

# Fergus Feilden

Born 1983. Architect.

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# 1. Introduction



*Fergus Feilden is the co-founder of the architectural practice Feilden Fowles. He comes from an architectural family. His father, Richard Feilden, was a distinguished architect, who co-founded Feilden Clegg Bradley Studios, one of the UK's leading architectural practices.*

*His great uncle Bernard Feilden was a leading conservation architect, whose practice included work on cathedrals, the Great Wall of China, and the Taj Mahal.*

*Fergus Feilden studied architecture at Cambridge University and at the Royal College of Art. In 2009 he founded Feilden Fowles with Edmund Fowles, whom he had met at Cambridge . He is in June 2021 described thus at the Feilden Fowles website:*

Fergus is passionate about leading project teams to create aspirational shared visions, and to deliver complex and challenging projects particularly on sensitive sites. He is currently working with high profile clients across the country including the National Trust, TfL, the Science Museum Group, Carlisle Cathedral and Yorkshire Sculpture Park. His projects span education, culture, strategic and heritage sectors, with current commissions including a masterplan for Yorkshire Sculpture Park, and Central Hall at the National Railway Museum in York.

He has lectured widely at universities and other cultural institutions across the UK, is a panel member of the Queen Elizabeth Olympic Park Quality Review Panel, RIBA Awards judge and visiting professor at Sheffield University. Fergus enjoys spending time in the natural world; exploring, making, running and cycling.



*The staff of Feilden Fowles in 2020.*

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## 2. Early Years of Feilden Fowles

*The following chapters, archived in 2021 with acknowledgement and thanks, are the transcript of a talk given by Fergus Feilden at the University of the West of England, Bristol, in February 2020.*

Thank you for having me here today. I am going to tell you a little about the formation of the practice, then lead on to some of the current work we are working. I thought it might be quite interesting because it was not that long ago, about twelve years ago, that we laid the foundations for the practice. When we were a similar age to some of you guys.



This is Ed [Fowles] and myself in our first studio. We first started working together in second year, doing collaboration on a range of competitions. So student competitions. We had very different design styles and skills at that stage. Over time we have kind of converged. We found initially that there was a really good rapport between the two of us. One of us is a kind of meticulous person, in terms of detail, and I had bit more passion for buildings and landscape and the externals.

There were quite a lot of friends who started a practice after Part 2. They formalised, and they set up before they had any work. Some of them survived, and some of them didn't. In our case there was a huge long lead time in us setting up our practice, because we were given the opportunity to design our first project out of Part 1; that was way back in 2005. And that project was not delivered until 2009. So we had a really soft start. But it meant that when we did get going we had a project that was published.

It meant that we could attract staff. It meant that there was a bit of momentum. I felt some of these things were interesting. We set up the practice, but then we started doing Part 2 in 2009, so despite having professional indemnity insurance from back in 2005 we were not properly qualified or chartered for the next four years. We started as an LLP; we later flipped to being a limited company. We couldn't really retain staff for more than about two years, because their ambition was growing faster than the duration of projects.



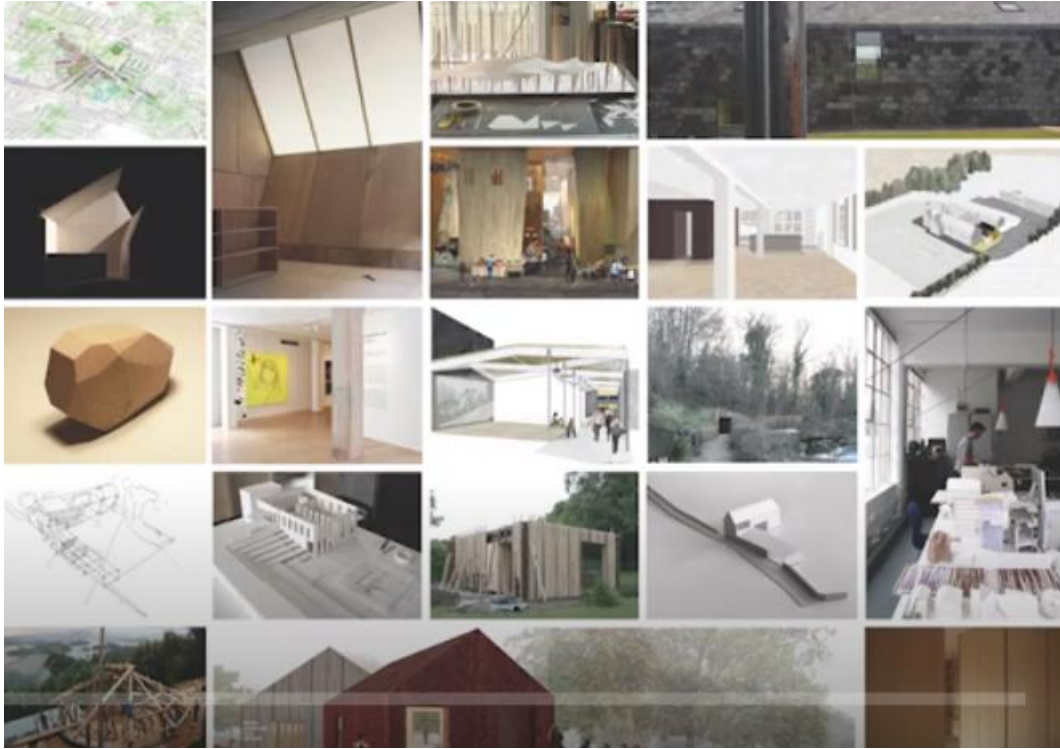
This was our first ever project. It was called Ty Pren. It's a house just outside Brecon in Wales. It uses larch which was milled on the other side of the valley, and lots of re-cycled slates. We didn't realise how pivotal this project would be for us in terms of setting the agenda. It's a bit like when

you look at somebody's website, we all have a first impression. Or you have a first impression when you meet somebody. Ty Pren meant that we started winning lots more rural projects. We were winning projects where clients wanted to use materials in a certain way. It started to establish our values around certain environmental principles. For example, it's really nice that there is no boiler in this house. There's a log burning stove with a back boiler, then it's got photovoltaics and solar collectors and it all goes into an accumulator tank. I would really struggle to persuade a client to do that now, but at that stage we were straight out of university and trying all sorts of things.



We employed somebody else before we were full time, and that was really important as well, because we didn't quite know whether the practice would survive. So we employed Alex Thomas. He was with us at university. He was full time. We met up in pubs in the evening to review things, and we had a studio in east London.

The images below are some of the early projects that we were directly involved in, or in some cases we were volunteering on. But you would constantly be pretending that you are more grown up and established than you actually are. So we were presenting student projects and being a bit ambiguous about them, and trying to win more work. The really key thing for us was that we always wanted to do social projects. We didn't want to be just doing private houses. We were desperately trying to get out of that. But when you have just one private house in your portfolio you have to argue all sorts of other things.



*Our first office.*

I loved the first office because there was no stuff. Now the office is bursting. You can't move for models and people and files. The only thing we had was a really nice sound system. If I was a client and I went into an office like that I would just say 'Well, what is your profession? You're not architects!'. We had a model maker (below) as our third employee, so Ed [Fowles] and Ed and I were not really earning anything, but still we had a model maker. It was really this student mentality. But we did have an office manager early on so we didn't get bogged down in admin, which was great.



These are the buildings that were finished in different years, and you'll see how a practice forms, and how it diversifies. Ty Pren was finished in 2009.



Then in 2010 we did a £20k garage and studio, really basic.





2011 small domestic stuff. This was a travelling exhibition and we were the contractor as well, and we made more money on that than pretty much the rest of the jobs combined for the whole year. When we were told we were going to be the contractor I was so terrified that I completely over-egged all the budgets, and ended up with it coming in as we had originally thought, so that was quite a good one.

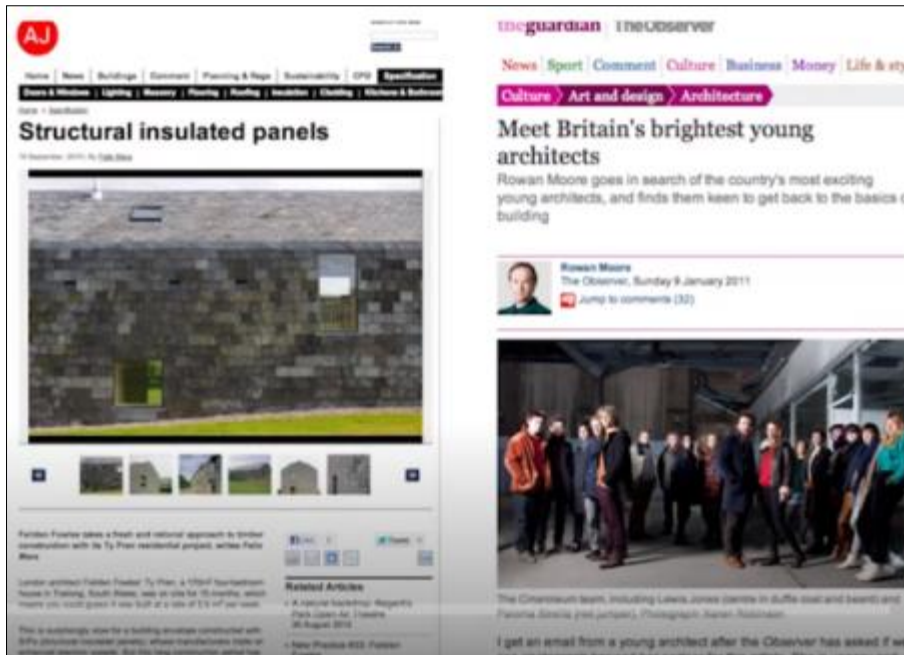


The studio was kind of filling up by this point. It was bloody freezing, so we used some sheep's wool insulation. We ended up putting a raised floor in, because some of the staff were getting chilblains. And that wasn't quite so much fun.



But we got some really fantastic early press, so that was great. The story behind the Guardian article (below) was that a woman came to us from Assemble for a job interview. She slightly wound me up in the interview, so I gave her this ridiculously tough interview, because I really wanted to find out what made her tick. Instead of her going away and slanging us off to everyone, she mentioned to Rowan Moore of the Observer that we were

a really interesting practice, so he came to interview us, then there was this article, and that served us for two or three years with various small scale commissions. I've been in awe of her attitude ever since.



We then moved to slightly larger offices, By this stage it's about growing up, being a bit more presentable, not having that 100 metre corridor full of bikes and artists' junk. We moved to another old factory, but it was a lot warmer and a lot safer. By this stage we were beginning to deliver some other projects.



I had gone back to my old school in Bath, which was Ralph Owen School, and talked to them about doing an access plan about getting students who wouldn't go into architecture to go into architecture. While I was there they raised the question of what do we do with their site. So we did a £6,000

master plan, and started delivering small elements of it like an outdoor classroom. And that was really our major break to get away from doing domestic work. Lots of rural projects. Lots of projects in timber. Every project we were trying to treat as a kind of prototype.

So the outdoor classroom was a combination of masonry, cob, and timber. It was a very old barn down in Bude. We got to know all about cob and how you made it. This was made from cob blocks with a flick coat on top. How you ventilated it. Loads of discussions, because although we were set up probably much too early and too irresponsibly the good thing was the culture of discussion was very good for us.

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### 3. Our First Proper Building



The first proper building was the Applied Learning Centre in Bath (above). That won some awards, which really helped.



We then used these projects to try to diversify. We loved doing education projects, we loved doing anything social, as I mentioned. Then we found we were asked by some graphic designers we knew to work on some exhibition design. Shown above are two temporary art installations we did (above) at the Jewish Museum in New York. One is called Primary Structures and the other was a collection from Helena Rubenstein.

We then got the job of refurbishing part of the Hepworth in Wakefield. The way that I approach new projects is that if someone comes to us and say 'We want you to work on this' or 'We want you to tender this project, but

we don't think you've got the experience', I will always draw an imaginary Venn diagram of the sectors we work in, and try to place their project at the heart of it. And show where the overlaps are, to reassure them and get people on board so they trust you and appoint you to that next step.



More school buildings. The project above with the red stair was another project at Ralph Owen School. It is one of my favourite projects, because it is so lean. It's about £1400 per square metre. It was built to Michael Gove's baseline cost guidance which basically tried to strip out anything architectural. We managed to flip that around. The funding formula did not specify very exactly the difference between Gross Internal Area and Gross External Area. So we put the circulation externally, and we hung the stair which meant the footprint was reduced, so the amount of concrete in the footings was reduced. There were lots of little tweaks which meant it was a super lean building, but still had quite a strong identity.

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## 4. Charlie Bigham



*Charlie Bigham food production facility in Wells, Somerset.*

In 2015 various workplace projects. That led to our studio moving to Waterloo in 2016. The reason we could build our own studio was thanks to the project above, for a guy called Charlie Bigham. It's a food production facility in Wells. It's in a quarry. Winning that project meant that we could finally afford to build the studio. We had had planning permission for the studio for two years. We had been desperate to do it, but we simply didn't have any money. So the fees from that one project, at £20m much bigger than anything we had done before, meant that we could do something interesting.

We had spent a lot of time thinking about what kind of practice we wanted to be. All of our work is for end users. We have quite a strict schedule of PR activities. We target the awards we wanted to go for, so that we would have the status to go for certain jobs. We have quite a lot of studio events. We have someone who helps us with press one and a half days a month. And we are constantly thinking about what happens next. For example, we are thinking of opening a studio in the Bristol area. We are constantly monitoring things, partly because in the first few years we had so little money in the practice that we couldn't do research, or take on certain projects. It was humbling, even humiliating. So we have been working really hard to get up to speed and really understand the figures, and the turnover and if we make some profit what we can do with that which will make us more creative.

Our work is all over the country. I am from the south west, and we started doing quite a few projects around the south west as a result of that. The practice is in London, and finally we have quite a lot of London work now. And really strangely we have quite a lot of work in the north of England. We are finding there that the clients know one another. It's not six degrees of separation, it's two degrees, even when they are a hundred miles apart. We are working for the National Trust in north Yorkshire and at Fountains

Abbey. And you find that somebody down in York knows that, and they can quickly cross over.

We do quite a lot of studio trips, which is really important.



And we have an amazing space where we can have a lot of design reviews.



I think it's useful to have some context, so that is a potted history of the practice.

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## 5. Case Study: Waterloo City Farm and Studio

Now I'm going to talk to you about three case study stories. The first is our studio in Waterloo. The photo below is going into Waterloo Station, which has 99 million visitors a year. It's the busiest station in the country. You have Parliament over on the left. And then you have this funny little skinny strip of land which is owned by St. Thomas's Hospital, which is the building on the right.

In 2014 my brother, who runs a local charity, was speaking to one of the local schools. They said to him that they wanted to build a City Farm and they wanted somebody to come in with them on it. He said he was keen to do that, and suggested bringing his brother along to look at the site. So I went along, and I said why don't we give you a bit of a kind of outline master plan, with no money involved.



*The site is the strip of land with low buildings in the bottom left hand corner.*

It was clear that they needed a bit of a vision to help them attract funding. So we put together a few slides to present back to various people. Despite being in central London it is a really poor area. Lambeth comes from lamb and hythe, and it was a bit like a lamb landing place. There is Lower Marsh and Upper Marsh and it was all marshland and farmland a long time ago.

Our site has had various iterations of Victorian housing that was bombed. There was some postwar housing. Then it was derelict for thirty years. St. Thomas's Hospital said we could have a five year lease for free if you smarted in up and do something interesting with it.

When we came along there was a big fence around it, and in amongst all this undergrowth there was lots of nasty stuff like used needles and nappies

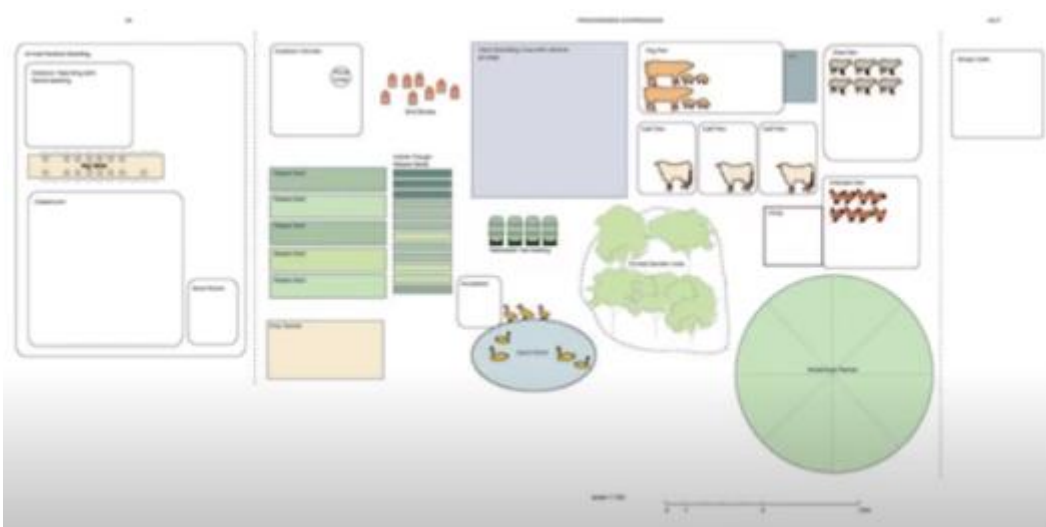


and industrial waste. So the first thing we did was a quick appraisal on which trees should be kept. We kept a few of the trees, including a wonderful old apple tree that was completely overgrown with ivy.



And we did a really simple master plan. The master plan was trying to understand the essence of the organisation. We had Oasis who ran schools, and food banks and churches and all sorts of things in the local area. And we had Jamie's Farm.

We asked ourselves what is it about a walled garden and a farm that could achieve what Jamie's Farm was trying to do with kids from inner cities who are on the margins of exclusion. We saw it as a retreat from the city. It could have lots of communal events. There could be a lot around the culture of eating together, growing food. Making this hands on, and quite utilitarian and simple.





We had to produce an area schedule for animals, because the Metric Handbook didn't provide this. We had to understand what these animals would actually need. How long is it OK to keep them in central London? They kind of come on city breaks to central London, then they go back again. They come for a few months, then they go away.

One of the funniest things we had recently was that some of the pigs were bought by some of the vegan volunteers who were on the farm. So they rescued them! I think my brother was a bit hacked off - he said that's not the purpose!



In the middle of the site we have the hard working bits of the farm, then we have the animal shelters, which was the first phase, and the studio which came next. It was never going to be a studio originally, it was just going to be a space for an outdoor classroom or something for the farm.



The animal shelters are really really simple. We were drawing on that kind of bush carpentry (above) with very crude lapping of joints and post and beam structures. The important thing was that they sat lightly on the site and could all be unbolted and moved.



We didn't want to touch that wall, because it's in a pretty ropey state. There's a brilliant engineer we work with who is very practical and doesn't over-engineer things. He was saying: how much tolerance can we tolerate? We don't want to fill the ground with concrete, especially if it is a temporary site. So we've got a very shallow raft foundation. And spreading the load over three lines of structure really helps. There's a little composting toilet in there. And then there is the studio at the other end of the site.



The influences on the studio were several. We've got the agricultural sheds - the leanest structures imaginable.



We loved the drawing studios at the RA and the simplicity of the north light and the simple form.



And the concept of the enclosed walled garden. So these were the kind of things that were feeding into our end of the site.

The plan of the studio is really lean and rational and stripped back - because we were paying for it! That was the main reason. But also it could be constructed off site. Alex Thomas, who was the first person we had employed, had left us because he was frustrated at not knowing enough about building, so he had gone off to become a timber framer. And we gave him his first proper job as an independent timber framer, which was to build our studio. It's a Douglas Fir frame; it's really simple. Then we have this wonderful garden which was part funded by the Garden Bridge. The Garden Bridge project - which we were not affiliated with in any way - wanted to put some money back into the community. So that was all planted up by the students, and they use that space.



This is the Douglas Fir frame being built down in Devon. We managed to get 7.5 metre spans, and it was all flash kilned to stop any kind of moisture growth on the timber. We couldn't kiln dry it. 7.5 metres is quite large for single solid pieces of timber, especially in Douglas Fir. We have since specified it on a number of projects where the same supplier has refused, and said we don't do that!



The purlins are housed within it. And you can see these paired beams are bolted through on one side, and on the other side they are very simple.



This is the frame going up. We acted as main contractors. We subbed out the various bits, which no doubt made it far more economic, but took more time.



The idea is that we can move this in the future. And if we do, I think there is a whole load of lessons learned that we will apply to the next iteration. The ventilation works really well. We've got a little hatch that runs along which they can open and close.

It's got a very kind of mute presence to the street. That's partly down to security, but it's also partly about this sequence of spaces, and revealing it as you come round.



Then once you are into the garden, you've got this incredible garden, and the idea of the walled garden with the wall wrapping right through the studio and that datum continuing round.



And the views back out are lovely. You are constantly aware of the seasons and the changing light. We don't have any gutters on the roof, so when it rains you get to enjoy the splashing and it fills up and it's really beautiful.

The barn was the next thing. I'll whip through this one because there are some projects I would like to talk to you about in more detail. It's constantly trying to combine identity with a low environmental impact, and what the social drivers are. We had this costed as a portal frame, but it turned out we were going to be filling each of the footings with two cubic metres of concrete. It felt insane. So we moved to a raft foundation and we split the structure. We treated it more like the plan of a church, with a nave and aisles.

We went for a big bow truss or diamond truss, and we wanted that identity to come right through the project and come through into the street.



This was also built by Alex and Jan, and this is the frame going up. It's always my favourite point in a project really. When they are at their skeletal best.





You can see how that follows through into the cladding, and gives it this kind of identity onto the street. And then we have a view (below) right the way through the site, all the way down to the studio. The technology evolves and may be tweaked. Here we have ply gussets which were all CNC cut. Again this is Douglas Fir. But it is rough sawn and bolt connected. We've got a slight fall on the slab, and this insulated classroom at the back. It's an incredibly demountable project, and I am quite excited about where it is going to go next.



## 6. Case Study: Yorkshire Sculpture Park



I am now going to talk about a project which we finished last year. We have been working on it since 2014. When I showed you all those small scale art projects, they all led into winning this commission, which is our most significant commission by a long way. Firstly, it was our first public building, Secondly it was a gallery. Thirdly it was a fantastic client, who is well connected. The benefits of working on a scheme like this are tremendous. We spent much more than the fee we got, but we always knew what the impact would be of doing this properly. I think we got a 5% fee for this, which is less than what we got for some of the school projects. That is really low, and given that pretty much everything is bespoke it has been quite a challenge.



I'll talk you through the context. This is the Yorkshire Sculpture Park, which is about seven miles south of Wakefield. It's just off the M1 so if you find yourself driving north do visit it - it is a truly magical place to visit.

They have this incredible landscape that has been re-unified over the last forty years; the Sculpture Park has just had its fortieth birthday. It grew out

of an art college that was in Bretton Hall, which is the old historic mansion house in the middle of the park. A guy called Peter Murray started putting sculptures in the landscape, and got the local authority to back them slightly. They managed to acquire lots of different collections, and they started an amazing building programme. The first project, by Feilden Clegg Bradley was for the main visitor centre. Then the underground gallery, which is really stunning. They have also commissioned pieces. They have one by Tony Fretton on the other side of the valley. They are really an inspired client.

We came to this project knowing the site a little bit, but not a huge amount. It was a design competition, and we started by looking at their existing context. In terms of the landscape, the buildings and the sculptures.



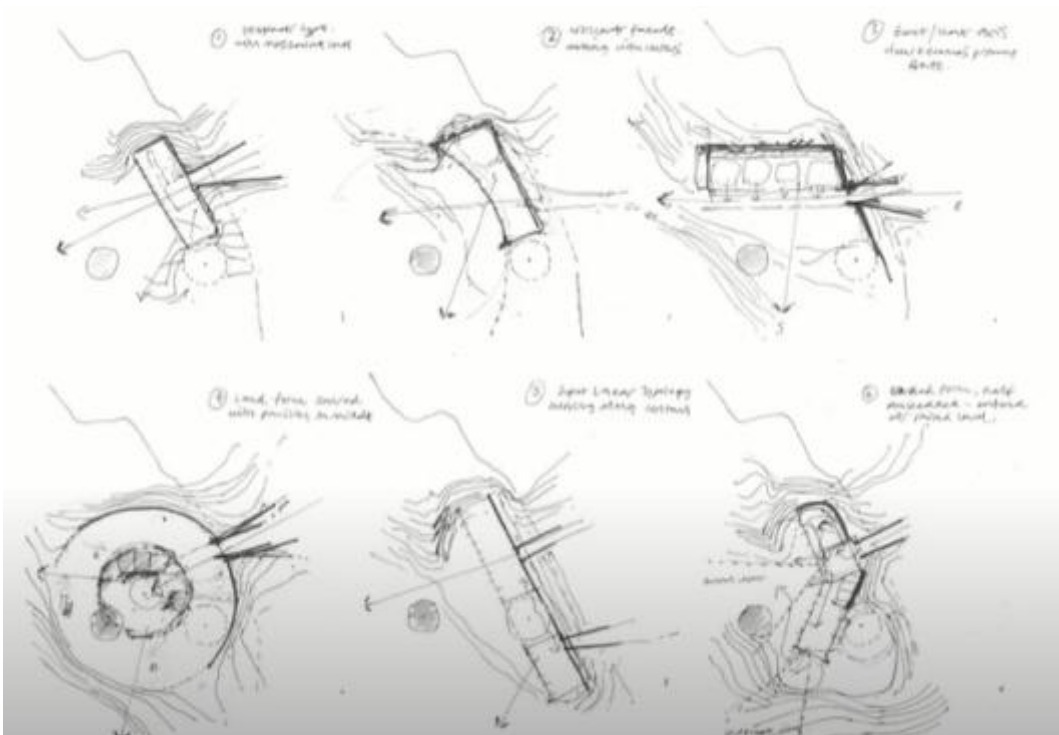
The site is at the northern boundary of the Park, shown by the red dot above. It is close to the M1, so the noise was really significant. We wanted to draw people over from the main visitor centre to this site, and create all these new routes around the site. Loads of our projects have a master planning element, trying to understand the people flows and trying to change the way these high volume sites operate.

Here we are opening up the park and putting a new destination to the north east of the Park, to encourage people to walk across the path. So suddenly they've got hundreds of acres of land that they can start to use more effectively.

We wanted to take an approach to the new building which would not compete with the sculpture, or competing the land, but something very modest and sensitive.

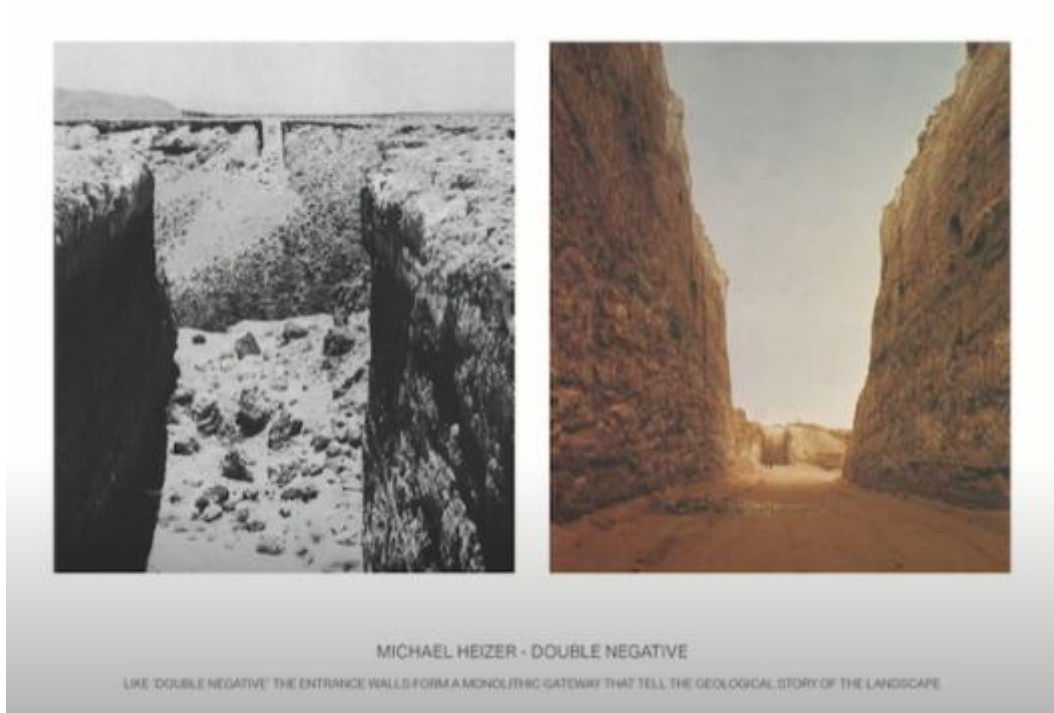


This (above) is the site before we started. It looks quite pleasant, but most of the time you could hear the noise of the motorway. The car park had a public toilet that had a reputation for all sorts of things I can't talk about, It was not a very savoury place.



So we said we have to create a threshold. This is a building that needs to work from both directions. We are bringing people off the M1 into an

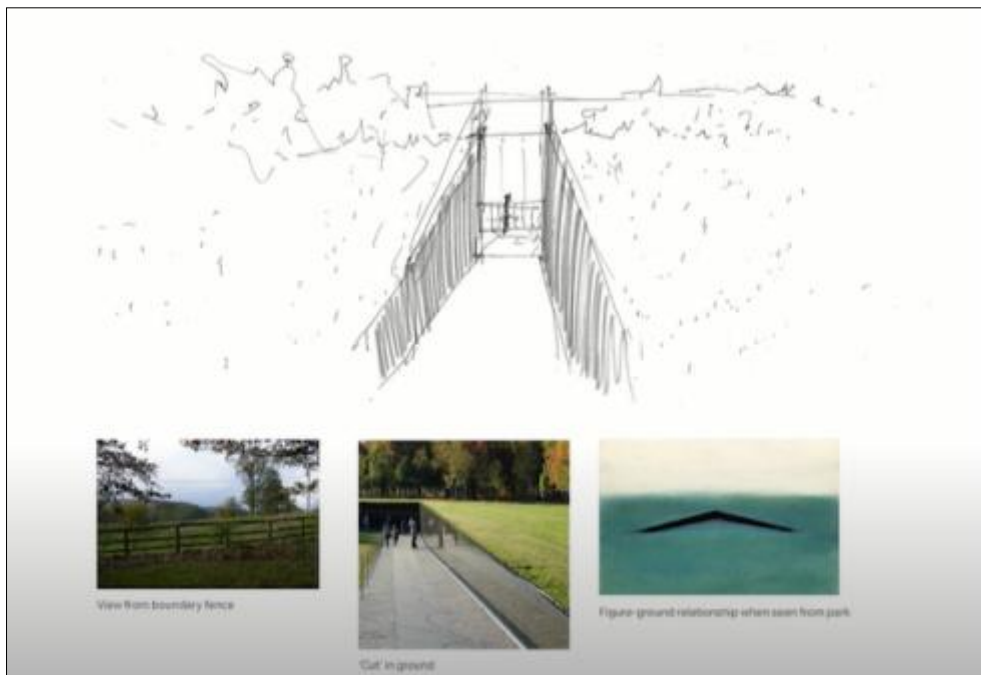
existing car park and into a new building. So we wanted to push the building close to the car park, and make it a boundary building, that you pass through and then encounter the views. These (above) are some of the sketches from the competition stage. We were wrestling with the land, and the topography and the form, and what our intervention in this landscape was going to be. The crescent façade (middle of top row above) was pretty much what we ended up building.



There were a number of land artists, such as Michael Heizer (above) that we were looking at and referencing. This idea of a monolithic gateway, and telling a geological story through the building, felt really potent.



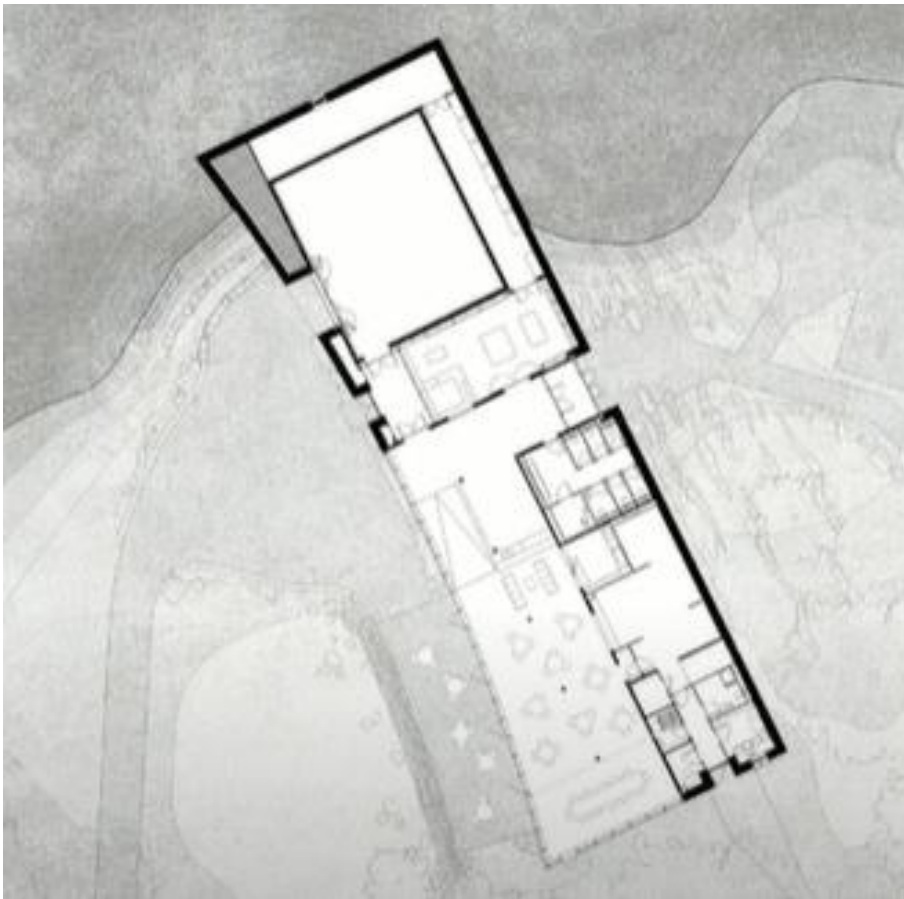
And Robert Morris, with his observatory project (above) was all about clear axes through the land.



We were trying to find what is the key diagram, or key spatial sequence of getting people into this building.



So this (above) is the position of the building on the site. One entrance coming through the building, then a subtle arc on the south west façade. The arc we felt was really important, because it is almost like the building is embracing the landscape with its arms. It also takes it away from being a severe building.



The noise of the M1 is really significant, so we've put all of our services, all of the back-of-house along edge facing the M1. That acts as a buffer zone, and frees us up to look back out to the park. The gallery itself is deeply embedded within the hill.



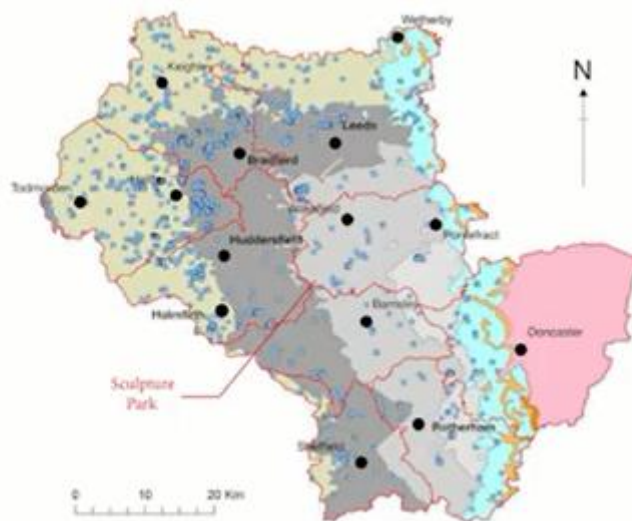
The wall development was fundamental. It was quite a wrestle, because originally we had conceived of it as revealing this geological slice into the landscape. To be very slender, and just subtly emerge, drawing from those land artists. There was a stage when it was going to be constructed from rammed earth. We had worked quite hard to get the client to buy into that.

But we found that with the rammed earth all the experts were coming from Australia, which meant a massive carbon footprint, despite the actual materials being very low carbon. We couldn't get any warranties, and for a project which is funded by the Arts Council that is really fundamental. The

contractor and the sub-contractor seemed to be at war before the project even started. And to do it, it had to be stabilised rammed earth with at least 10% cement. So it wasn't really quite rammed earth anyway.



The walls developed into in situ concrete walls, but we managed to reduce the carbon content by having a weaker mix because the walls were not having to work so hard.



Everything else in the building we tried to source as locally as possible. Above is a geological map of Yorkshire. The dots represent the different sources of aggregate. We wanted to have limestone, sandstone and granite, which can all be found in the site if you take a slice, a deep bore hole, through the site.

We were doing these test panels (example below) but we were a long way from where we wanted to be. The key client was an inspiring woman called Clare Lilley. She is incredibly particular, and she doesn't beat about the bush. So when she saw something like this she basically walked away. She was so disappointed. We were too. Having a good tough client is fantastic, because it meant we could really drive the contractor, we could drive



ourselves. And we could start to evolve a specification that was beginning to resemble something that we wanted.



*Early test panel.*

The upper part of the later sample panel (below) was where we started getting closer. We tried using different sizes of aggregate. We used a retardant on the formwork of the shuttering, and then jet washing it afterwards. We previously used shot blasting, but it came out like terrazzo. We tried all sorts of different things, including the lengths of time between the different pours of concrete. It is all vibrated, so it doesn't have air pockets in it. We ended up producing a quite detailed specification for every panel of the building.

Then it was all batch mixed on site in one metre cube at a time, then poured into the formwork.



*Later sample panel.*





*Pouring into the formwork.*

We tried it without tie bars between the formwork on either side, but the pressure meant we ended up with some pillowing.



I love these moments (above), where you get the runnels in it where the jet washing had happened. It feels very geological, and the tones are really critical.

You can see in the image below the tones of the wall, in relation to the millstone grit and the boulders that came out of the site. They are quite closely aligned.



We've got an unfired clay brick labyrinth in the scheme, Ten thousand unfired clay bricks, laid in a labyrinth. We blow the air through them to regulate the humidity in the gallery. Galleries have very specific controls of both temperature and humidity. The Park were more relaxed about the temperature, but the humidity was absolutely critical. Particularly in a parkland setting, where you might have a hundred people walking across the park in pouring rain, then they come into the gallery and they are all dripping. You quite quickly need to modify that environment.

So we have a diverter in this, which means that if it is 50% relative humidity outside, we can ventilate directly into the gallery. But if it is higher or lower we will use the labyrinth to moderate the humidity. We

bring the cool fresh air in at high level. It drops down and enters at low level. The vents at the top (seen top right) extract the foul air.



I will quickly explain how the whole thing came together. The tones were really fundamental. And the arc (above) was a really important element. We have a Douglas Fir frame inside, and a Riko system outside. So the façade (above) is a simple visual screen which can be replaced at any point.



The GRP screen (above) is probably the most controversial element of the scheme. It is designed so that artwork can be exhibited. There is one specific artwork that has been designed to go against it. During various conservations, and during judging, that came in for the most criticism.



There are lots of different qualities of light and different materials. We use an eco mortar, and a lime based plaster with its natural tone all the way around internally. We have used an acidic lye which stops any organic growth on the timber, but it also reduces the ultraviolet impact.



Then we have this cool gallery space, with very subtle bullnose of the concrete. It's quite a simple modest building. It cost £2.8m. It has completely transformed this part of the site. It is incredibly calm when you get in there. You come from the bustle of the motorway, and when you get into the building everything becomes clam and reflective.



They have been so respectful of the building. I was terrified it would start to get bashed about instantly, specially things such these columns (above). But it is the opposite of designing for schools, and it is really lovely.

A very simple building. But for us it represented growing up as a practice, and delivering our first public building.

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## 7. Case Study: Carlisle Cathedral Precinct



This is Carlisle Cathedral Precinct. Carlisle is on the border to Scotland, and Hadrian's Wall runs through it. It was described in the Guardian as being like Sean Bean with its rugged good looks. I thought that was a lovely description. But it's a bloody tough place in some respects.

The Cathedral is an incredibly special building. It is right at the heart of the town, but it has been unloved for a long time.



This building in particular (above) which is the old Priory, had a little porch by a well known architect called G. E. Street, which was built at the end of his life. It was a very compromised structure, because the building is half a level up and half a level down.





In the undercroft there was a rather sad café (above). It was not really commercially viable, and the main hall was not really used. But it sits on the historic axis between the castle and the station. Everyone passes through the precinct, with the main hall not being used.



*Existing site plan.*

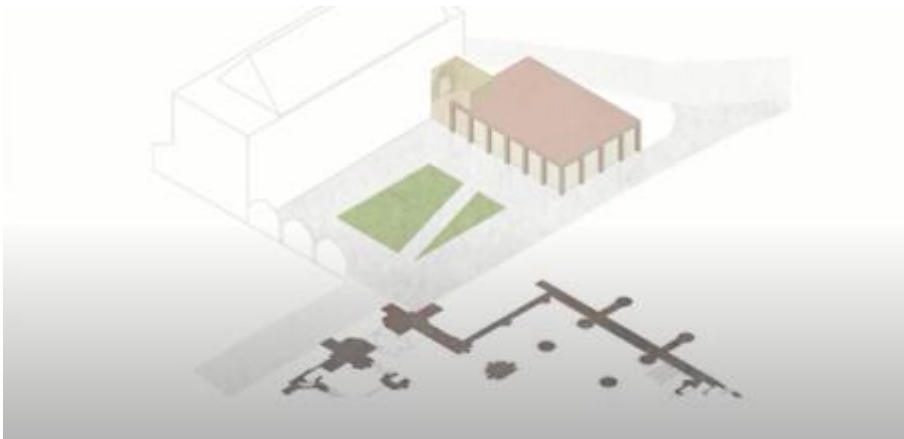
What they needed was new toilets, and proper threshold, and making the building accessible to everyone.

We said you've made a kind of traffic island of this building, and the amount of tarmac everywhere is taking away from any sense of historic setting.



*Proposed site plan.*

Back in the 15th Century there was a cloister at the heart of it, between the cathedral and the priory. So it was a reflective space, not just a route between the car park and the shopping area. So that was quite a clear diagram to work with.



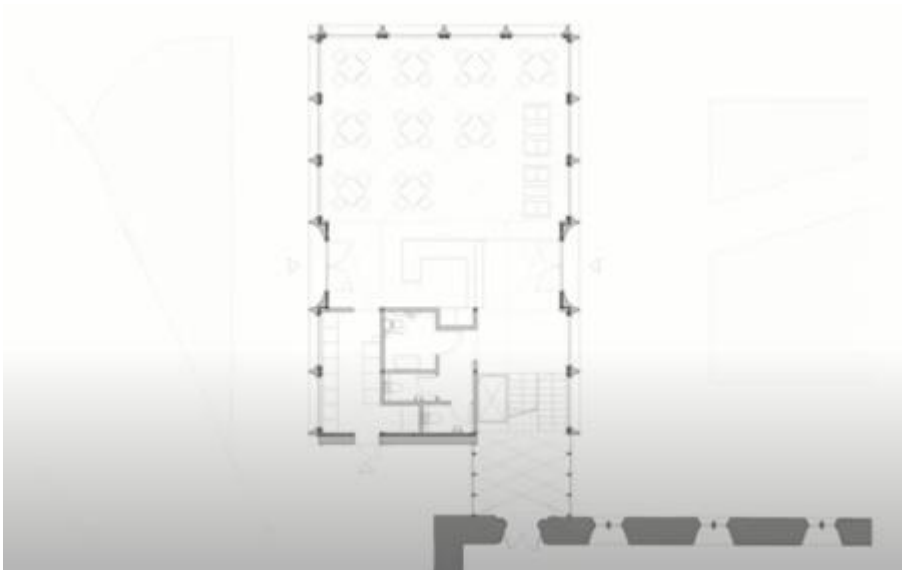
Our early concept was that we need a link building to deal with the access, and we are going to re-form something that references the cloister.

At this stage we came in for quite a lot of flack. We did visuals which were, I think, rather too architectural. There was a guy who was the ex head of planning, who wrote to the local paper, saying this project will never happen over my dead body. We got him in to talk to him, and it turned out there was a particular bench there. He said I don't have a problem with the building, but I love that bench, and that is my favourite view, and I don't want it changed. So that was interesting!



One of the things we knew we had to do was to soften it. So we went from having a very simple modernist pavilion to a hybrid with the Gothic dropped arches. The new dropped arches were drawn from the geometry of the existing dropped arch at the west end of the building.

We did quite a lot of analysis of the site, to understand what made it very particular to Carlisle.



The plan above shows the footprint of the new building. It is a glazed link building, It will have a café and some interpretation, then you go up a half level or down a half level into the Priory building.

The qualities that we wanted to bring out were the refinement of the Perpendicular Gothic; the very fine tracery, with very slender leading edges. And a latticed roof, referencing various structures around the precinct. And that's all in bronze.



The construction of this building has been so interesting. The movement is really critical. There is an underground river, which we didn't know about, which runs under the site. It's not huge, it is a culvert really, but there is a lot of water running through it. Also in the basement some of the arches were going into reverse, and the whole end of the building was at risk of collapsing.



When Street had put the porch on, he had taken the doorway and reversed it and dropped it down. Everything was back to front. So we said let's flip it round and return it to where it should be. Let's get level access. To do that we had to create new openings in the old walls.

We had loads of monitors, monitoring the building every day for millimetre movements. There was one stage where it looked as if the building was collapsing, because it had moved by several millimetres over a period of three weeks. But what we found was that the whole building is moving slightly all the time. The arches open up slightly, then close again. The movement is produced by changes by temperature, and in the amount of groundwater. It is all very complicated, and we have had four different groups of engineers working together on it. Our challenge is to hold the whole team together, and to keep moving forward.

It's wonderful working on an old building like this, because you feel you are just part of a long story. No doubt the building will be adapted again in the future. It's really incredible, it just doesn't feel like any other project we have worked on. Brilliant local masons working on the arches.

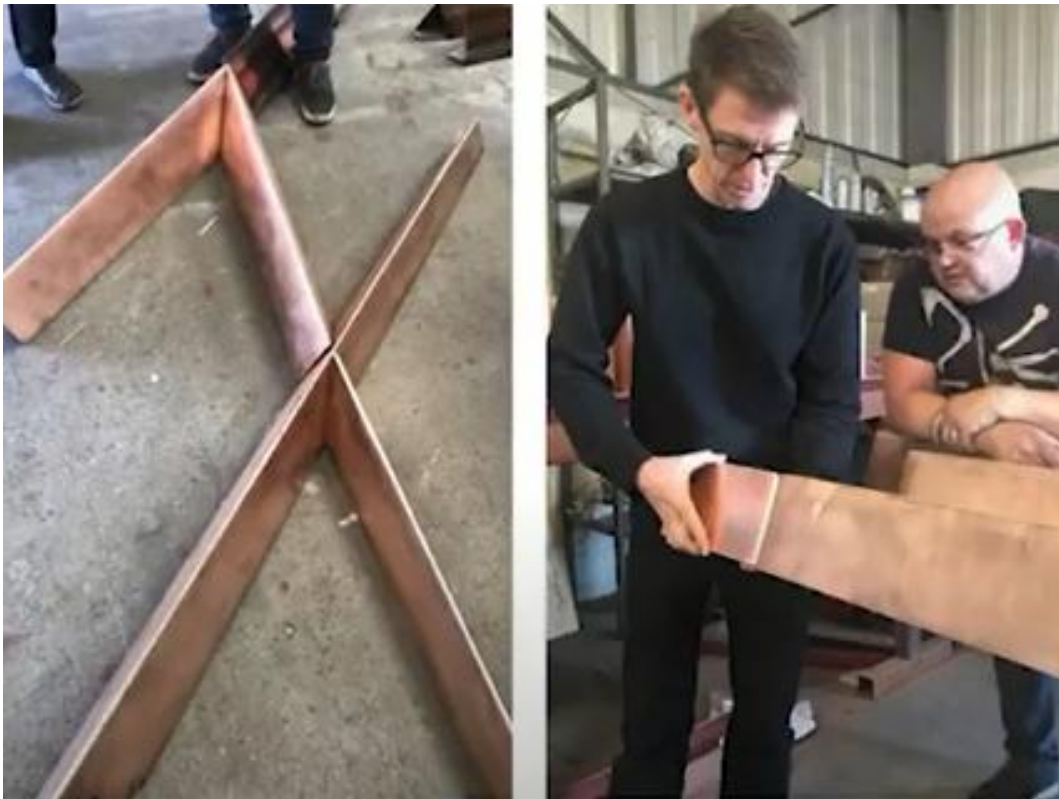


*The old doorway dismantled in order to be reversed back into its original position.*

We have opened up and re-furbished the main hall, with new lighting, and new heating. Paring it all back into a celebratory hall.



The new stone work is truly exquisite. It is all cut by computer controlled machinery. There is a double curvature, taking up the arch and leading into a fine edge.



This (above) is the bronze structure. It is causing major headaches, because £50k was saved by going to a non bronze specialist, and that has already caused two months delay. It's a bit challenge. I think it will still be beautiful, but it will be a different thing; it will be a bit more raw.

The images below show what it will look like when it is completed. It is really close to the railway station, if you are passing by. It is going to be quite significant, because there hasn't been a new building here for 500 years. Cathedral precincts do not have much change, certainly in the heart of them. So I absolutely love that project.



