



Brief

AD: Tectonics

This document is divided in two. The first part is called 'Brief' and outlines the project's ambitions and attitudes. The second is called 'Technical Brief' and consists of the project's 'technological approach' concerning Learning Objective 2. The parts are separated for clarity but are deeply interrelated and naturally affect one another.



Port of Leith engraving, 1828.



Salamander Street, Gless



Leith Docks



Bottle kilns seen in the background of William Reed's Leith Races, 1842

[Overleaf]: Photograph in the community garden (Nachbarschaftsgarten) at Moritzplatz at the junction of Oranienstraße and Prinzenstraße, Berlin, 2022.

The brief has several parts but it might be prudent to first start at the site as this is the background which all decisions made later are to be placed in front of.

The site lies in the port town of Leith, now absorbed into the city of Edinburgh, straddling two urban contexts. From the west the site spans from an urban block ringed by tenements over a road to a portion of the Leith Links to the east, now occupied by environmental charity Earth in Common's (EIC) 'urban croft'.

Leith was the engine of Edinburgh. Its nature as a port fed, clothed and nourished its bigger brother. The water of Leith running to the sea, powered the mills which allowed the area to industrialise. The sequence of mills, warehouses and factories which had run through the town are now almost invisible. These are the long-gone paper mills, tobacco plants and bottle kilns that fuelled Scotland's enlightenment and supported the Empire's expansion.

The town is still recovering from the fallout of the second industrial revolution and Britain's abandonment of industry in favour of cheap overseas labour and imported goods. Draw from this history - its traces are all around and can be uncovered with keen eyes. Be wary, don't romanticise - these structures were built by engineers.

Contemporary Leith is now under a process of gentrification as an older, poorer and static population of locals mix with mobile, younger, WFH digital nomads. They mix, grate and abut against one another. The fabric of the town is changing - coffee roasteries, microbreweries and co-working spaces sprout amongst cobblers, mechanics and stale, malty pubs. Any development should be sensitive to its potential to raise property value in the area, bringing wealth to some yet evicting others.

The urban portion of the block was and is a mix of industrial (now commercial) and residential typologies. What were once, according to Charles Goad's Fire Insurance Plan of 1941, warehouses, stables and cooperages are now flats, garages and ruins. The street facing frontages are groomed and formal but things begin to get raggedy and improvised towards the centre. In the centre of the block is the to-be-demolished derelict stable turned storehouse which chokes an otherwise complete interior tenement yard. The dog-legged courtyard of Constitution Street, narrow John's Lane and Alexander Latto's garages all reach towards each other in the block and each terminate at the ruin.

The Players are the inhabitants (or soon-to-be) of the site. Already mentioned is Earth in Common (EIC) based on the Leith Links.

Many of EIC's infrastructural needs will be serviced by the newly opened pavilion with its cafe, community space, offices, toilets and so on. As such, any ambitions must be projected into the future and any development should define and anticipate the future direction of the craft. What are those needs?

The shed exercise presents a test and a beginning point for this expansion. As a place to store materials, process waste and access tools or workspaces, the shed seeks not just to give the community the infrastructure that they need (bearing in mind, we have, as so-called architects, determined that they need), but rather equip the community with the tools and space to determine and construct it for themselves. In a sense it functions as a statement of intent - a didactic example of how architects should consider their relationship to, not just community projects, but the construction site and the work involved in construction.

Additionally, the craft's placement on the Leith Links is pertinent. These were originally Commons or 'common land', and this is land originally designated for the commoners to graze their livestock on. Consider expanding EIC's craft to include livestock. In particular pigs which can be fed food waste from either the craft, homes or businesses (i.e. the numerous fine dining restaurants or trendy coffee shops of Leith). This infrastructure of food waste collection could be built into that of our next player - Empty Kitchens, Full Hearts (EKFH).

EKFH is a charity dealing with food insecurity. Started during the pandemic, out-of-work chefs began preparing food that would have gone to waste as meals for those in need of it. Running on volunteers, it has been hugely successful however its existence betrays a condition which should only be temporary. Idealistically, their organisation should not have a permanent place in our society meaning that their new home on the site should only be temporary and have a built-in redundancy.

Their temporary needs encompass the storage, preparation, packaging and delivery of food as well as administration spaces. There is also room to be generous, to include perhaps a mess hall or yet more unprogrammed spaces as food insecurity can carry a shameful stigma. Thus, an openness and tender treatment of space is paramount - one that invites and does not judge nor qualify.

Harbour Homes - Constitution Street

VISITOR

MICHAEL BACKER
No Company
Visiting: NA



1. Between 2010-2017, 78 UK slaughter workers lost fingers, parts of fingers or limbs, more than 800 workers had serious injuries, and at least 4,500 had to take more than three days off after accidents.

A. Wesley, A. Heal, 'Shocking Safety Record of UK Meat Plants', Bureau of Investigative Journalism, 2018. <https://www.thebureauinvestigates.com/stories/2018-07-29/uk-meat-plants-injuries>



Pilot project for the re-development of the public spaces of Montà, Castel San Pietro, Ticino, 2019-2022



EIC and EKFH together present two aspects of the question of food security, that of provenance and of distribution. How food is produced and what is done with it. Where does it go?

My suggestion would be to propose an expansion to the functions of both charities with the introduction of pigs. Using the infrastructure of EKFH already in place to collect food waste which is unable to be prepared for human consumption and to feed a small farm of pigs on the property of EIC (of course this infrastructure can also be used for composting as well). This loop could ultimately be closed by a rather provocative piece of infrastructure - the abattoir.

Numerous articles over the last ten years report the grotesque suffering and gross negligence of Scottish abattoirs which are perhaps a result of our vast consumptive habits as well as the low pay and grim working conditions of this industry! The urban abattoir seeks to exaggerate these two conditions of our industrialised modernity in the extreme, the consequences of which are otherwise obscured and thus commodified.

These conditions have parallels not just in farming but also construction which is similarly hidden but hidden in plain sight. The messy realities of construction occur in tandem with our slick and refined urban lifestyles, obscured behind thin plywood boards and fences, occasionally disrupting our meetings and mealtimes with the grating sounds of jackhammers and saw blades. The high visibility jackets worn by construction workers curiously make them almost invisible to civilians. The ever-present cranes and scaffolds of our cities are considered seemingly unremarkable and 'temporary'.

So alongside farms and food, pigs and abattoirs we find also the construction and the construction site. As this is the timber studio, we might also add the tree and the sawmill to begin to connect the provenance of material (timber) to the act of construction and the consequences therein. Yet all of these sites and processes are not only obscured in space but also in time. The next section will discuss some of the timelines this project is interested in. →

Cedar Mill, Seattle 1973



Fisherman's Shacks



Bat Tower

Installation by Claude Cattelan





Log Flume

2. Taken from an urbanist perspective, this idea has parallels in the unitary urbanism of Guy Debord and the Situationist Internationale. "...current urbanism, in their view, has as its aim to organise life in such a way that people are discouraged from thinking that they might have anything of their own to contribute." Quoted in H. Heynen, *Architecture & Modernity* (Cambridge: MIT Press, 2000), 155.

3. There is also perhaps a need for provisions of construction paraphanelia such as, tools, mats, PPE, ladders, flooring paper or fabric and so on.

4. In Thomas Hardy's *Jude the Obscure* there is an infamous scene where the butcher is late and Jude must kill their family pig. Hardy does not shy away from the cruel gruesomeness of animal slaughter yet at the end when the act is done the 'tender-hearted fool' Jude is relieved but his wife Arabella scolds him.

"Thank God" said Jude. "He's dead."

"What's God got to do with such a messy job as pig-killing, I should like to know!" she said scornfully. "Poor folks must live."

The project is interested in considering the following questions both rhetorically and practically.

How long to grow food?

How long to rear a pig?

How long to grow a tree?

How long to grow the table to sit at to eat?

How long build a building?

How long to build a community?

How long for food insecurity to become food security?

Accordingly, I feel the project should take place in three parts. Initially the site must be established as a place for EKFH to continue their work. However, this must only be temporary and functions only as the first stage of the site's life cycle. The purpose is to give time for other things to occur, for example, trees to be planted for future construction, waste collection and material infrastructure for the pigs and so on.

The first metamorphosis shifts the site into a community construction 'laboratory' while continuing to accommodate EKFH. This will function as a place for the community to not only come together to build something but a place to learn skills in how to effect change in one's own built environment through construction.² Too often designers (or students) deign to bless communities with workshops for furniture and so on but always reserve the act of construction for themselves. The laboratory will start with small interior fixtures such as how to insulate one's homes, install double glazing, furniture and repairs to then moving on to larger community objects such as bike sheds, allotments tool sheds, community fridges/larders, granaries, chicken sheds, pig houses and so on.³

As both timber and pig populations grow and the community is more equipped with construction knowledge, the site can be constructed into its abattoir. This space may choose to continue to include aspects of the previous two uses, that of the workshop and the food preparation of drying, fermenting, salting and so on. This final iteration is rather speculative and suggests that with the construction of the abattoir, perhaps in a metaphorical sense, food insecurity can become food security.⁴



Coal Tippie



There's a joke in here somewhere about the three little pigs and their houses of brick, timber and straw.



MVRDV's Pig City

Finally, there is a question of attitude or approach, to help guide the proposal I have written some notes to remind myself in no particular order.

1. Do objects rest on or embed in?
2. Consider relations between people and material.
3. Allow spaces to be porous/in flux but reject ambiguity.
4. Embrace labour - celebrate it.
5. Drawing is advocacy - a value judgement, construction as agency.
6. Allow the design to be worn in and digested by the users - permanence is vanity.
7. There is more than one kind of sustainability.
8. Allow the head to be guided by the hand *Hand*
9. Copy constantly.
10. Best Practice? Says who?



Small Pig Keeper's Council (SPKC) poster. SPKC was introduced during WWII as a response to food insecurity.

Material Selection

5. Much of the theoretical foundation of this approach is derived from work done on my undergraduate dissertation and the writing of artist and architect Sergio Ferro.



David Gates' GYCM

6. The figure of the carpenter originally emerged from the farmer. To be able to carry out any changes or rebuilding work necessary at any time was worth the effort required... The majority of farmers would not have been in a position to appoint somebody else to build their house. Relying on the materials available, the use of which was sometimes still subject to severe limitations, and the assistance of family and friends, optimum designs evolved which today give rise to yearning and transfiguration.

K. Zwinger, Wood and Wood Joints (Basel: Birkhäuser, 2000), 54.

The following portion of the document is the 'Technical Brief' divided into four sections, 'Material Selection', 'Construction', 'Structure' and 'Use'. These sections also overlap and great influence each one another, as such more attention will be paid to some more than others.

Material Selection is primarily influenced by the unit's focus on timber. My interest in timber is twofold. First concerns timber's provenance (and its transparency). It is with great effort (or large pieces of plasterboard) that one obscures the forest from timber construction. Timber, even engineered timber, is easily recognisable as a material that comes from a tree, from the forest. Its arrival from forest, to sawmill, to site is almost implicitly understood, relative to many other modern construction materials. In this sense, the labour gone into a piece of timber is more implicitly understood than, say, concrete, steel or other intensively processed material.⁵

Secondly, timber is light, soft and easy to work with. Timber construction has an extremely low barrier to entry relative to steel, concrete and so on. It is safe and most anyone can participate in it, learning use a saw or hammer a nail into a piece of wood in an afternoon (most could also plant a tree in an afternoon). This strategy also works in favour of timber's weakness - its durability. Though not as hard wearing as steel or concrete it not only allows the layperson to construct with it using minimal equipment but repair and deconstruct with minimal equipment. This metabolic quality allows a consistent engagement with material - with its durability, provenance and construction.⁶ As such the timber chosen should be of small spans without the need for large pieces of machinery or equipment to work with. Make use of a diversity of tree species - demand shapes supply. Stay local, try for regional timber suppliers and sawmills. Embrace irregularity, disused and reused timbers. Utilise waste and offcuts.

Secondary materials should also correspond to these criteria. Consider brick for its accessibility but also its mass in contrast to timber's frame. Make use of reclaimed material on site and in the wider environs. There are numerous derelict brick buildings in Leith along with archaeological remains of old industrial sites whose bricks can be made use of. Use waste as aggregate: gabion cages, Wright's 'desert masonry', rubble infill trenches, telegraph poles, rammed aggregate tyres & piers, caissons and masonry. Iron and steel fixings for timber, bolting allows for disassembly as well as ease of deconstruction/reconstruction. Avoid chemical treatments and finishes - construction is not permanent.



David Gates' 100 Legs

Structure

Following from the selection of materials and chosen design philosophy, construction should be considered an ongoing process that is part of the occupation of the proposal rather than a necessity involved in the delivery of a finished object. It is intended to be a learning process and rather than longevity should aspire to be easily fixed, replaced and added to. Improvisation encouraged. What should be considered part of the process of construction is the replenishment of materials used on site (i.e. new planting in a forest). Allow the sequence of construction to be dictated by the needs of labour and materials. A place to store materials, a place to work, a place to rest, a place to eat and so on. The construction process should shape the form and tectonics of the building. The focus on accessibility of construction necessarily excludes large specialist equipment and prefabricated pieces - focus on the site as the place of construction.

Formally the proposal might take cues from the industrial heritage of the site and of Leith. Traces of brick bottle kilns, sheds, warehouses, shipyards, gasworks and breweries can still be found. Avoid demolition and seek only to build when necessary, touching lightly and double up if in doubt. The existing sheds and ruin on site provide an ample starting point. The foundations of the fort from the siege of Leith can also be made of use. Try inversions, interiors can become exteriors and courtyards can become rooms. Prop, lean, hang and hinge. Use simple connections, consider the skills needed to assemble it and the users. In the interest of transformability, a separation of structure from conditioned spaces could be useful as to allow each to be altered separately. Design so that construction aids such as tables, storage, scaffolding and so on are incorporated into the building itself.

Use

Certainly, with the strategies opted for the 'building as construction site' is not without hazards, unconditioned areas and dangers of fire with certain areas having limited accessibility at certain stages in the proposal's life cycle. However, the proposal intends that in the more hazardous stages of the life cycle the conditions will be much improved from those of a more conventional construction site. In this sense, the proposal seeks to narrow the gap between what is normally considered 'use' and 'construction'.



Enzo Mari's Autoprogettazione table, 1974

[Overleaf]: Albrecht Dürer's The Prodigal Son Amid the Swine, 1496

