idea of attaching an old **World War II telephone** to the wall, one end up in cellar and one down in the tunnel. When a cart was full they would wind the telephone halfway and it would ring in the cellar.

He made a **rail** out of steel for the cart, and attached a **motor** and winch to the rails so that the cart taking the earth up goes faster.

AIR RUNS OUT

As the tunnel got longer, the air runs out so they needed to get fresh air from outside down the tunnel.

He brought a **big ventilator**, put it outside the tunnel and funnelled the air down using **stove pipes**. Each a metre long, and taped together. This worked well and pumped air right down to the bottom of the tunnel.

NO LIGHT

To see where to dig.

Rudolph set up these **electric lights** so they can see while they're digging.

LIMITED CREW

They had to find diggers.

Four men working in eight hour shifts. One person digging, another stood at the bottom of the shaft loading the cart up with clay. And two people stood at the top hoisting the cart up on a pully, emptying the clay into a wheelbarrow, pile it up in the cellar and send the cart back down again.

LIMITED TOOLS

- Hammers
- Chisels
- Wheelbarrows
- Chovels
- Rakes
- Pickaxes



• Tunnel 29, Joachim Rudolph, 1961, Under The Berlin Wall. <https://www.express.co.uk/news/world/1202179/Berlin-wall-anniversary-bbc-podcast-tunnel-29>



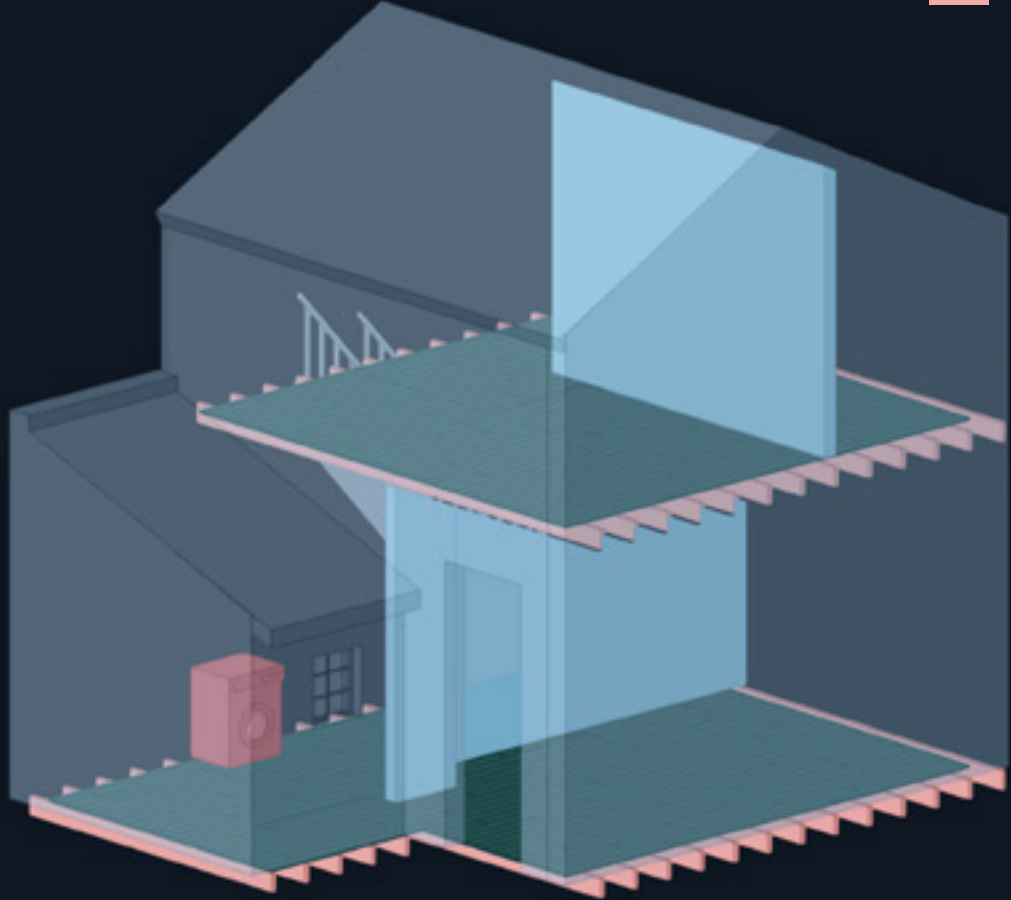
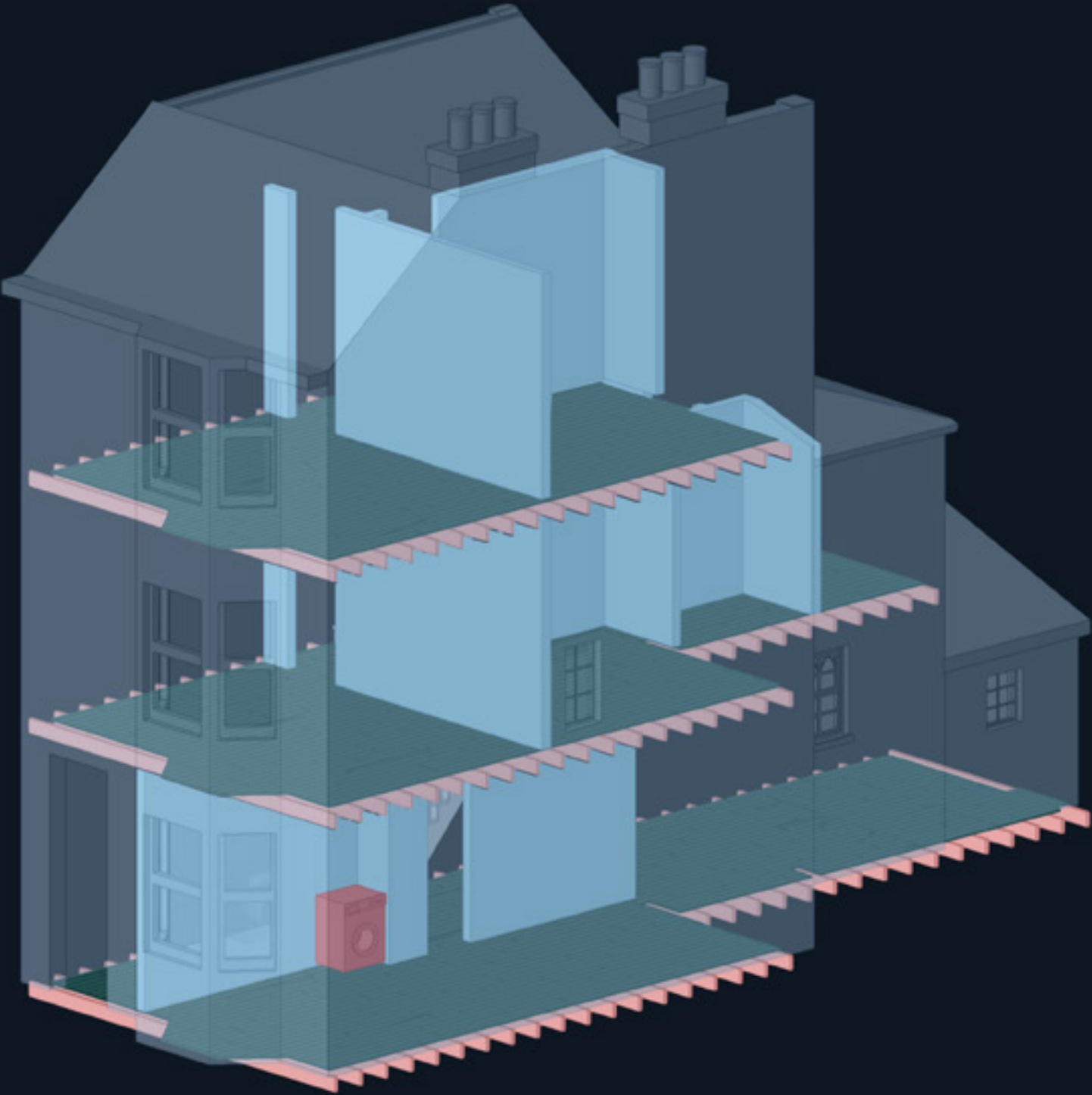
• Tunnel 29 Joachim Rudolph, 1961, Under The Berlin Wall. <https://www.express.co.uk/news/world/1202179/Berlin-wall-anniversary-bbc-podcast-tunnel-29>

• Information extracted from podcast "Intrigue - Tunnel 29 (Om-nibus 1) - BBC Sounds". 2019. BBC. <https://www.bbc.co.uk/sounds/play/m000b0rr>.

When looking for tunnel precedents, it was important to consider the big factor that is the secrecy of it. The realisation of the fact that using heavy machinery is not an option due to both noise and actually getting the machines in without bringing attention to them and blowing their cover. In creating Extinction Rebellion's tunnels, a similar strategy can be applied as the case study of Tunnel 29. They had similar (but worse) conditions and requirements. Problems they came accross such as the lack of oxygen at the bottom of the tunnel is telling that some form of ventallation is key to the design, this could be achieved through using resources from the existing site for example pipes. Also the digging techniques, tools needed and the number of people realistically required, and what each person has to do. It seems that they had a good system going, kind of like a converorbelt with people on different stations doing different jobs. The introduction of a steel rail to carry loads through the tunnels with more ease and faster, will be applied to Extinction Rebellions tunnels. From the photographs of Tunnel 29 you can see that they used wood to reinforce the tunnels, which could be applied to the design by extracting and using existing timber joists from the two houses.

DECONSTRUCTION

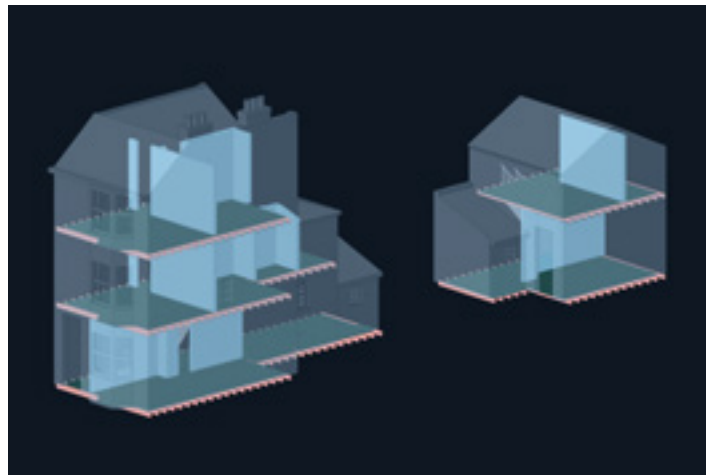
- EXTERNAL ENVELOPE
- WASHING MACHINES
- INTERIOR WALLS
- FLOOR BOARDS
- FLOOR JOISTS



DECONSTRUCTION OF EXISTING

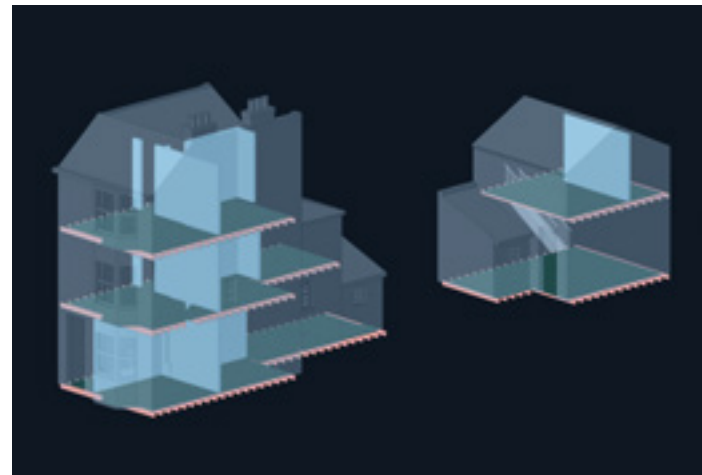
Inventory drawing of the existing elements of the site shows what is available to use to construct the tunnels. This method is both in order to keep it secretive and also to use the resources available, recycling them rather than buying new materials and equipment. It shows what will be removed and used, and what will be retained. The schedule of deconstruction is based on the structural hierarchy of the elements. The exterior walls act as an envelope, an inconspicuous disguise to cover what's going on inside and underneath it.

SCHEDULE OF DECONSTRUCTION



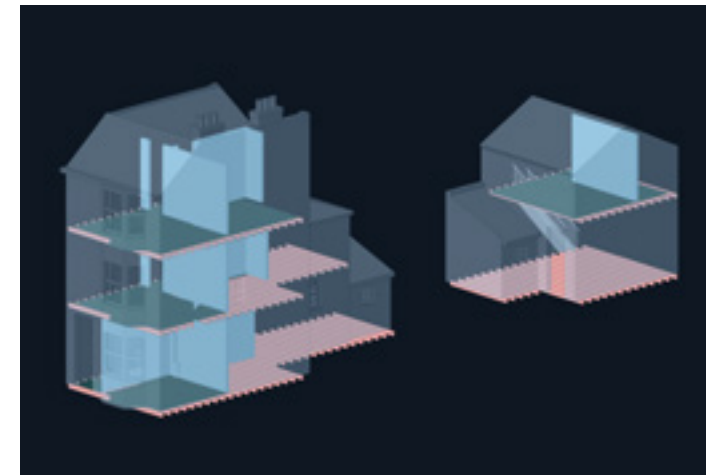
1. WASHING MACHINES

The washing machines will be taken and used underground as a more discrete alternative to building site mixers. Other things taken out at this first stage of deconstruction will be white goods, furniture etc. and possibly used as well.



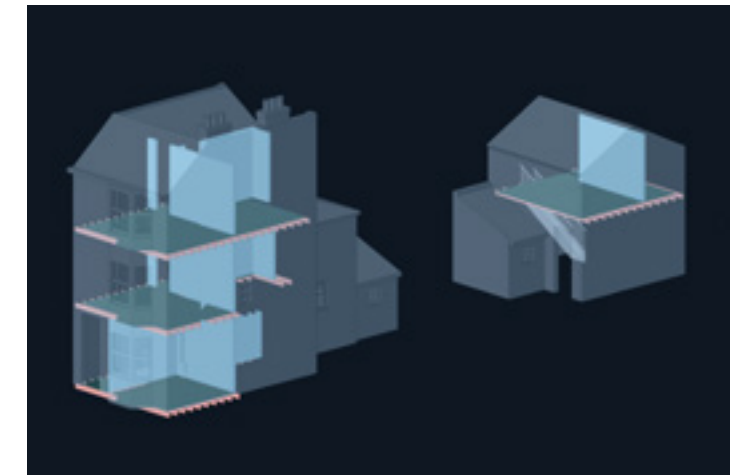
2. INTERIOR WALLS

The upstairs walls are partition walls made out of lath and plaster. The downstairs walls are supporting brick walls, so when removed they need to be replaced with supporting steel beams.



3. FLOORBOARDS

The floorboards will be removed next and used to construct moulds for the bricks that Gail and Ken are making.



4. TIMBER JOISTS

The timber floor joists will become a crucial element of the construction of the tunnels. They will act as frames like used in precedents to support the underground chambers and tunnels.

CONSTRUCTION



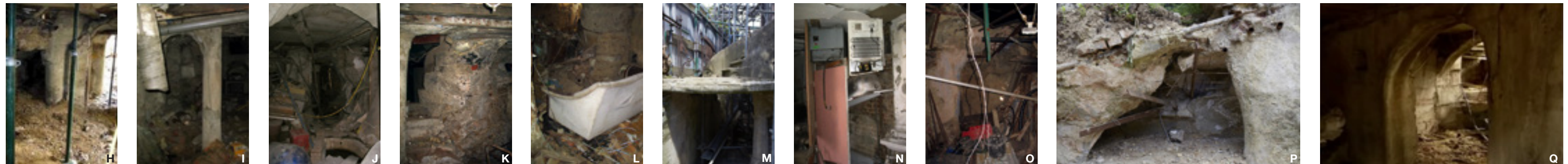
MOLE MAN'S HOUSE, HACKNEY (1960-2006)

Mole Man aka William Lyttle got his nick name after a network of tunnels were discovered underneath his home in Hackney. The Mole Man was an eccentric, antisocial man with a passion for digging⁽¹⁾, he spent over **40 years digging** without planning permission. He chipped away the earth with a **shovel and a homemade pully**⁽²⁾. He let the house go derelict and lived in the tunnels underneath. When he got evicted in 2006, engineers found **over 10 tunnels**, they were **25 ft deep** in some areas and around **60 ft long**, spreading out in **every direction** beneath his property⁽³⁾. They also had to remove approximately 33 tonnes of debris from the property, this included 3 cars and a boat⁽⁴⁾. In the past neighbours had complained that the ground would shake, and that he cut off his whole street's power by hitting an underground power line⁽⁵⁾. For the next few years

after Lyttle's eviction, the house was held up by scaffolding, and a corrugated metal fence was put up to stop people accessing the property. However this did not stop the Mole Man from re-entering the property at some point by slipping through a small gap in the fence. He reoccupied the tunnels for a while before the council found out and evacuated him again⁽⁶⁾. In order to ensure that the building would not collapse, the council poured 2000 tonnes of lightweight concrete⁽⁷⁾ into the tunnels, filling them up. The pictures below are of the **subterranean part of the house**, which is mainly filled with **random objects with no apparent purpose**. Some of the objects are conventional household items like **sofas and baths**, others include **tools** and loads of **tangled up cables**.⁽⁸⁾



MOLE MAN'S SUBTERRANEAN TUNNELS



William Lyttle letting his house go derelict and occupying the underground is similar to what will happen in Gail and Ken's house. Not really inhabiting the interior of the house, deconstructing it and going town to the tunnels Mole Man made his own mix of concrete, using materials readily available to him on site. For example stones, chunks of metal, newspapers and cardboard were some of the materials he threw into the mix. This same DIY concept that mole man used could be adapted to what can be found in Gail and Kens home.

In photo **J** you can see the distance and complexity of the tunnels as the pathway ahead fades into darkness while the hole in the floor below suggests an entrance to another, deeper chamber.

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MOLE HOUSE, DAVID ADJAYE HACKNEY (2012-PRESENT)

Artist Sue Webster purchased the Mole House in 2012. She was riding past the abandoned property on her push-bike and stopped to call the number on the fence. Webster paid 1.12M⁽¹⁾ for William Lyttle's house and all the history that came with it. She spent the following 5 years renovating it with friend and architect David Adjaye. She wanted to create a modern live work space whilst keeping the authentic history of the Mole Man's home and years of work. Adjaye said "The project came together as an exercise in **excavation and retention**, with Webster's vision for the new home being strongly tied to the history and fabric of the original building."⁽²⁾ For example the house still has numerous ways of entering it, which emulates the Mole Man's buried tunnels underneath⁽³⁾.

On most of the facades you can still see the **cracked**

rendering⁽⁴⁾, this was in order to keep the character of the Mole Man's house. On the south facade it is exposed brickwork. The external walls around the perimeter of the plot was built with 15,000 **reclaimed bricks**, partly from the site, and some were from local demolitions⁽⁵⁾.

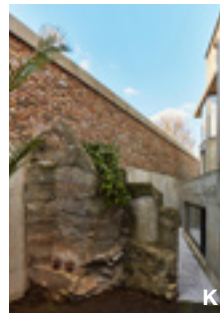
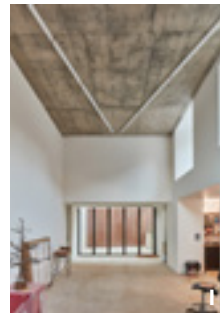
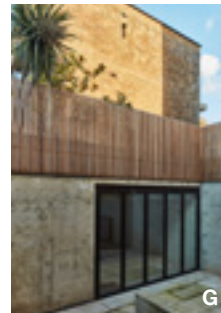
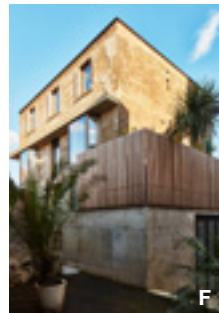
The house was completely **gutted from the inside**, leaving just the four walls. **Exposed concrete walls** in a **cross formation** were put in to support the new flooring slabs⁽⁶⁾. You can clearly see what is new and what is existing through the use of sleek concrete shapes. The existing foundations of the house were supported through reinforcement⁽⁷⁾, but the biggest part of the renovation was the lower ground floor. The architects had the ground **excavated into the garden** on the west and south sides, **increasing the volume of the basement**⁽⁸⁾. They had to excavate

tonnes of lightweight concrete and rubble, creating a **sunken garden** below street level to make it accessible. This level is a **double height studio** space for Webster to work in, this allows for light from **high windows** to flood the space. Above the stairs leading down to the studio, there is a **large skylight** which allows more light to the work space. Mole House owner Sue Webster said that it's "fascinating looking at the remains of the building, some of the structures that the mole man made when he made his own mixture of concrete, he put in stones, he threw in chunks of metal, he's patched holes up with pieces of cardboard or news papers and they're still there."⁽⁹⁾

As you walk around the garden you can still see pieces of history left by the Mole Man⁽⁹⁾.

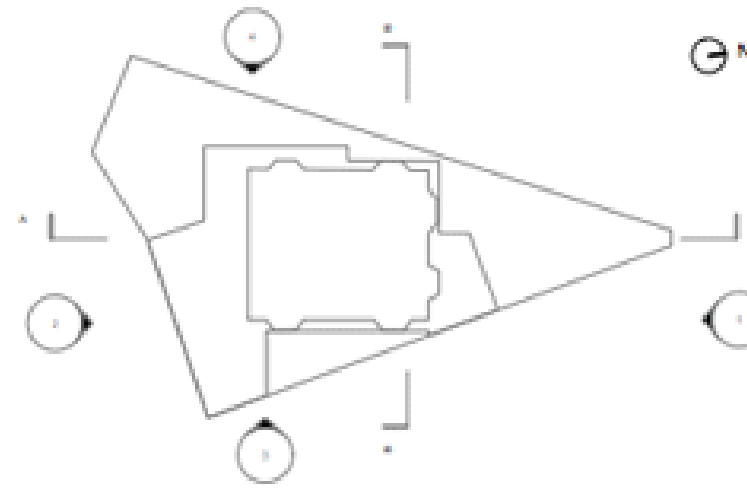


RENOVATION



All the interior walls and floors had to be gutted out as they were decaying, the same thing will be applied to Gail and Ken's houses in order to reuse the material to construct the underground spaces and tunnels. Another element to take inspiration from is how David Adjaye managed to get light down to the basement. This idea of having a double height basement space in order to use the existing windows that act as high windows, and some new ones like a large skylight could be designed between Gail and Ken's the gardens.

- ⁽¹⁾ "Mole Man' Home In Hackney Sold For £1.12M". 2012. BBC News. <https://www.bbc.co.uk/news/uk-england-london-18898642>.
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Historic RT = 11.102m (36.437m)

Historic Parapet = 8.942m (29.330m)

TF FFL = 7.325m
Existing height of masonry walls = 7.480m

SF FFL = 4.565m

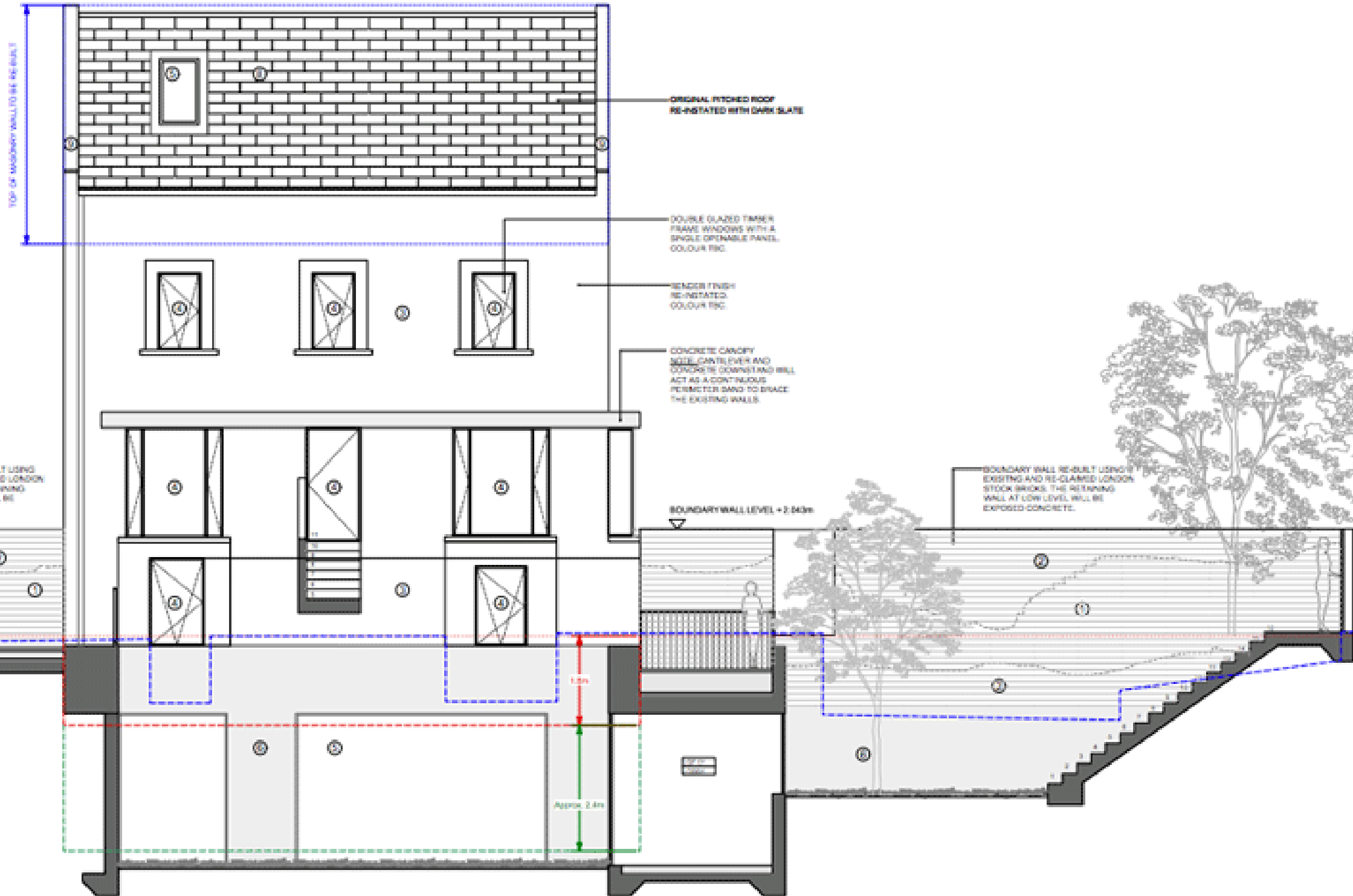
FF FFL = 1.855m

DATUM = 0.000m (+18.376)

GF FFL = -1.000m

GARDEN LEVEL = -3.017m

LOF FFL = -4.388m



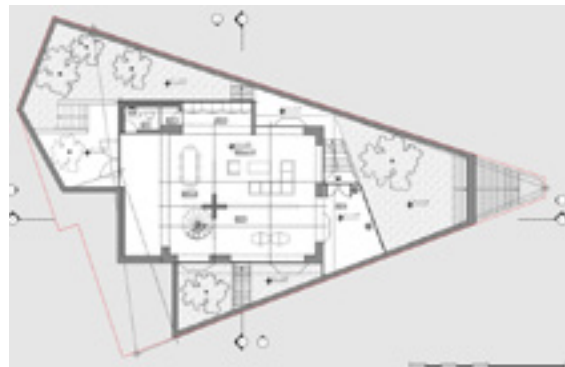
3 EAST ELEVATION



MOLE HOUSE RENNOVATION DRAWINGS



GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



SECTION



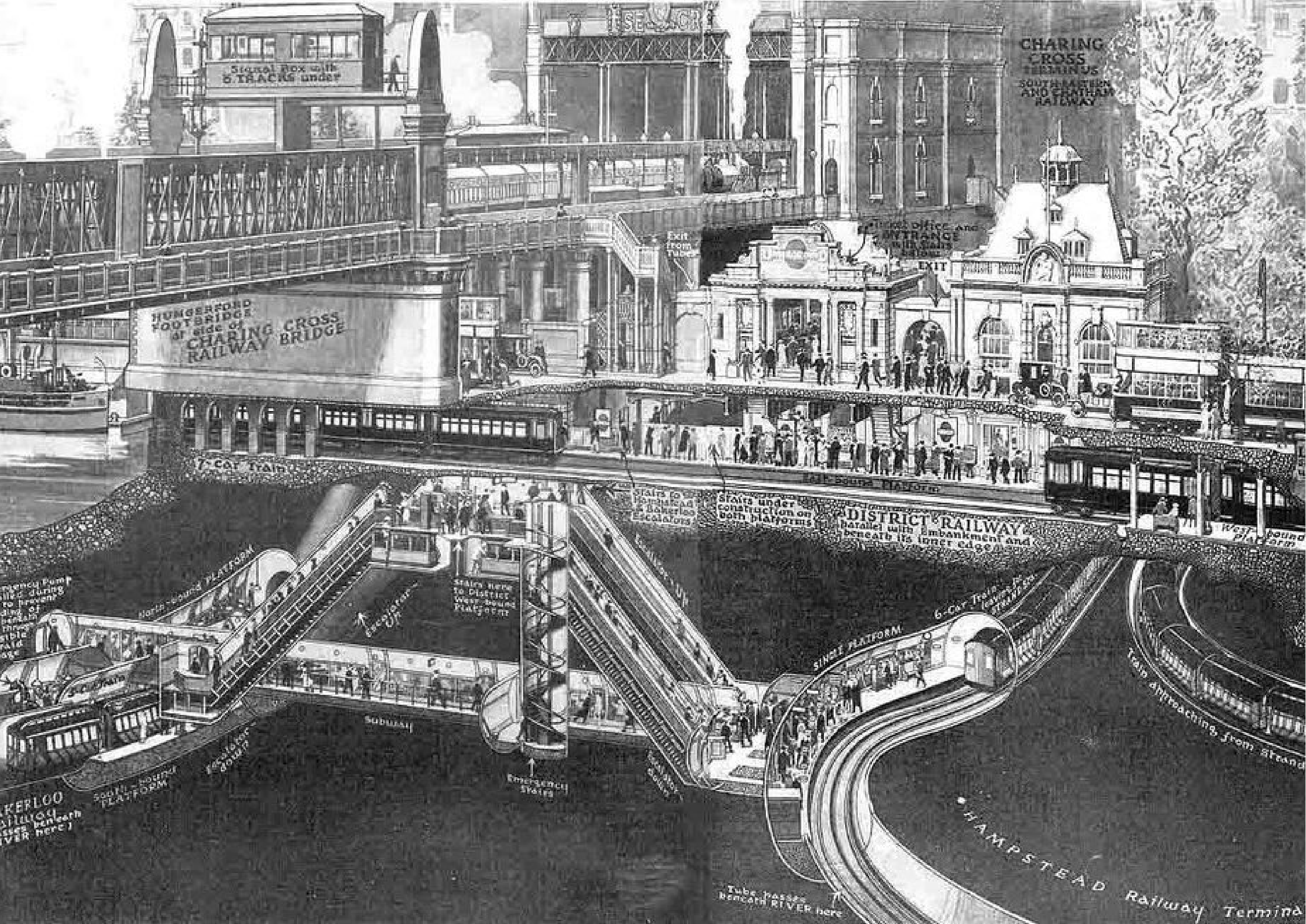
NORTH ELEVATION



SOUTH ELEVATION

These renovation drawings of the Mole house show what they have excavated. For example the ground floor plan and the lower ground floor plan above show that the basement level has been extended / excavated into the garden. This technique is transferrable to Gail and Ken's house in order to create more ssecret spaces underground.

- "David Adjaye To Transform "Mole Man" House In London Into Home For Artists | Minimal Blogs". 2014. Minimal Blogs. <https://minimalblogs.com/david-adjaye-to-transform-mole-man-house-in-london-into-home-for-artists/> drawings of mole house.



Signal Box with 5 TRACKS UNDER

CHARING CROSS TERMINUS SOUTH EASTERN AND CHATHAM RAILWAY

HUNGERFORD FOOTBRIDGE AT SIDE OF CHARING CROSS RAILWAY BRIDGE

Exit from Tube

Police Office and ENTRANCE with Stairs below

EXIT

Stairs to Bakerloo Escalators

Stairs under construction on both platforms

DISTRICT RAILWAY parallel with Embankment and beneath its lower edge

Emergency Pump (to prevent flooding of platform through possible leak in pipe)

North-bound PLATFORM

Stairs here to District West-bound Platform

SUBWAY

Emergency Stairs

SINGLE PLATFORM

6-Car Train leaving for STAMFORD

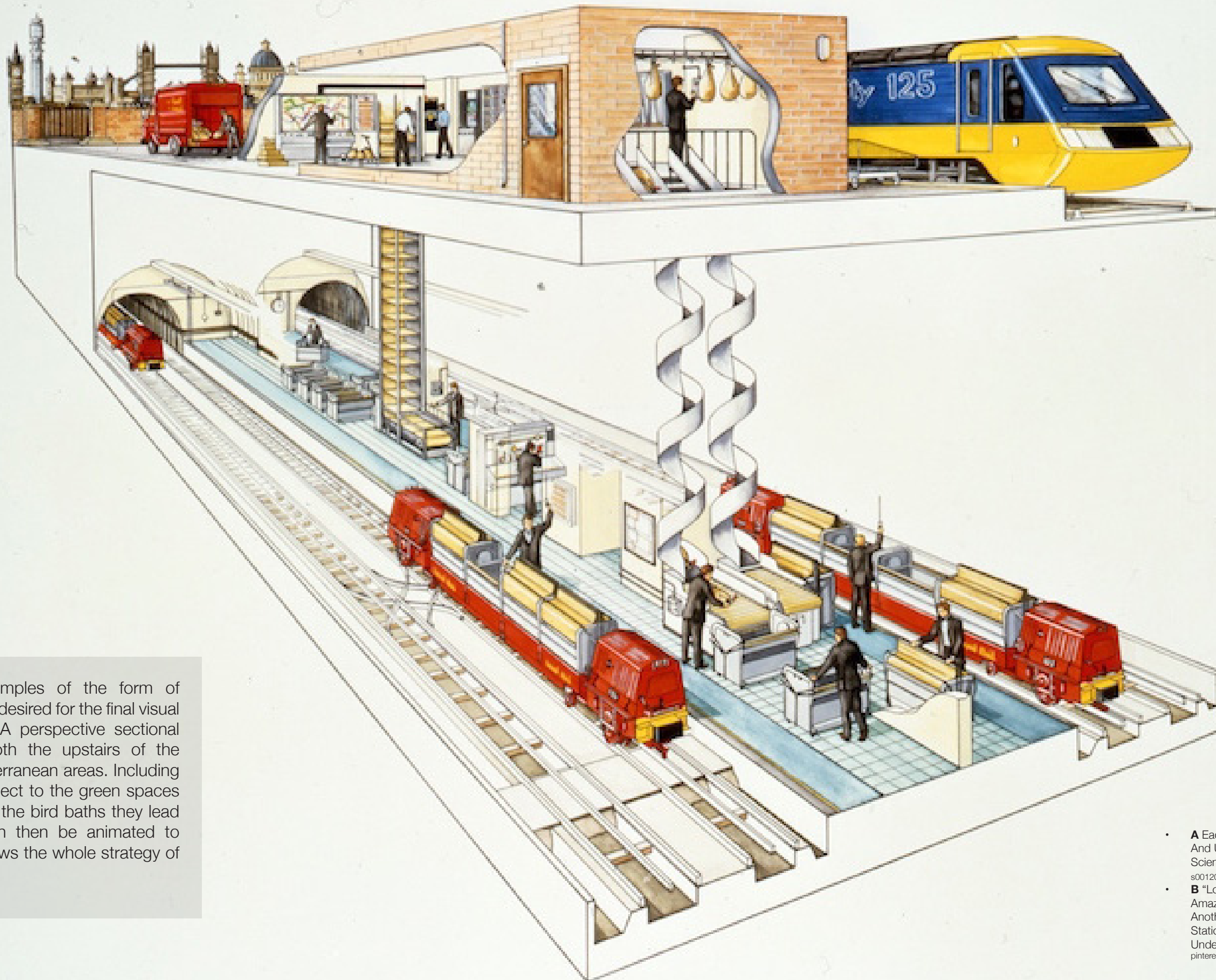
HAMPSTEAD Railway Terminal

Tube passes beneath RIVER here

Train approaching from Strand

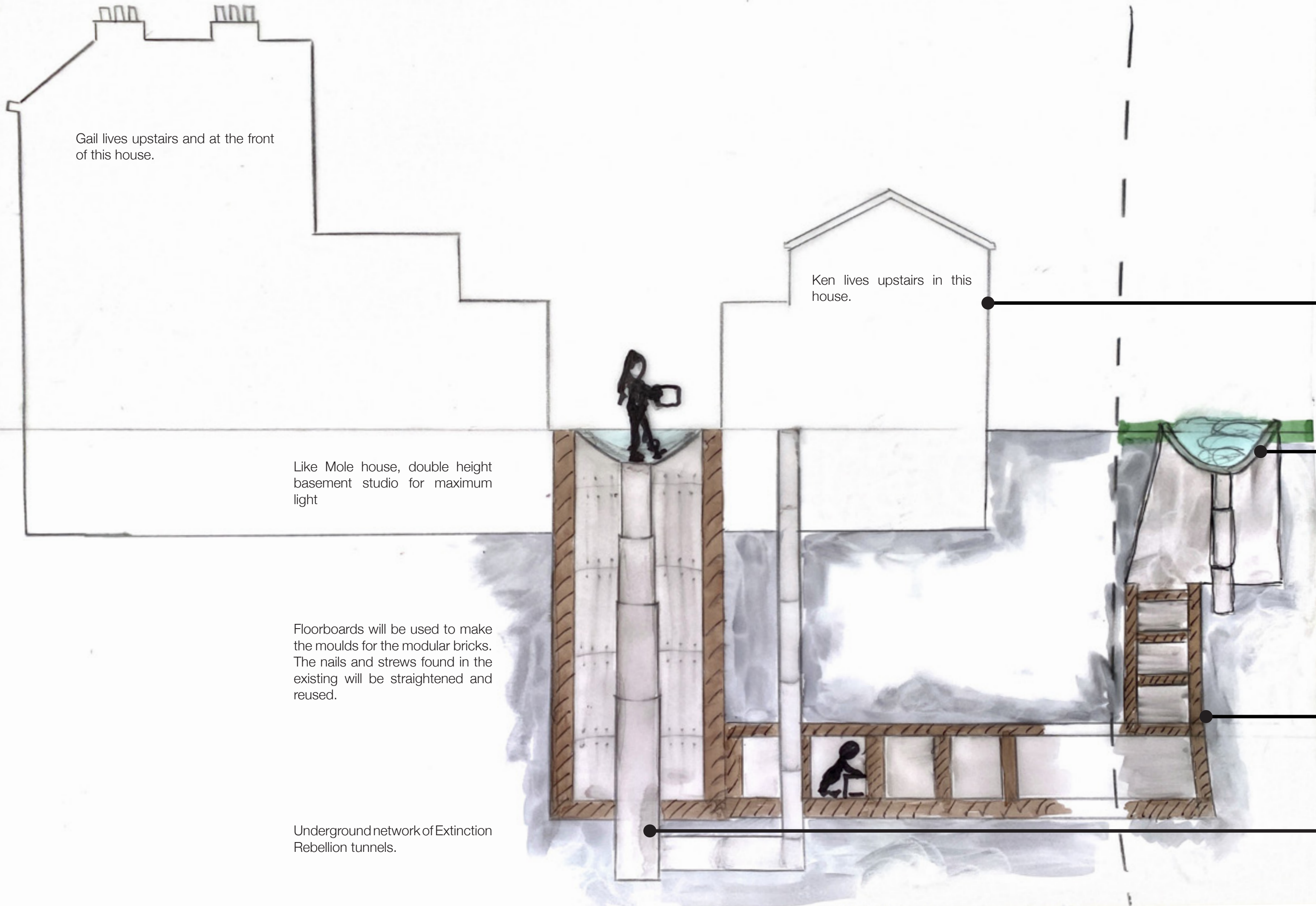
West-bound platform

FORMS OF REPRESENTATION



These are two examples of the form of representation that is desired for the final visual drawing and video. A perspective sectional view that shows both the upstairs of the houses and the subterranean areas. Including the tunnels that connect to the green spaces around Brighton and the bird baths they lead to. This drawing can then be animated to create a film that shows the whole strategy of the design.

- **A** Eade, John. 1921. "Charing Cross Railway And Underground And Tram Links, Popular Science". Thames.Me.Uk. <https://thames.me.uk/s00120.htm>.
- **B** "London's Hidden Tunnels Revealed In Amazing Cutaways | Londonist And Here's Another From... | London Underground Stations, London Underground Map, London Underground". 2017. Pinterest. <https://www.pinterest.es/pin/186336503318151329/>.



Gail lives upstairs and at the front of this house.

Ken lives upstairs in this house.

Like Mole house, double height basement studio for maximum light

Floorboards will be used to make the moulds for the modular bricks. The nails and strews found in the existing will be straightened and reused.

Underground network of Extinction Rebellion tunnels.

PLANNING OUT DRAWING

Like the Mole House, the house is treated like a shell, leaving the outside mainly untouched and ordinary, while inside and underground a rebellion is in process.

Protest spot disguised as a bird bath so that people know where to meet when they are given co-ordinates. It is permanent structure that also gives birds a safe space at the same time. These bird baths will be constructed from modular bricks that Gail and Ken make in their workshop. Only Extinction Rebellion have access to the tunnels and for the public it is an unassuming hang out for humans and birds.

Timber floor joists removed from existing site repurposed into permanent timber frames that support the tunnels.

Hydraulic lift system that takes people and equipment underground.

CONCLUSION

The research carried out in this almanac is directly and indirectly informing the design process. For example through researching secretive tunnelling like Tunnel 29 it forced a more realistic approach as it was on a similar scale and also secretive. Using their problems to create design parameters like need of air ventilation and their system of labourers. Looking at tunnel construction precedents like the Victorian London Sewers was helpful to see how these spaces were built before the time of tunnelling machines. The timber frames used to support the tunnels seem to be a common theme amongst most of the case studies and therefore will be a design strategy later on in this project. Studying the interior materiality of the site resulted in more design parameters being set with elements being deconstructed and reused underground.

Intentions moving forward are to test out systems and materials through a series of material test models. Through doing this it will inform zoomed details which will eventually give the the final perspective section more depth and detail. This drawing could then be animated and made into a short film, depicting the full narrative of the project.

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REBEL #2: KEN QUANTICK (Pages 12,13)

- KEN QUANTICK FLATLAY OF PERSONAL OBJECTS, Created by Author
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- Image **2** Bricks made by author.
- Image **2b** "Projects Archive - Local Works Studio". 2019. Local Works Studio. <https://localworksstudio.com/projects>
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- Image **7** Photographed by author.
- Drawing **8** Drawn by author.
- Drawing **9** Drawn by author.
- Image **10** Photographed by author.
- Image **11** Photographed by author.
- Image **12** Photographed by author.

CHAPTER 2

Identifying protest sites & tunnels (Pages 18,19)

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- "@AndyMustard Instagram Post (Photo) #ThisisBrighton - Gramho.Com". 2019. Gramho.Com. <https://gramho.com/media/2037998424558596100>.
- **G2** Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 242, 243)
- **G3** Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 250, 251)
- **G4** Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 192, 193)
- **G5** Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 118, 119)
- **G6** Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 118, 119)
- **G7** "Check Out This 5 Bedroom Terraced House For Sale On Rightmove". 2019. Rightmove.Co.Uk. <https://www.rightmove.co.uk/properties/74996934#/>.
- **T1** info and pic - Seymour, Ellie. 2018. Secret Brighton, An Unusual Guide. 1st ed. Brighton: Jonnglez. (Pages 90, 91)
- Image T1b <https://brightonmuseums.org.uk/discover/2013/04/09/so-is-this-one-of-the-secret-underground-passages/>
- **T2** Image - "Brighton's Only Underground Bar, Hidden Beneath A Seafront Hotel | Ellie & Co., Inc". 2019. Ellie & Co., Inc. <https://www.ellieandco.co.uk/2019/02/cellar-cocktail-bar-old-ship-hotel-brighton.html>
- Information - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- **T3** Information & image - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- **T4** Information & image - "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- **T5** "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.
- **T6** "Someone Has Created A Map Of Brighton's Secret Underground Tunnels - Brighton Journal". 2017. Brighton Journal. <https://brightonjournal.co.uk/someone-has-created-a-map-of-brightons-secret-underground-tunnels/>.

CHAPTER 3

PROTEST TUNNELS (Pages 24,25)

- Big Image - Rory Hooper in the Protest Tunnels in Euston, by HS2 Rebellion, 2021, London. <https://inews.co.uk/news/eco-warrior-swampy-underground-hs2-tunnel-protest-euston-contractors-dig-860340>
- **A** "HS2 Protest: Final Activist Removed From Euston Tunnel". 2021. BBC News. <https://www.bbc.co.uk/news/uk-england-london-56209311>.
- **B** Elvin, Sian. 2021. "How Did A Band Of Eco-Warriors Manage To Dig Tunnel Network In Central London". Metro. <https://metro.co.uk/2021/01/27/how-did-hs2-protesters-manage-to-dig-tunnel-network-in-central-london-13971212/>.
- **C** Elvin, Sian. 2021. "How Did A Band Of Eco-Warriors Manage To Dig Tunnel Network In Central London". Metro. <https://metro.co.uk/2021/01/27/how-did-hs2-protesters-manage-to-dig-tunnel-network-in-central-london-13971212/>.

TUNNEL INTERSECTIONS OF VICTORIAN SEWERS (Pages 26,27)

- Big Image - London's Victorian Sewers, Created by Sir Joseph William Bazzalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>
- **A** London's Victorian Sewers, Created by Sir Joseph William Bazzalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>
- **B** London's Victorian Sewers, Created by Sir Joseph William Bazzalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>
- **C** London's Victorian Sewers, Created by Sir Joseph William Bazzalgette, 1870, London. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>
- Info - "Joseph Bazalgette - Wikipedia". 2021. En.Wikipedia.Org. https://en.wikipedia.org/wiki/Joseph_Bazalgette.
- Info - "Tunnel: 3 Types And Classification Of Tunnel And Purposes". 2015. Civil Knowledges. <https://www.civilknowledges.com/tunnel/>.
- Info - "London Sewers And Manchester Drains - Urbex Tour". 2018. Urbex Tour. <https://www.urbextour.com/en/urbex-travel/london-sewers-and-manchester-drains/>.
- Info - How The Victorians Built Britain. 2020. Video. London: Channel 5. <https://www.my5.tv/how-the-victorians-built-britain/season-1/saving-the-nation-s-health>
- **D** Model made by Author
- **E** Model made by Author
- **F** Model made by Author
- **G** Model made by Author
- **H** Model made by Author

CONSTRUCTION OF VICTORIAN SEWERS (Pages 28,29)

- All drawings and photographs on this spread are from The London Archives, GCL Photo Library, G.L.C. 1964. London.

ORIGINAL DRAWINGS OF VICTORIAN SEWERS (Pages 30,31)

- London Archives, Main Drainage Metropolis, Metropolitan Board of Works. 1964. "Deptford Pumping Station". Contract Drawings. London.

PROGRESS DRAWING EXCAVATION & PRODUCING BIRD BATHS (Pages 32,33)

- Drawn by author.

SECRETIVE TUNNELLING TUNNEL 29 BERLIN (Pages 34,35)

- Big image - Tunnel 29, Created by Joachim Rudolph, & fellow engineering students. 1961, Under The Berlin Wall. <https://metro.co.uk/2019/11/09/incredible-story-tunnel-29-students-went-back-berlin-wall-11068837/>.
- **A** Tunnel 29, Joachim Rudolph, 1961, Under The Berlin Wall. <https://www.express.co.uk/news/world/1202179/Berlin-wall-anniversary-bbc-podcast-tunnel-29>
- **B** Tunnel 29, Joachim Rudolph, 1961, Under The Berlin Wall. <https://www.express.co.uk/news/world/1202179/Berlin-wall-anniversary-bbc-podcast-tunnel-29>
- Information extracted from podcast “Intrigue - Tunnel 29 (Omnibus 1) - BBC Sounds”. 2019. BBC. <https://www.bbc.co.uk/sounds/play/m000b0rr>.

DECONSTRUCTION (Pages 38,39)

- INVENTORY DRAWING OF EXISTING SITE ELEMENTS, Drawn By Author.

CONSTRUCTION

MOLE MAN’S HOUSE, HACKNEY (1960-2006) (Pages 42,43)

- **(1),(3),(6),(8),(C),(D),(I)** “How A ‘Mole Man’ Dug A Series Of Tunnels Under His Home For Years In London Without Anyone Noticing - Digg”. 2014. Digg.Com. <https://digg.com/video/the-story-of-the-hackney-mole-man/amp/>.
- **(2)** “Mole Man Of Hackney – BLDGBLOG”. 2012. BLDGBLOG. <https://www.bldgblog.com/tag/mole-man-of-hackney/>.
- **(4),(H)** “‘Mole Man’ Home In Hackney Sold For £1.12M”. 2012. BBC News. <https://www.bbc.co.uk/news/uk-england-london-18898642>.
- **(5),(B),(F)** “A Real-Life Mole Man Spent 40 Years Digging Tunnels Beneath His London Home Before It Was Abandoned. See How An Artist Transformed It Into A Subterranean Studio.”. 2020. Insider. <https://www.insider.com/abandoned-mole-man-house-transformed-artist-studio>.
- **(7)** DETAIL Magazine, Refurbishment conversion. 04.2021. “Mole House In London”.
- **(E),(J),(K),(L),(N),(O)** Russo, Karen. 2008. “Karen Russo - Gallery - Mole Man (2008)”. Karen Russo. <https://www.karenrusso.co.uk/en/gallery/47>.
- **(G)** “Mole Man Of Hackney”. 2012. Quigleyscabinet.Blogspot.Com. <http://quigleyscabinet.blogspot.com/2012/07/mole-man-of-hackney.html>.
- **(A),(M),(P),(Q)** “Frieze 2014 Special: Tim Noble & Sue Webster’s New House”. 2014. Another. <https://www.anothermag.com/fashion-beauty/4017/frieze-2014-special-tim-noble-sue-websters-new-house>.

MOLEHOUSE, DAVIDADJAYEHACKNEY (2012-PRESENT)

(Pages 44,45)

- **(1)** “‘Mole Man’ Home In Hackney Sold For £1.12M”. 2012. BBC News. <https://www.bbc.co.uk/news/uk-england-london-18898642>.
- **(2),(3),(A)** “Mole House - Adjaye Associates”. 2019. Adjaye Associates. <https://www.adjaye.com/work/mole-house/>.
- **(B)** “How A ‘Mole Man’ Dug A Series Of Tunnels Under His Home For Years In London Without Anyone Noticing - Digg”. 2014. Digg.Com. <https://digg.com/video/the-story-of-the-hackney-mole-man/amp/>.
- **(4),(5),(6),(8)** DETAIL Magazine, Refurbishment conversion. 04.2021. “Mole House In London”.
- **(7)** “A Real-Life Mole Man Spent 40 Years Digging Tunnels Beneath His

London Home Before It Was Abandoned. See How An Artist Transformed It Into A Subterranean Studio.”. 2020. Insider. <https://www.insider.com/abandoned-mole-man-house-transformed-artist-studio>.

- **(9)** Rendekova, Chiara. 2020. “Video Of The Week - Sue And The Mole Man House”. Foliovision. <https://foliovision.com/2020/01/sue-and-the-mole-man-house>.
- **(C),(E),(J),(L)** “ARCSOC Talks: Sue Webster”. 2020. Youtube.Com. https://www.youtube.com/watch?v=tefLtn83kWo&ab_channel=CambridgeArchitectureSociety.
- **(D),(F),(H),(I),(K)** Magazine, Wallpaper”. 2020. “Step Inside David Adjaye And Sue Webster’S Mole House In London’S Hackney”. Wallpaper”. <https://www.wallpaper.com/architecture/mole-house-sue-webster-david-adjaye-london>.

MOLE HOUSE RENNOVATIN DRAWINGS (Pages 46,47)

- “David Adjaye To Transform ‘Mole Man’ House In London Into Home For Artists | Minimal Blogs”. 2014. Minimal Blogs. <https://minimalblogs.com/david-adjaye-to-transform-mole-man-house-in-london-into-home-for-artists/drawings-of-mole-house>.

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- **A** Eade, John. 1921. “Charing Cross Railway And Underground And Tram Links, Popular Science”. Thames.Me.Uk. <https://thames.me.uk/s00120.htm>.
- **B** “London’s Hidden Tunnels Revealed In Amazing Cutaways | Londonist And Here’s Another From... | London Underground Stations, London Underground Map, London Underground”. 2017. Pinterest. <https://www.pinterest.es/pin/186336503318151329/>.

PLANNING OUT DRAWING (Pages 50,51)

- Drawing by Author.