



**FISHING MEMORIAL  
ABERDEEN**

“Ah, the steam trawler - the best ship for the job that was ever built!”

(Ewan McColl et al; Singing the Fishing)

## Historic Background

In the 19th century, fishing on the Moray Firth and the Scottish East coast was dominated by small and medium-sized wooden sailboats such as the Skaffies, Baldies, Fifies and later the Zulus, which offered a larger and safer vessel for the difficult environment of the North Sea. These boats were ideally suited for the small harbours of the region. Aberdeen, in contrast, established its dominant position as Scotland's major fishing port with the arrival of the steam trawlers and drifters in the 1880s. These riveted - and later welded - steel plate-built trawlers were powered by expansion steam boilers revolutionised fishing and changed economic dynamics, the routine of fishing and the appearance of Aberdeen significantly. Steam trawlers dominated the fishing fleets until the decline of the industry after the first world war and were subsequently replaced by diesel-powered vessels.

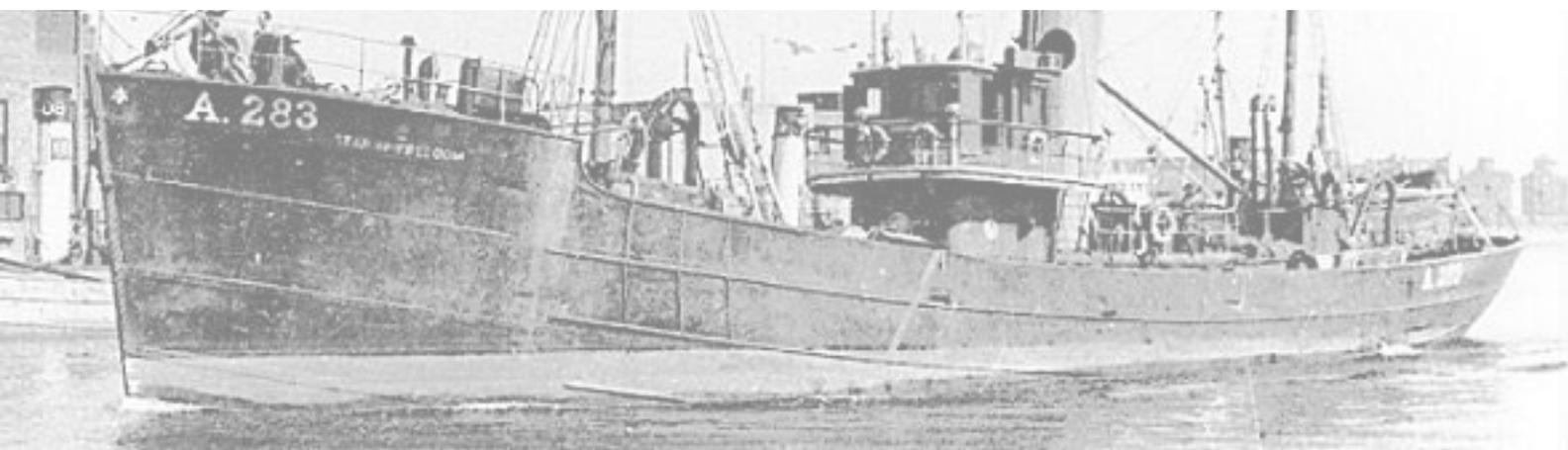
## Artistic Approach

While the remit of the commission is to represent a historic subject, the sculpture should provide a contemporary interpretation, also expressing understanding and technology of our own time. Therefore the work incorporates current fabrication methods, lighting and multimedia elements and is finished with a modern and unconventional blue-green patina.

The proposed design aims to:

- 1) create a strong and unique *contemporary* artwork to reflect the fishing heritage of Aberdeen
- 2) be accessible to both community and visitors regardless of age, social background and abilities
- 3) be sympathetic to the architectural heritage of the former Trinity Congregational Church building, the recent museum extension and the conservation area as a whole
- 4) be a landmark feature with strong artistic integrity and a distinct contemporary presence
- 5) be clearly visible from the road, pedestrian area and the interior of the café

Drawings, maquette and montages illustrate the design concept which will be refined through further research on location, with community stakeholders, historians and planners. Exact location and scale is a suggestion and can be finalised with the client. Location in a heritage area may require alterations to the design and structure to cohere with planning regulations and to ensure structural integrity of the sculpture.





## Sculpture Concept

A three-tier approach provides a distinctly contemporary and memorable solution for this public sculpture commission with a historic subject:

1. Two towering prows of steam trawlers evoke images of the busy fishing harbour a century ago while also referencing the modern working port visible from the building. The intersecting bow waves of the lower part suggests the interconnection of nature and technology and the historic interdependence of female and male labour in the fishing industry. The wave element adds surface texture in contrast to the smoother plating of the prows.
2. The outward facing surface of the split prows contain back-lit historic images of men and women working in the fishing industry: women mending nets and carrying quarter crans, trawler men and boats - the final imagery will be selected with local researchers. Please note that the perforation on the model are placeholders to show detail and hole sizes. The digitally-rendered half-tone images are punched into the sheet metal and back-lit with LED lighting via an internal diffuser panels. For real-life examples of this technique, please refer to previous work (*Conor's Corner*, Belfast and *Myles after Myles*, Strabane) on the *Public Projects* page at [www.holgerlonze.com](http://www.holgerlonze.com).
3. A multimedia aspect including a web page ([www.fishingmemorial.info](http://www.fishingmemorial.info) - limited sample page only) and a Facebook blog that contain further information and details of the work and fact about the Aberdeen fishing industry. The work will have a QR-code (see last page) and/or NFC tag accessible by smartphones. This approach will further enrich the experience of both the local community and visitors, and appeal to more technology-conscious beholders. A separate wall-mounted information panel gives basic 200 words information about the work.

## Architectural Context

Placed alongside each other the prows form an archway the references the arched windows of the former church building, which, being built in the late 1870s, would have been contemporary with the development of steam trawlers and drifters. The dimensions of the sculpture are designed to line-up with divisions and window areas in the building fabric. This will ensure minimal impact on the historic architecture and the natural light entering the building and also allows the perforated images to be viewed from the café seating area. The work visually responds to the contemporary design of the glass facade of the new extension through the inclusion of halftone imagery and the sea-like blue patina, linking old and new through its contemporary semi-abstract design and the use of classic sculpture materials.

## Specifications and Variants

3.6m high; footprint of c. 0.8m x 0.8m. Total static ground load per element: 2,500N (approx. 220kg). Dimensions allow pedestrian and maintenance access to the window zone (min. 800mm). Given the location in a conservation area and potential planning issues, this size is the maximum dimensions possible within the given budget but may be reduced in scale if required. An alternative series of five smaller trawler prows is a variant that will reduce the visual impact on the building and the static ground load on the structure: 2m high x c. 0.5m x 0.4m; ground load 650N (c. 60kg) for each element. Appearance, detail and perforated imagery, etc. remain similar.





## Material Pallet

The structures are fabricated in 2mm thick CZ109 gilding metal (*architectural bronze*), an alloy of 90% copper and 10% zinc, a material with distinct maritime connotations. Given the site constraints and allowing best use of the budget, direct fabrication methods will be employed together with traditional urban sculpture processes: sheet metal work for the panels combined with innovative lighting and high-tech image processes. The bronze panels are CNC punched with relevant halftone images and text, using the innovative PicturePerf® process developed by Graepel Metal Perforators Ltd., Kinsale. All material has proven durability in urban/coastal environments. The prow structures will be finished with a blue-green patina, referencing the proximity of the sea and contrasting the grey-brown stone of the building fabric of the former church building. Alternatively a more traditional brown patina can be chosen. All materials reflect highest quality standards and best practice in public sculpture in accordance with PASA guidelines.

## Lighting

A single Collingwood® GL-007 RGB, Erco® Tesis or similar high-quality in-ground luminaire (c. 24W consumption, Safety Class III and IP68) will light the two prows. Internal 10.4W, IP67 LED strip with Bluetooth controller is used for the perforated imagery. The use of RGB varieties allow for a choice of different coloured lighting scenarios, e.g. for events or seasonal variation. Divisions in the prows can be accentuated through linear lighting (shown on the right hand prow in the model).

## Public Health and Safety

Steel presents no direct health hazards. The work can not be easily climbed and will not contain any trip or trap hazards. Any protrusions will have smooth edges (min. 6mm radius) and corners (min. 3mm radius). The base fixings are sufficiently dimensioned to withstand dynamic wind loads and limit the risk of theft. Risk Assessments, Method Statements and an Environmental Impact Study can be provided as required. Sub-contractors will be required to hold appropriate public and product liability insurance and will receive appropriate site inductions.

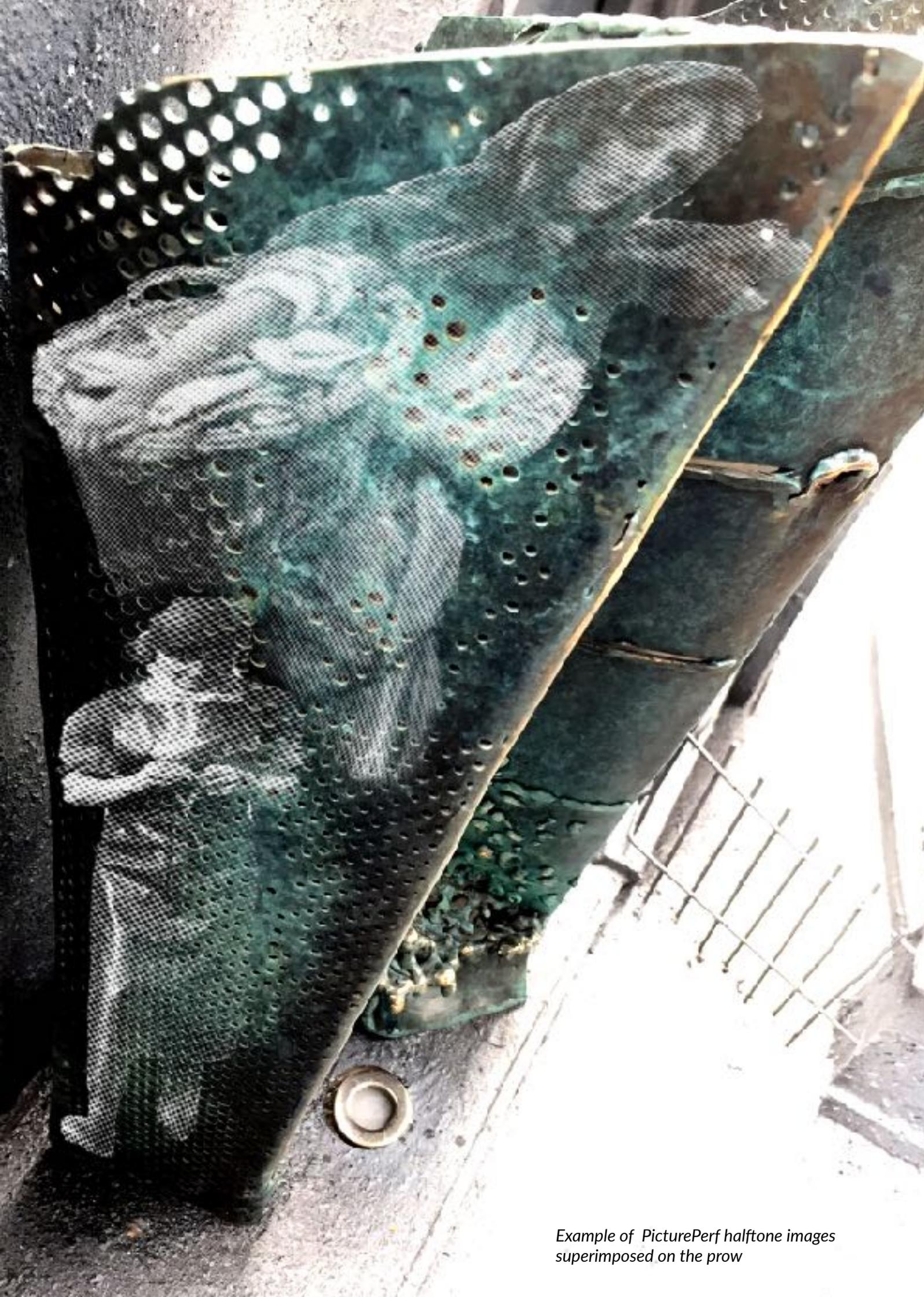
## Durability and Maintenance

Both gilding metal (bronze) and the internal stainless steel have time-proven durability in both urban and coastal environments and the work are reasonably vandal proof and resistant to impact and external force. A design life well in excess of hundred years can be expected. The sculpture itself will require no maintenance beyond occasional cleaning with water. Graffiti can be removed with appropriate cleaning products. All fixings and fittings are of A2 and 304L marine grade stainless steel. All LED lighting has a lifetime of 70,000-100,000hrs and can be easily replaced when required. Annual maintenance cost should be expected at max. £150 for cleaning with water and re-waxing every two years, a maintenance plan will be provided.

## Environmental Policy

Recycled or low-carbon fuels, materials and processes will be used throughout the process where appropriate, resulting in a comparatively low embodied energy value over the lifespan of the piece. Any timber will be from Irish and FSC approved sources. Material and energy input and waste output will be monitored throughout the project and an Environmental Impact Study (EIS) can be provided as part of End-of-Project report.





*Example of PicturePerf halftone images superimposed on the prow*

## Delivery Program

### 1. Research & Development (3 days)

In addition to literary and archive research, some R&D will be spent on location, offering sufficient opportunity to meet with client and community representatives, researchers and authorities. Site visits will clarify any additional requirements and considerations for fabricating the work. An additional day is spent to collect reference material for the imagery of the PicturePerf light panels with local researchers.

### 2. Liaison (3 days)

Two days will be spent on consultation with Road Service, Planning Department and other relevant agencies and authorities. After refining the design and circulating a project management plan, the exact imagery and construction drawings will be circulated to all parties involved via post, email and website. There is still room for minor changes and development at this stage. A structural engineer (Horganlynch Ltd., Cork) will advise on foundations and structural requirements during this stage. Acquisition of materials and contracts to fabricators and companies. Public website and project management plan.

### 3. Fabrication (60 days)

Fabrication of sheet metal panels at artist's studio: Patterns and fabrication of the internal stainless steel structure for the sheet metal work. The sheet metal will then be cut, annealed, worked and TIG-welded onto the internal structure. Adding of texture and surface structure. (50 days). Assembly of structures, patination and finishing (10 days). Studio visits are welcome at all stages.

### 4. Site Work (10 days)

Four weeks in advance of installation: groundwork and foundations. Removal of existing paving, excavation to a depth of 0.3, screening layer and foundation cast in premixed concrete. Provision of site security and safety (Harris Fencing and signage). A method statement and risk assessment for the installation can be provided during this period.

### 5. Installation (3 days)

Delivery to site with Hiab, lifting and bolting onto foundation. Re-instating of existing surface. Connecting lighting by certified electrician. Installation will take place over one day allowing sufficient time on site, touching-up, cleaning and finishing of surface and groundwork.

### 6. Completion (1 day)

Photographic documentation and an end-of-project report including an Environmental Impact Study, engineer's certificate and maintenance schedule can be provided if requested. The project website will be updated with images and information throughout the process and will remain live after completion of the project (to be transferred to the client's hosting provider).





## Technical Verification

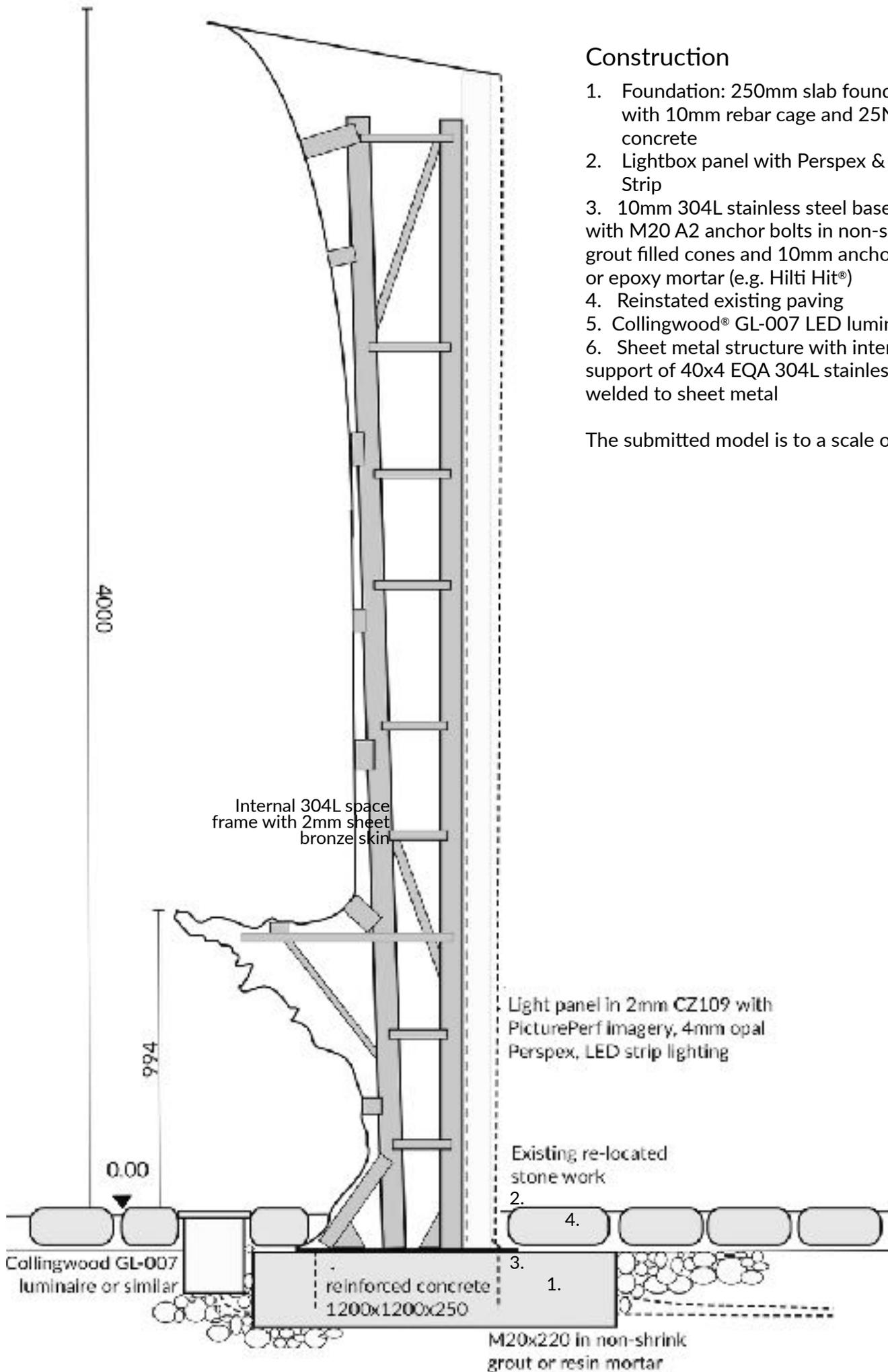
The majority of the work will be fabricated in my studio and workshop in Waterville. To ensure ongoing technical and artistic quality assessment at all production stages and a thorough visual inspection of all welds and fixing points will be undertaken at the end of the fabrication period and again after installation. Working closely to the construction drawings in regular consultation with the structural engineer (Donal Lynch of Horganlynch Ltd.) ensures structural integrity of the work. A thorough safety check of the work will be conducted before hand-over. All stainless steel fixings will be of marine grade 304L and A2 quality to ensure long-term durability. A maintenance schedule, equipment warranties, technical sheets and Environmental Impact Study can be supplied to the client after installation. I adhere to PASA guidelines for best practice in public art and will ensure highest quality standards in the fabrication of the work. I will personally inspect all delivered material and services and hold necessary certifications for the project: Public Liability and Product Insurance up to €6.5m (McCarthy Insurance Group, attached), City and Guilds Welding Techniques Certificate, valid current Tax Clearance Certificate (IE2555512R, Access Nr. 4769480).

## Preliminary Timescale

Research & design development	3 days	October 2017
Community consultation, liaison with authorities	3 days	October 2017
Submission of final design for approval, presentation		November 2017
Preparation: materials order	2 days	November 2017
Fabrication and finishing	60 d.	Dec.-April 2018
Site preparation and base	10 days	May 2018
Installation (to be negotiated)	3 days	end of May 2018
Documentation, EIS, end-of-project report	1 day	May 2018
Total available work period	82 days	







## Construction

1. Foundation: 250mm slab foundation with 10mm rebar cage and 25N concrete
2. Lightbox panel with Perspex & LED Strip
3. 10mm 304L stainless steel base plate with M20 A2 anchor bolts in non-shrink grout filled cones and 10mm anchor plates or epoxy mortar (e.g. Hilti Hit®)
4. Reinstated existing paving
5. Collingwood® GL-007 LED luminaire
6. Sheet metal structure with internal support of 40x4 EQA 304L stainless, welded to sheet metal

The submitted model is to a scale of 1:10



## Budget

### Sheet Metal Fabrication

11x sheets gilding metal CZ109 1000x2000x2	£5,900
1250x250x5 304L stainless steel sheet for internal structures	£300
18m 75x7, 30m 30x3 and 6m 40x4 EQA, 2m 100x15 bar304L stainless steel	£1,500
Pureshield Argon (Size X 2x bottles), 15kg 308 and SIF8 welding rods	£500
Consumables and additional equipment; outsourced services	£500
A2/304L fittings, craning hooks, epoxy mortar etc.	£100
Sheet metal fabrication costs incl. workshop costs, labour and assistance	£11,900
PicturePerf® imaging 8.0m <sup>2</sup> , digital rendering	£13,100

### Sitework and Installation

1m <sup>3</sup> 25N concrete, rebar cage, anchor plates	£300
Foundation labour costs x4 days	£1,200
Safety equipment, Harris fencing, signage	£200
Own installation costs, Hiab hire, assistance	£900
Re-surfacing, finishing	£400
Delivery from studio to site	£2,300

### Lighting

1x Collingwood® GL-007 or similar LED in-ground luminaire	£800
Ducting, digital controller and timer	£400
Internal RGB LED IP67 9.6W strip lighting, driver	£1,200
3x 1560x3120 3mm Perspex® Opal diffuser sheets	£400
Installation by certified electrician	£300

### Miscellaneous

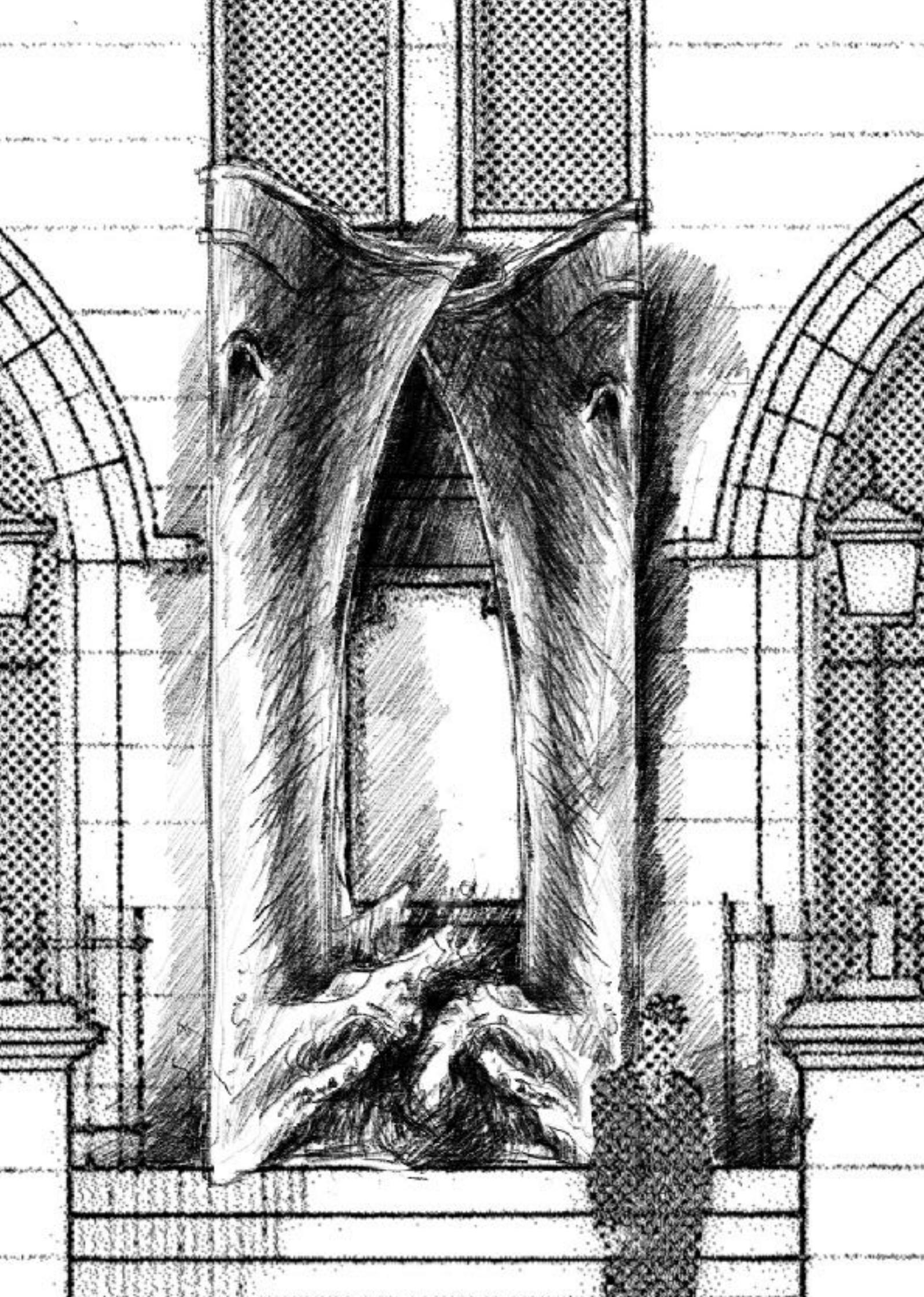
Artist's design fees (1/3 as to VAI recommendations)	£15,000
Administration, documentation	£300
Liaison, site visit, location research	£400
Transport, travel and delivery costs	£900
Fee for structural engineer (Horganlynch Ltd., Cork)	£500
Website design, 2 year hosting and domain; QR code	£250
Proportional part of public liability insurance costs	£200
Printed display panel on sheet bronze or similar	£250
Contingency	£2,500

Sub Total	<u>£62,500</u>
VAT @ 0% (EU Intra Community Export)	£0
Total	<u>£62,500</u>





Appendix:  
Development Sketches



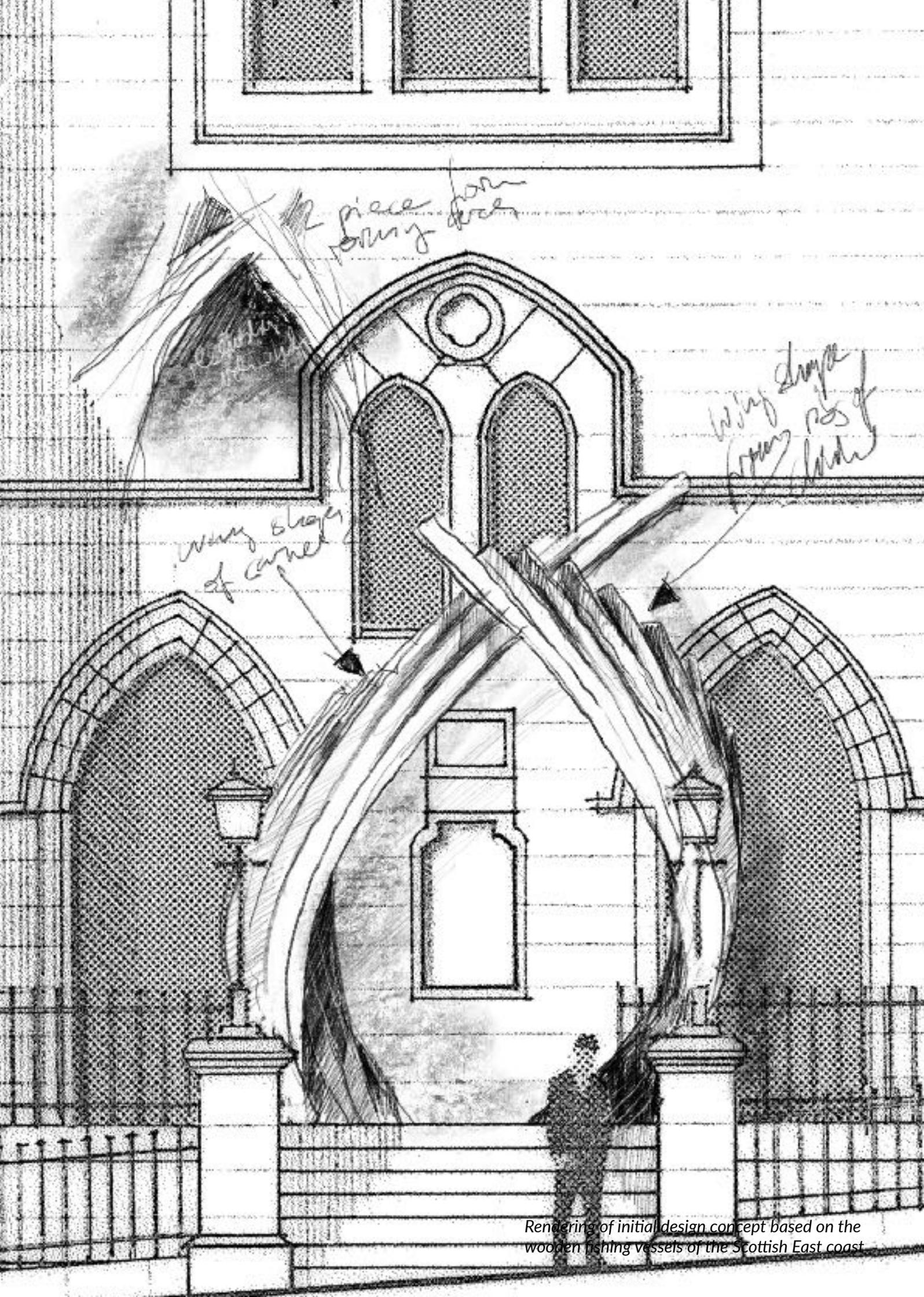


front section  
of steel  
trawler

section of  
Quarter  
Crane

possibility  
of Fibre Resin?

Design with trawler prow and matching crane shape in stainless steel



Rendering of initial design concept based on the wooden fishing vessels of the Scottish East coast



Sketch of initial design concept based on the wooden fishing vessels of the Scottish East coast



Holger C. Lönze - Dealbhoir  
Aonad 1, Forbairt na Dromoda,  
Cillín Liath, Máistir Gaoithe,  
An Coirean, Chiarraí

[www.holgerlonze.com](http://www.holgerlonze.com)  
[lonzholger@gmail.com](mailto:lonzholger@gmail.com)  
Mob.: +353834251864

© Holger C. Lönze, 2017

The submitted proposal documents and maquette remain the property of the artist. The Intellectual Property Rights and Statuary Copyright remain with the artist.



[www.fishingmemorial.info](http://www.fishingmemorial.info)