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Artist's Statement

Product Design 23'

Studying at the Academy, I have learned that 'design' is a domain which offers the potential to unite both my interests, and my passions.

Graduation work - WdKA

I aim to create (more literally, to make) objects of beauty and meaning through an autonomous, circular process that is, if not autobiographical, then at least personally expressive and exploratory.

My practice unites my love of image-making, improvisational music-making, and ceramic production, while exploring and embodying aspects of research into creative processes and the physical and psychological states associated with these processes.

Wilem Cousins

My improvisatory music-making has taught me the importance of being alive to the potential of the accidental and the serendipitous, and this has been reinforced by my work with ceramics, with dynamics of control/no control, and associated aesthetic traditions of imperfection.

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Project Introduction

For my graduation work, I have developed a project, and related processes, to unite image-making, improvisational music-making, and ceramic production.

Using music I have composed and recorded, or images I have created (chiefly, analogue photographs), I sought a way to express these as topographical 'landscapes'.

Using digital fabrication techniques, particularly 3D Modelling and Computer Numerical Control ('CNC') milling, I create plaster molds derived from these 'landscapes', allowing me to transfer these detailed textures into the clay body. These slab bodies are then variously manipulated to create objects which are both accurate expressions of the original source material, and of the improvised act of assembly into vessels and other forms.

The body of work which has resulted, I have called GROOVE. GROOVE derives its name from musical improvisation (to be 'in the groove'), the literal meaning of 'marks' or 'scorings' in a surface, and in the sense of 'routine' or working pattern. GROOVE is a suite of related ceramic works which derives from a specific source: one from an analogue photography, and the others from my own musical improvisation at the piano.

Each of these families of objects has a name, and like a musical suite, the objects are separate 'movements' which are thematically and tonally linked.

The project has a focus on the ambiguity of intuition, and the nature of the intrinsic reward of creation. In particular, I am fascinated by the creative act. Where does the desire to create come from? How do I account for a sense that something 'works' for me, or satisfies me? How do I optimise for these?

Introduction

This book is for the general public, for designers, for ceramicists, and for collectors of my work. It sets out to explain the process by which I created my graduation work, GROOVE.

GROOVE consists of ceramic objects derived from and embodying 'landscapes'. These objects raise questions of completeness and practical application. Each of the 4 'landscapes' has a specific source.

For ease of comprehension, in this book I focus on the development and deployment of one 'landscape', called PHOENIX.

Documentation, including images, of the other 'landscapes' in the collection, and the resulting suite (or family of objects) are set out in my graduation catalogue. These landscapes are variously: PHOENIX, SEABED, ACID COIN, and ENT.

"Though artists generally aren't aware of it, that end work is a by-product of a greater desire. We aren't creating to produce or sell material products. The act of creation is an attempt to enter a mysterious realm. A longing to transcend. What we create allows us to share glimpses of an inner landscape, one that is beyond our understanding. Art is our portal to the unseen world"

- Rick Ruben

fig 1.

Close-up of
SEABED vessel

Imagery | Music & Analogue Photography

The process begins with image generation, with the source or image subject being undetermined or 'open'. That is to say, the process is applicable to a wide range of image sources.

In the case of GROOVE, these images are derived from one of two sources: self-composed and -performed music, and analogue photography of textures (for example, tree bark in ENT). In the case of PHOENIX, the image is generated from a fragment of my music (see QR Code), using an audio EQ visualiser.

The image is then translated into a 3D file in Fusion360, using a plugin called Image2Surface. The plugin uses alpha maps (black and white images) to define depth, and generates a file that can be exported as a file (obj/stl).



Scan QR code for "Phoenix" sound clip and video exploration. Video exploration to be explained later on in the book.

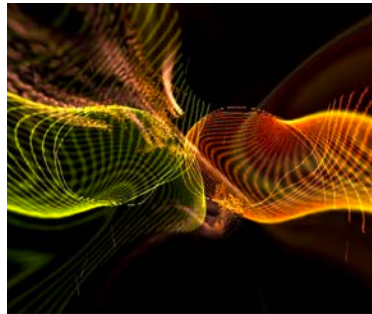


fig 2.
Result of audio visualizer processing a piece of music. This is a flat image.

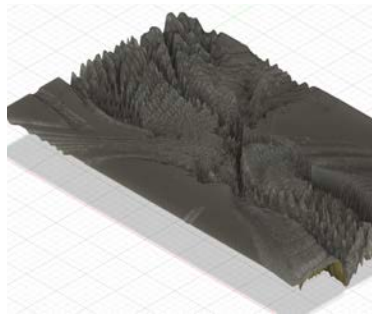


fig 3.
Result of flat image run through Fusion360 to create a 3D file suitable for CNC Milling.

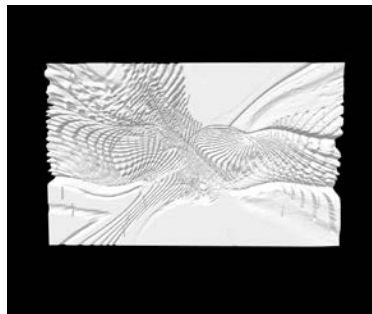


fig 4.
High resolution image of the 3D file (stl. format)

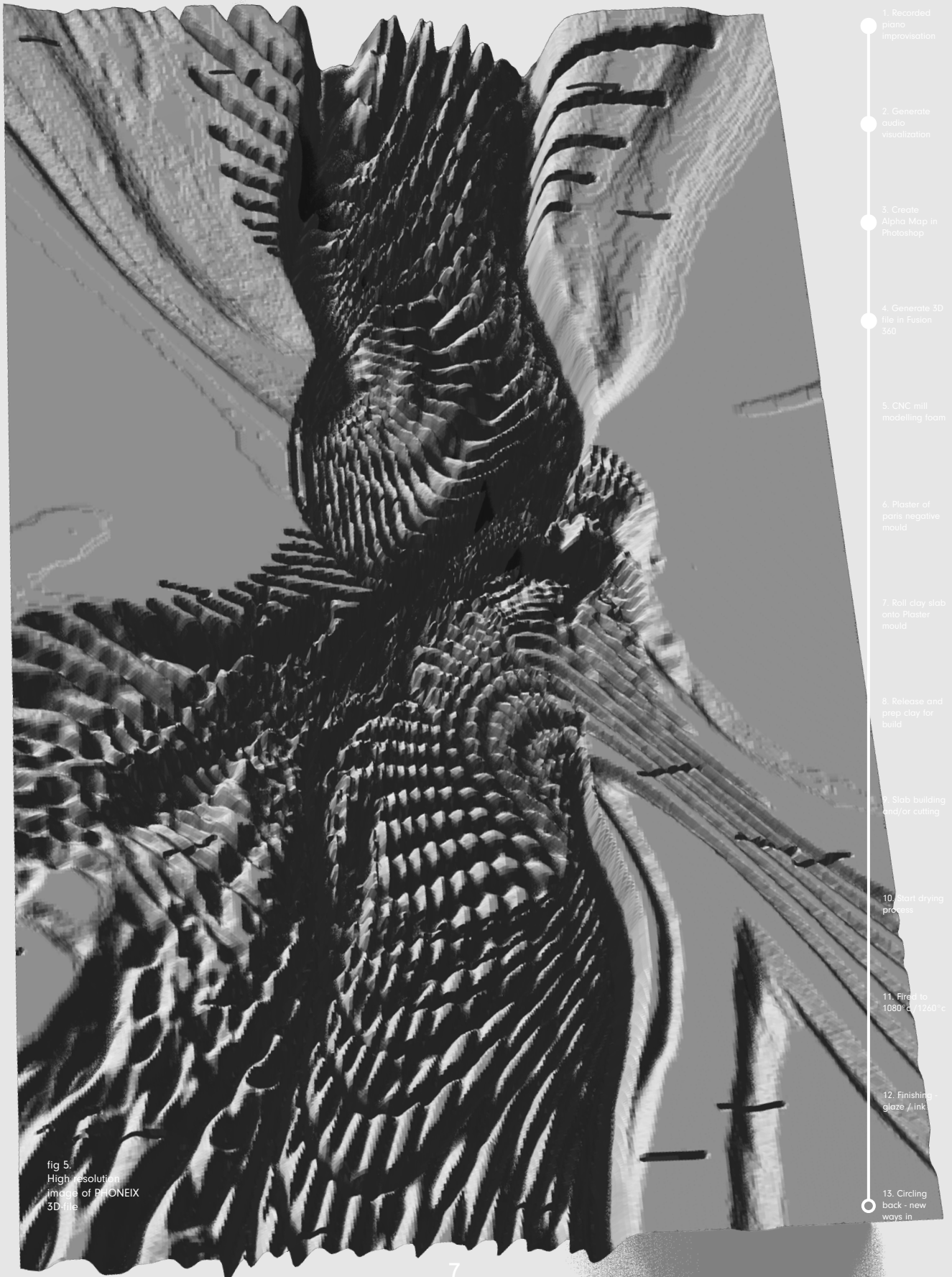


fig 5.
High resolution
image of PRONEIX
3D file

1. Recorded piano improvisation
2. Generate audio visualization
3. Create Alpha Map in Photoshop
4. Generate 3D file in Fusion 360
5. CNC mill modelling foam
6. Plaster of paris negative mould
7. Roll clay slab onto Plaster mould
8. Release and prep clay for build
9. Slab building and/or cutting
10. Start drying process
11. Fired to 1080°C / 1260°C
12. Finishing glaze / ink
13. Circling back - new ways in

Bring into Reality | CNC and Mold-Making

Product Design 23'

Graduation work - WdKA

Wilem Cousins

After the selection of the source image, the digital is transformed into the analogue.

In order to do this precisely and time-effectively, I use a CNC Milling machine – essentially a very large drill that follows co-ordinates, quickly and accurately. I use modelling foam, more brittle than common foam, for this stage, which generates the first mold.

Again, this choice is about efficiency – the softer the material being milled, the quicker the drill can work. A downside of this choice is that the material is not very durable.

This stage of the process is exciting: there is an element of surprise, and revelation. This is the first time the true detail and dimension of the texture is revealed, and there is a sense of wonder that an audio file can generate something so aesthetically interesting. This is also a moment of inspiration as the resulting texture is suggestive in itself.

Once the first (foam) mold is done, it's time for the second, negative mold to be made out of plaster of Paris. As a material, plaster of Paris is highly absorbent and is highly effective as a ceramic mold, because of its releasing qualities, its durability over time and use, and because it is ready for slab creation as soon as the day after casting.



fig 6.
The negative plaster of Paris mold just released from the positive modelling foam mold (right)



fig 7.
Plaster of Paris negative mold left to dry. I discovered later that actually they are more effective for my purposes when still a bit wet.



fig 8.
First textured clay slab that came out of the Phoenix mold.

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7. Roll clay slab onto Plaster mould

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10. Start drying process

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12. Finishing - glaze / ink

13. Circling back - new ways in

fig 9.

Closeup of PHOENIX plaster of Paris mold

The Floor is Lava | Slab-building

I press the clay slab into the plaster mold of the 'landscape' derived from the music source, generating a heavy, wet slab of clay, with which to play (or improvise).

As a ceramicist, I love how clay texture and pattern changes the shape and perception of both the vessel and the surface texture itself, and it seemed logical to start here, not least because of the primacy of vessel making in ceramic history.

I then went on to explore the potential of the landscape slab by developing it into a suite of other objects, including wall pieces.

This part of the process inspired me deeply: an improvisatory process in itself, it involves a playful tension between the landscape, the object in the making, and the technical requirements of ceramic production: following the inherent suggestiveness of the landscape texture (what vessel does the landscape 'want to be'), the preservation of the landscape surface texture at all stages, and protecting the requirement for sturdiness.



fig 10.
PHOENIX vessel,
leather-hard clay
(1/3)



fig 11.
PHOENIX vessel,
leather-hard clay
(2/3)



fig 12.
PHOENIX vessel,
leather-hard clay
(3/3)

1. Recorded piano improvisation

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5. CNC mill modelling foam

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7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

fig 13.

Closeup of PHOENIX vessel, bisque fired

'Groove'

Product Design 23'

Graduation work

Wilem Cousins

One of my favourite discoveries in this process came from forming this vessel derived from the PHOENIX landscape.

Because of the extreme topographical variances in the landscape mold, some parts of the clay slab are much thicker than others.

This means that when the slab is manipulated into a cylindrical form, the thinner parts of the surface have a tendency to rip or tear, since they have limited elasticity. This leaves behind a serendipitous, beautiful, contrasting and natural raw clay texture that compliments the clean lines of the PHOENIX mold. It also satisfies my own need for immediacy and control/no control in the creative process.

The result is an excavated, somewhat organic effect which – in the case of PHOENIX – suggests fossil forms. In this way the image source, which is inherently inorganic, is transformed into an organic, apparently 'natural' vessel.

fig 14.

PHOENIX vessel,
bisque fired.

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1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

'Groove'

Product Design 23'

Graduation work

Wilem Cousins



fig 15.

PHOENIX vessel,
bisque-fired.

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fig 16.

PHOENIX vessel,
bisque-fired.

1. Recorded
piano
improvisation

2. Generate
audio
visualization

3. Create
Alpha Map in
Photoshop

4. Generate 3D
file in Fusion
360

5. CNC mill
modelling foam

6. Plaster of
paris negative
mould

7. Roll clay slab
onto Plaster
mould

8. Release and
prep clay for
build

9. Slab building
and/or cutting

10. Start drying
process

11. Fired to
1080°C / 1260°C

12. Finishing -
glaze / ink

13. Circling
back - new
ways in

Finishing Techniques | Accentuating Texture Pt.1

Traditionally in ceramics, glazing is used as a finishing technique. This has advantages: it makes work stronger and more durable, and offers exciting decorative possibilities. However, glazing forms a glassy layer between the clay body and the viewer, introducing a new surface element, which means that very detailed textures – which I would rather retain – are somewhat lost.

In fact, I sought to highlight texture and detail. In the case of the works in GROOVE, I decided to explore other, perhaps more contemporary techniques, and after experimentation settled on acrylic or shellac-based calligraphy and drawing inks. This has the added advantage of a spectrum of colours with which I can experiment in a controlled manner. It reduces the time and energy costs of the production process, which has commercial implications. But most importantly, it has its own relationship with the clay. It reacts with the ceramic surface, generating a sense of colour depth and intricacy, and it limits the layer between surface and viewer and therefore reveals every surface detail.

There is a further improvisational aspect to using ink because I can layer, detail and 'play around' with the results until I'm satisfied with the outcome.



fig 17.

Detail of bisque-fired sherd, broken during firing, used as an ink test sample.

Note how the grog in the baked clay doesn't absorb as much ink, giving these white specks.



fig 18.

Here I applied the inks while the sample was partially in water. The lower level soaked up lighter pigmentation while the higher level was exposed to the more potent pigmentation.



fig 19.

Test sample experimenting with saturation. Applying a drop of ink, then a drop of water, ink bleeds, leave to dry, repeat.



1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

fig 20.

Ink test sample

'Groove'

Product Design 23'

Graduation work

Wilem Cousins



fig 21.

Ink test sample

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1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

Finishing Techniques | Accentuating Texture Pt.2

Product Design 23'

Graduation work - WdKA

Wilem Cousins

As I further developed this ink-on-ceramic technique, I experimented with methods of application. For example, thicker layers and specific mixing recipes create gleaming, sometimes iridescent results, give a crystalline or quartz-like, almost metallic, quality.

When it does work, it works really well. The iridescent effect (yet to figure out how exactly that works) holds the same complexity and depth as some ceramic glazes, whilst still retaining the texture. The gleaming metallic examples seem to colour-shift as the light changes, also whilst retaining the details of the surface texture.

However one of the big obstacles I am running into with this aspect of experimentation is over-saturating the ceramic to the point that it looks 'cheap'. Like a metallic spray paint or a nugget of Fools Gold. Once the ceramic has reached this point it is quite hard to navigate away from it. The more layers you apply, the cheaper it feels, the darker it looks, until eventually you are left with something that resembles a rock dipped in plastic.



fig 21.



fig 22.



fig 23.

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1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

fig 24.

Ink test sample

'Groove'

Product Design 23'

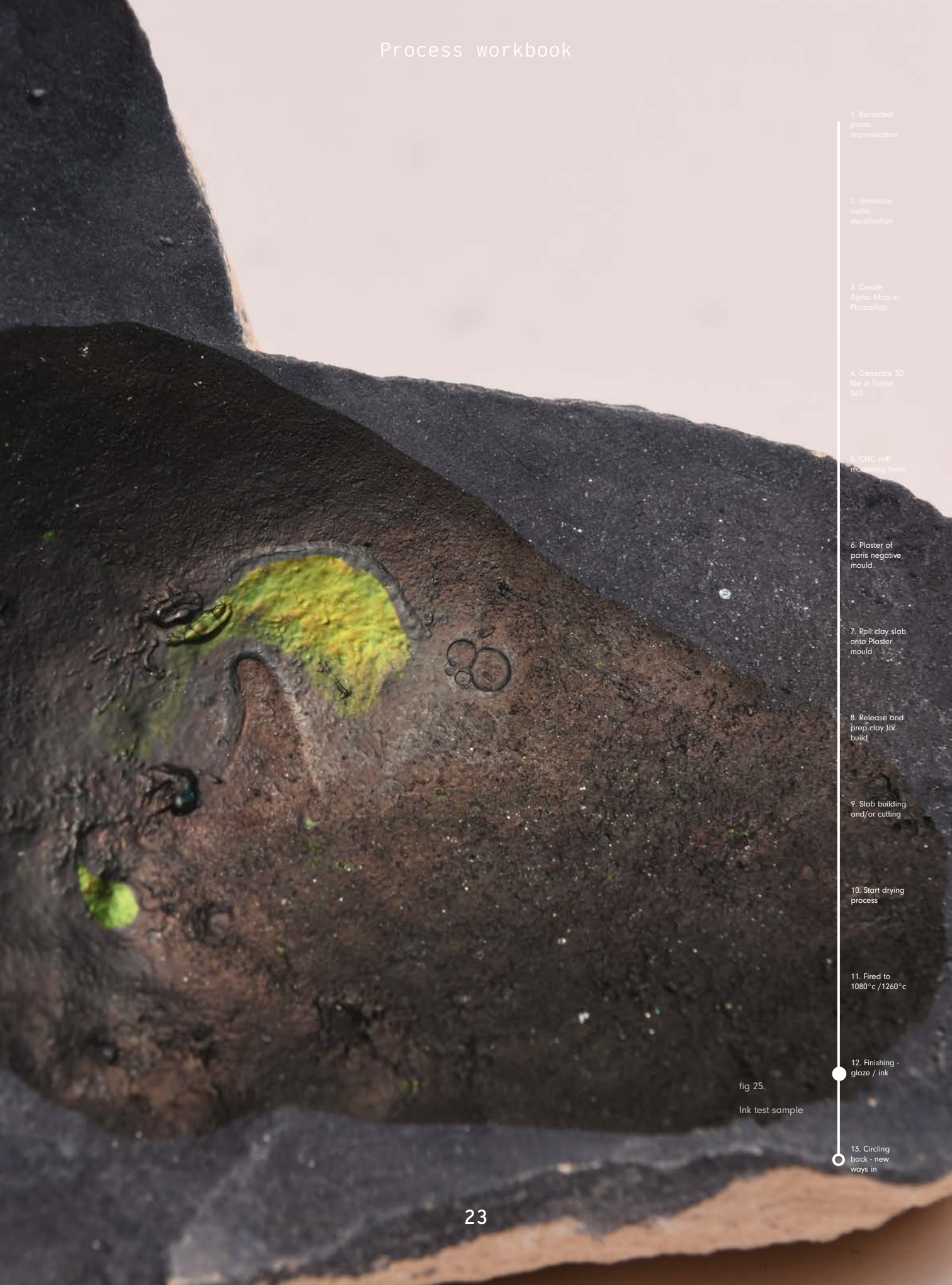
Graduation work

Wilem Cousins

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1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould.

7. Roll clay slab onto Plaster mould

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10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

fig 25.

Ink test sample

Finishing Techniques | Chapter on Colour

Ceramic glazes widen the possibilities of surface decoration, including the introduction of colour. In the context of my ceramics practice, I am less interested in decoration (and therefore colour) than in the surface of the clay body.

My colour choices in PHOENIX have more to do with highlighting and accentuating the surface of the clay body than introducing colour as decoration. The choices are to a large part functional, and guided more by what I instinctively perceive of the texture than by a desire to decorate. At the same time, there is a tension between the apparently organic surface of the landscape, and my colour choices, which are relatively extreme, an ambiguity which I enjoy.

It is possible that the image source (especially perhaps music, as in PHOENIX) plays a subliminal role in the final decision.



fig 26.



fig 27.



fig 28.



fig 29.

Ink test sample

1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

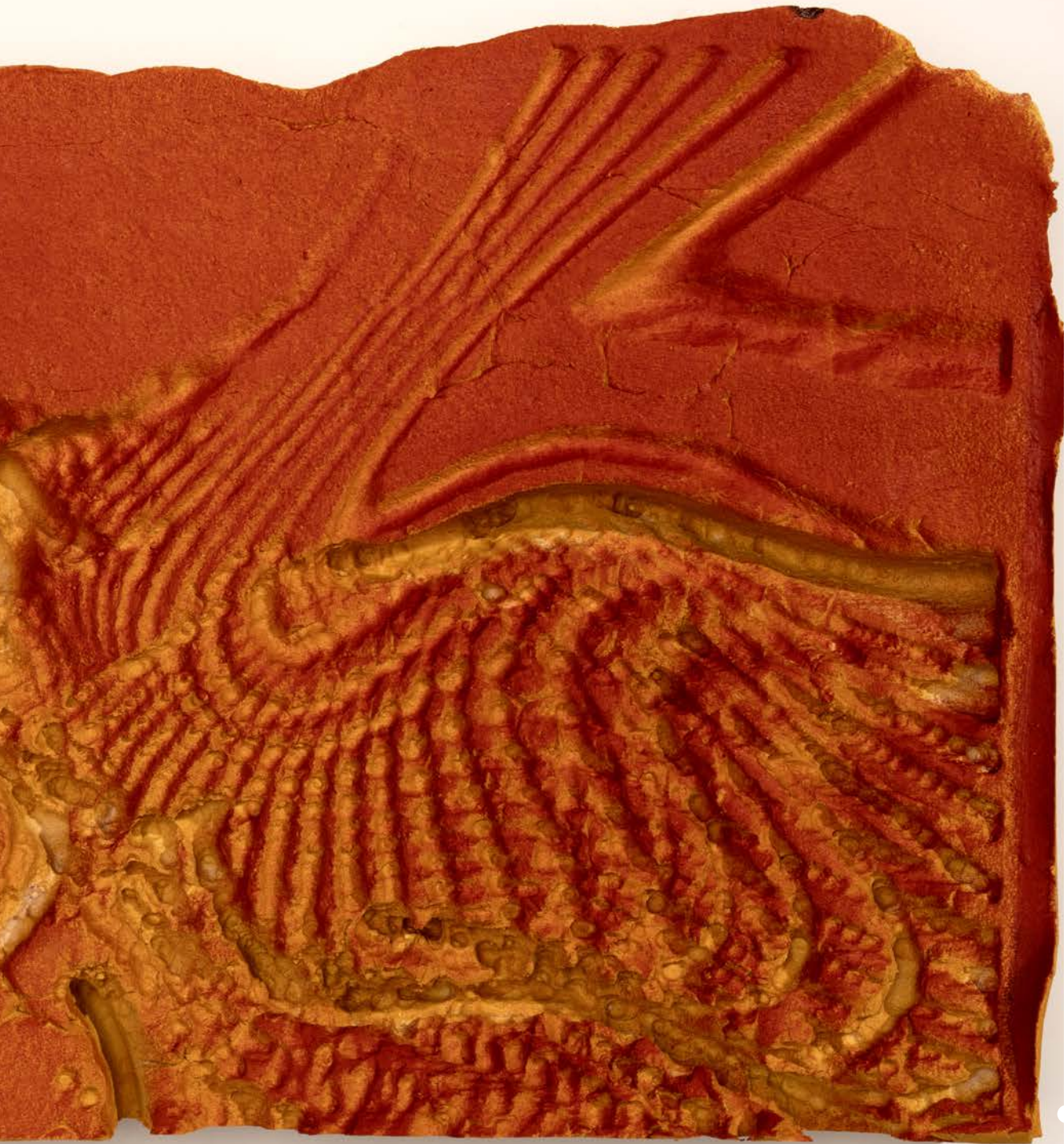
13. Circling back - new ways in



fig. 30

PHOENIX, one of the final pieces





1. Recycled
paper
improvement

2. Generate
vector
illustration

3. Create
Alpha Map in
Photoshop

4. Generate 3D
file in Fusion
360

5. CNC mill
modelling foam

6. Plaster of
Paris negative
mould

7. Roll clay slab
onto Plaster
mould

8. Release and
prep clay for
build

9. Slab building
and/or cutting

10. Start drying
process

11. Fired to
1080°c / 1260°c

12. Finishing
glaze / ink

13. Circling
back - new
ways in

'Groove'

Product Design 23'

Graduation work

Wilem Cousins

fig 30.
PHOENIX suite

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1. Recorded piano improvisation

2. Generate audio visualization

3. Create Alpha Map in Photoshop

4. Generate 3D file in Fusion 360

5. CNC mill modelling foam

6. Plaster of paris negative mould

7. Roll clay slab onto Plaster mould

8. Release and prep clay for build

9. Slab building and/or cutting

10. Start drying process

11. Fired to 1080°C / 1260°C

12. Finishing - glaze / ink

13. Circling back - new ways in

Circle Back | Artifact Analysis and New Ways In

Product Design 23'

Graduation work - WdKA

Wilem Cousins

As a ceramicist, I love how the transferring textures onto vessels changes the perception of both vessel and texture.

Despite the logic of the previous step, I also explore other ways of perceiving the object, and exploring its potential.

I think of this as 'circling back', a process which allows me to use the object itself as a further image source.

As an example, using moving images of the PHOENIX vessel, I used software to pair the object with sound, in this example, with the original music. This is the first time the object is 'scored' against the original music.

I find this process immensely satisfying: its circularity suggests that creative opportunities and processes are inherently fractal-like, and raises opportunities and potential for exploration at all stages. I think of it as a non-verbal Artefact Analysis. In praxis, it is pure 'fun', and it entertains my fascination for playing with software and digital fabrication in an artisanal context.

Not only do I see my work in a new way, it is also the opportunity to create new source images, and allows the process to begin again.

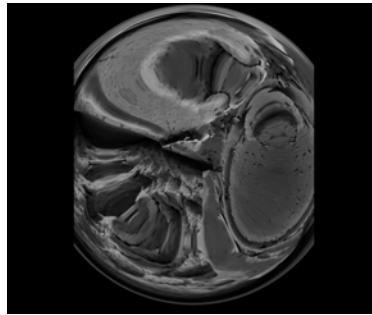


fig 30.

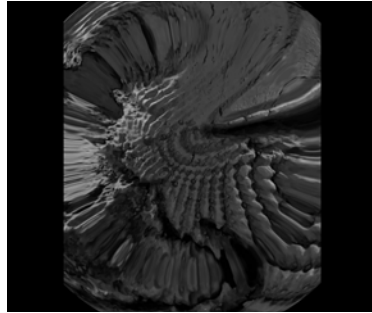


fig 31.



fig 32.

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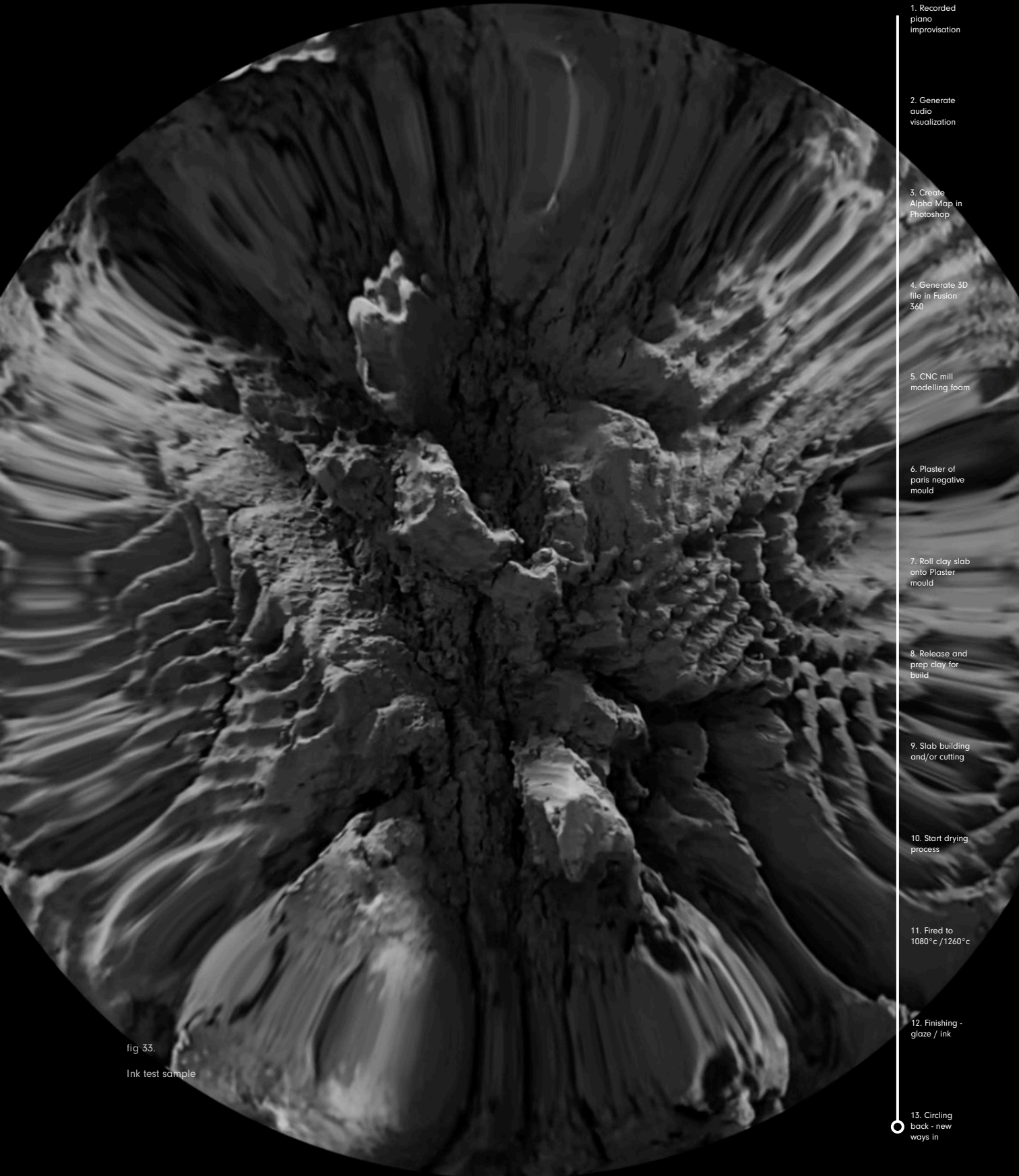


fig 33.
Ink test sample

1. Recorded piano improvisation
2. Generate audio visualization
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5. CNC mill modelling foam
6. Plaster of paris negative mould
7. Roll clay slab onto Plaster mould
8. Release and prep clay for build
9. Slab building and/or cutting
10. Start drying process
11. Fired to 1080°C / 1260°C
12. Finishing - glaze / ink
13. Circling back - new ways in

Special Thanks

Product Design 23'

There are quite a few people to whom I owe thanks for helping me realise this project but none more than Irene Vonck, Janey Joyce, and Gary Carter.

Graduation work - WdKA

Irene, I thank you for the time you have taken to discuss ideas, the inspiration you and your work have given me over the past four years, your incredibly touching enthusiasm regarding my work, and of course the golden tip of exploring contemporary finishing techniques.

Janey, I thank you for the conversations we had in the early stages of my project, suggesting my process was akin to Jazz and thereby shaping the transformative theory project that followed.

Wilem Cousins

Gary, words cannot describe how much you have contributed to my journey over the past four years. None of this would have happened had I not have been lucky enough to have you in my life. The unwavering support you have shown me has been, and always will be, a source of motivation and immense happiness.

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Wilem Cousins
Graduation process

'Groove'

Product design
Honours programme