



**University of  
Sunderland**

Watkinson, Cate, Rennie, Colin and Gasper, Giles (2016) Through a Glass Darkly project Reading of texts at Seminars/workshops/demonstrations leading to production of experimental artworks. UNSPECIFIED.

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# THROUGH A GLASS DARKLY



*A creative response to the Ordered Universe research Project on Robert Grosseteste's (d.1253) theories of colour, light, sound and the rainbow.*



Through a Glass Darkly is an artistic collaboration between the Ordered Universe Project, the National Glass Centre and the University of Sunderland. Taking inspiration from Grosseteste's treatise on colour, in which he evolves a notion of three-dimensional understanding of colour as light embodied in a diaphanous medium, Through a Glass Darkly brings together medievalists, scientists and artists to produce a series of responses to Grosseteste's scientific vision.

# WHAT IS COLOUR?

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## *The Concepts of Through a Glass Darkly*



We experience colour every second of our waking hours and some of our unconscious ones, but how often do we stop to think about what we are really experiencing?

We have an intimate and intuitive relationship with colour and light. We subconsciously understand their nuances that stir our emotions and reflect our subtle yet complex interactions with our environment and our relationship to it. Colour brings depth, form and character to what would otherwise be a cold, flatlands of an existence.

From the modern perspective an object doesn't simply embody or possess colour, it is the reflection of light which gives form to our world.

Colour is a question of perception. Our eyes can deceive us and we can choose to deceive ourselves, as such colour is a subjective experience. Optical illusions, colour perception and persistence of vision tell us that all is not as it seems. That being said, can we really trust our own version of reality or is it merely a projection?

The art of seeing is a subjective and personal experience. While some consider darkness to be the absence of light, others see darkness as the retreat of colour. So as the colour disappears from view does this mean it no longer exists or that we are simply no longer privy to its secrets? In the process of perceiving colour, are we choosing the reality we perceive, perhaps witnessing a reflection of ourselves?

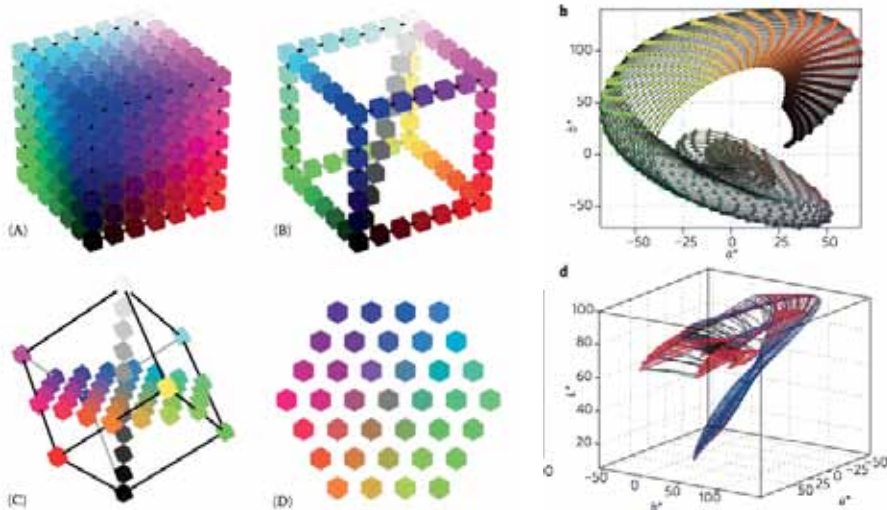
This then becomes a question of illumination and personal human experience. We all experience our world in a particular way, which is inextricably linked, with every other experience. As human questioning gives rise to experience, resulting in resolution we see blue transform into indigo which morphs into violet in a subtle yet perpetual cycle of change. The same way primary, secondary and tertiary colours and all the varying hues they possess, have an interplay, we ourselves convey the same complexity in the spectrum of human experience.

Colour and light may be considered as a metaphor for the perception and manifestation of the world we live in.

# COLLABORATIVE EXPLORATIONS ON LIGHT



Through a Glass Darkly has two strands of development within the team. Firstly there is great interest within the group to represent the three dimensional colour space of the rainbow which has been developed by Dr Hannah Smithson as a direct result of investigating the theories put forward by Grosseteste. A portion of the collaborative team are investigating ways in which this might be represented as a sculptural installation.



Another stand of the collaboration will be working from a more conceptual and abstract point of view on the core themes of the text with a view to sculpt with light as a medium, putting it centre stage, using glass and ceramics to achieve this goal.

Through a Glass Darkly focuses on three qualities of light as set out by Grosseteste.

Through a Glass Darkly will explore these bipolar qualities of light through experimentation of material and form, enabling the team to establish a three dimensional vocabulary by which these qualities can be represented and manipulated. The team will become *Artisans of Light*.

Shadows, reflection, refraction, additive light, interference of light and the geometry of light are all potential avenues of exploration for the collaborative team. In addition to the qualities of light, Grosseteste also draws our attention to the 'diaphanous medium' through which it passes. He mentions air, glass, clouds, water, vapour, oil and dew as examples, providing the team with a myriad of explorative opportunities.

There is a great deal of duality and a sense of movement within all of Grosseteste's treatises, and *De Colore* and *De Luce* are no exception. As such, this project is anticipated to culminate in a variety of dynamic works which we hope will demonstrate the subtle and complex nuances of colour and light that Grosseteste so eloquently and, at times, poetically puts forward.



# THE ACADEMIC TEAM

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## DR GILES GASPER

*Durham. History. Project Principal Investigator.*

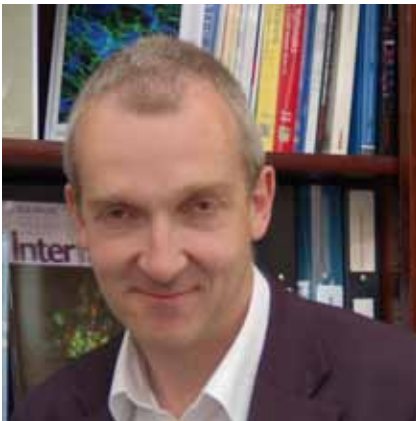
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## DR HANNAH SMITHSON

*Dr Hannah Smithson, Oxford. Vision Science. Project Co-Investigator.*

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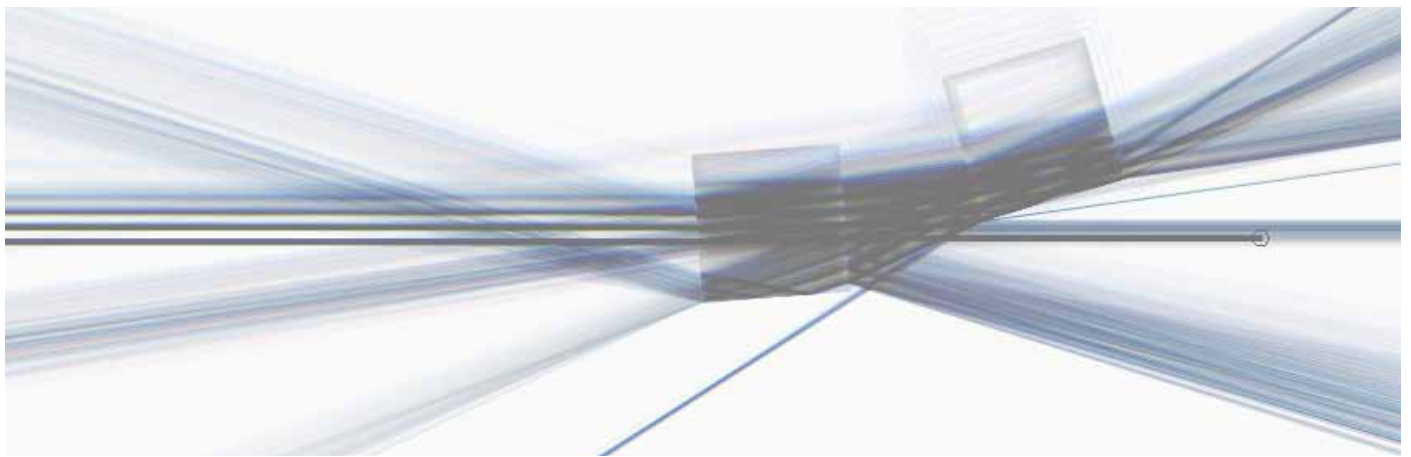


## PROFESSOR TOM MCLEISH

*FRS. Durham. Physics. Project Co-Investigator*

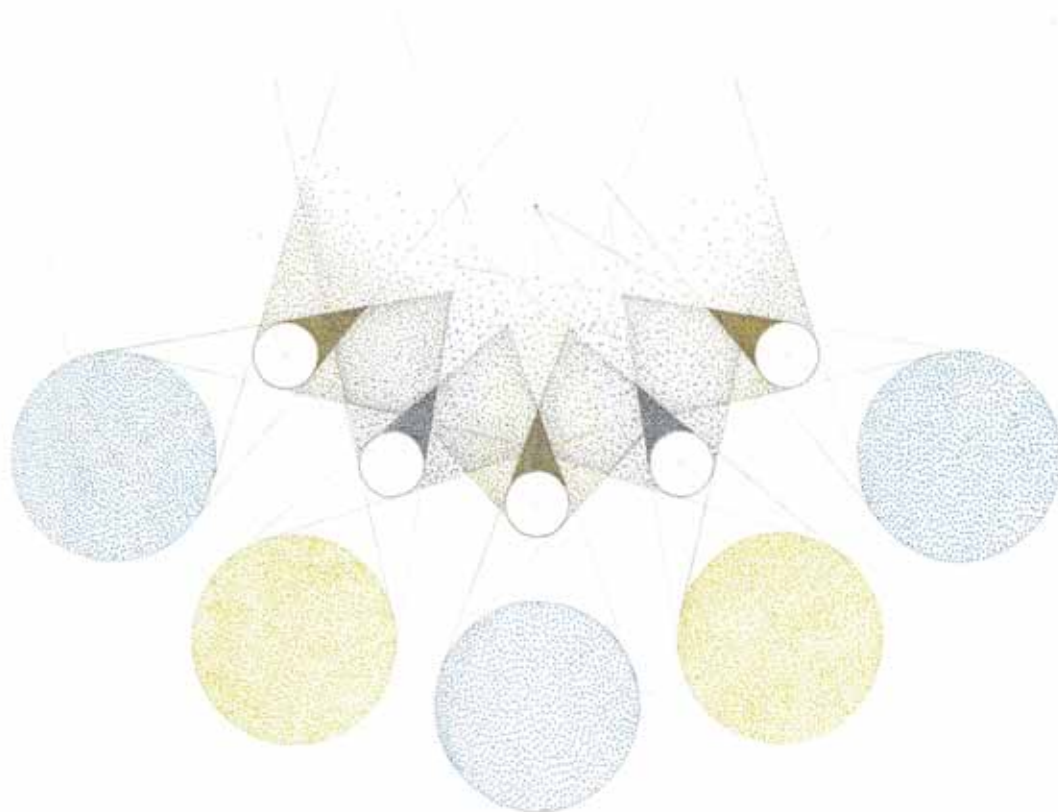
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# OUTCOMES



The academic team will work with the BA, MA and Phd students of the university of Sunderland and the core artists on the team featured in the following pages, to produce both individual and group responses to the texts. These artistic outputs of varying scale and form will be exhibited throughout the UK at various venues, museums and galleries.

It is anticipated that both scientific lectures and artist's talks will compliment the exhibitions where applicable. In addition, both scientific and artistic workshops will be developed in tandem with the creative responses to support the project and provide dynamic and engaging outreach programmes.



*Above: Study by Alexandra Carr.*



## CATE WATKINSON

*Architectural Glass Artist b.19*

Dr Cate Watkinson has over 25 years' experience as an architectural glass artist, designing and fabricating architectural glass for a wide variety of applications. She trained in the traditional skills of stained glass making including, glass cutting and leading. Over the years she has developed the skills and knowledge gained from working in the traditional methods to bring a fresh slant and new techniques and ideas to her contemporary work. She has been instrumental in developing the potential of glass in the public realm. Projects range from decorative glass panels for public and private buildings to street furniture and sculptural public art pieces. Cate has gained significant knowledge and experience working with glass on a large scale in the public realm, not only in aesthetic terms but also in design of structure and durability of materials used.



She is interested in the exploration of several interrelated themes: light, environments and processes including the relationships between glass and the environment and ways of placing glass within different settings. The work integrates new technologies with text and imagery to produce pieces with a unique visual aesthetic and involve new ways of working with the material.

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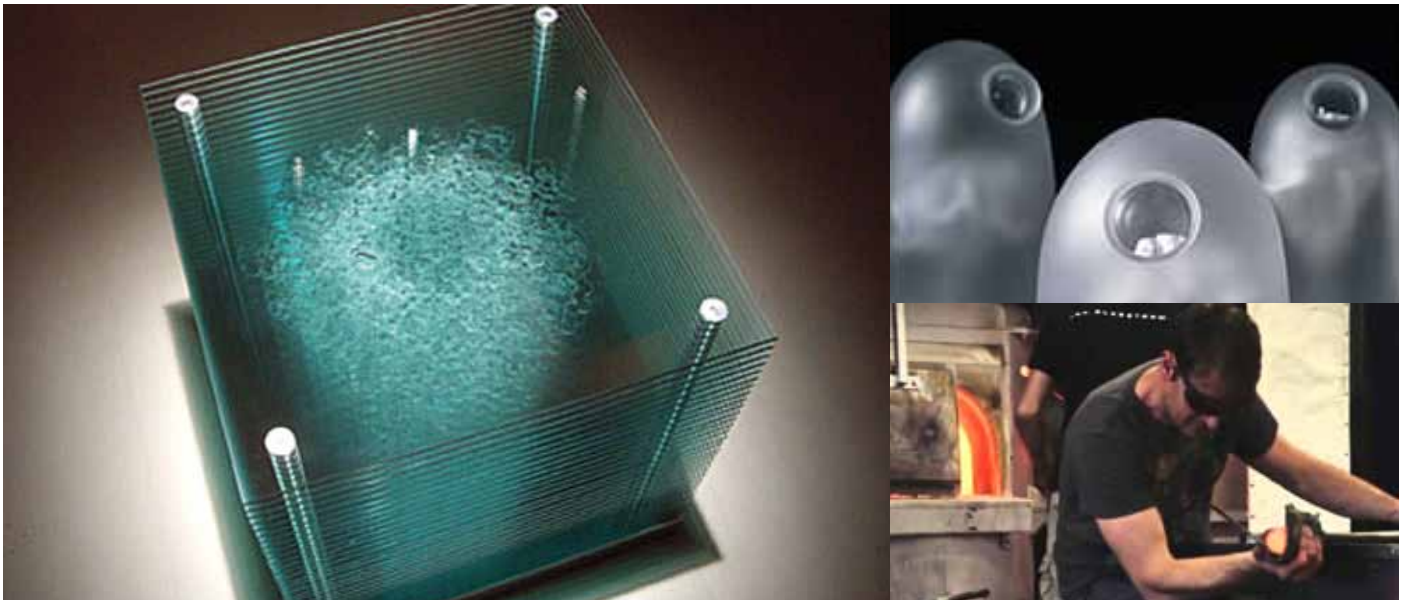


## COLIN RENNIE

*Glass artist and Senior Lecturer at the University of Sunderland. b.19*

Colin's expertise lies in hot glass, cold glass working, computer aided modelling and waterjet cutting.

The current theme of Colin's work centres around the translation of scientific ideas from abstract esoteric constructs into solid and real world models or agents of understanding. It comments on the perception of scientific explanation in an increasingly secular society.



The work often involves models of organic subjects or theoretical objects contained in vessels or cubes and optically obscured or distorted. Glass is used as both a modelling material and as a controlled window through which to observe; glass has the faculty to modulate light and transparency it is a metaphor for the visible and the invisible, or the grey areas between science and myth and idea and perception.

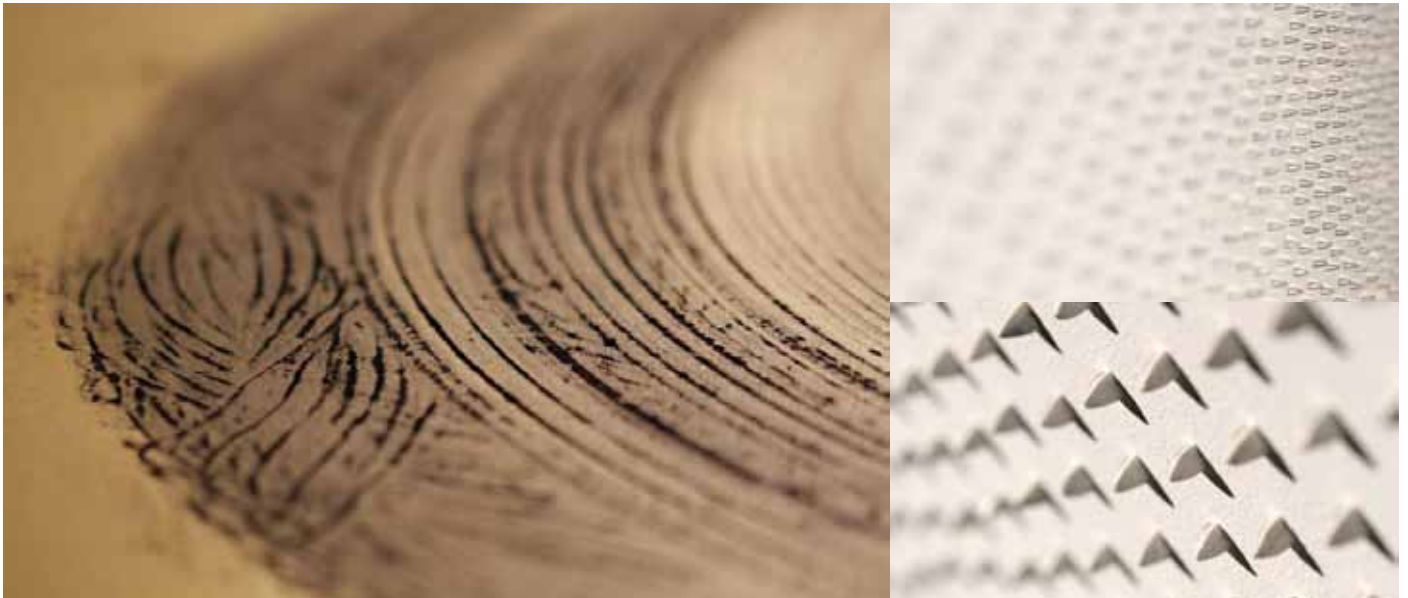
Current practical research is increasingly concerning microcontrollers, to modulate light emitting diodes and organic LED printable substrate (sheetleds) it is hoped that this technical research will soon inform a new body of work involving light and glass.



## ALEXANDRA CARR

*Experimental artist working at the intersection of art and science. b.1981*

Alex is an artist working with patterns in nature, natural processes and phenomena. Her work is heavily science based and experimental in nature. Alex completed a foundation at Central Saint Martins School of Art and Design and a ceramics degree at Camberwell College of Art, graduating in 2003. Carr exhibits internationally and collaborates with specialists from other disciplines such as musicians, sound designers and theoretical physicists. Her practice includes, drawing, sculpture, kinetic works, photography and video although the boundary between art and technology is of particular importance.



Carr explores the perception of our reality, our environment and our very existence. Levels of seeing, states of being and plains of consciousness are at the forefront of her mind when drawing, making or creating interactive or kinetic works. She surveys physical forces, prying under their charade of manifestation to uncover the underlying code that connects us to each other and the cosmos.

Superposition. Suspended realities. Scale of time. Space. Form. All are connected in this ether. They all relate to each other but are contradictorily irrelevant. The complete perfection and oneness of a sphere has infinity in its finite nature and invites division as all realities cascade from its potential.

Perpetual change despite the universal order provokes Carr to give weight to transience, boundaries between states of matter, and chaotic structures. Our observation of constant flow and flux is only possible due to the arrow of time. There is no past, there is no future, only now, but even our perception of the present is inaccurate. Persistence of vision dictates that we form thoughts based on light that our eyes perceive milliseconds in the past. As sentient beings, we can never truly experience the present. We only exist in our own construct of reality as experiential shadows of the past in a physical present. So the true definition of reality is inaccurate and redundant. Therefore we are free to exist in any reality we choose and transcend to the elegance of a universe we are unable to comprehend. There is no such thing as reality; there is only perception.

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## ALAN FENTIMAN

*Filmmaker. b.19*

Fentiman is a filmmaker based in Alnwick, Northumberland. He has over ten years experience working with clients including The BBC, Channel 4, The Tate Modern, Converse and Condé Naste.

In recent years he has specialised in documenting arts projects in the North-East, working with organisations including The Baltic, The Sage, Durham Brass Festival, Berwick Visual Arts, Modular, Festival of The North East, GIFT, The Bowes Museum, Alnwick Playhouse, Shimmer, The DLI & Great North Run Culture.

His documentaries have covered the development of large-scale festival commissions, public art installations, artist exhibitions, writers, poets, composers, makers, festivals, theatre projects and galleries. he also produces music videos and writes and produces his own films.



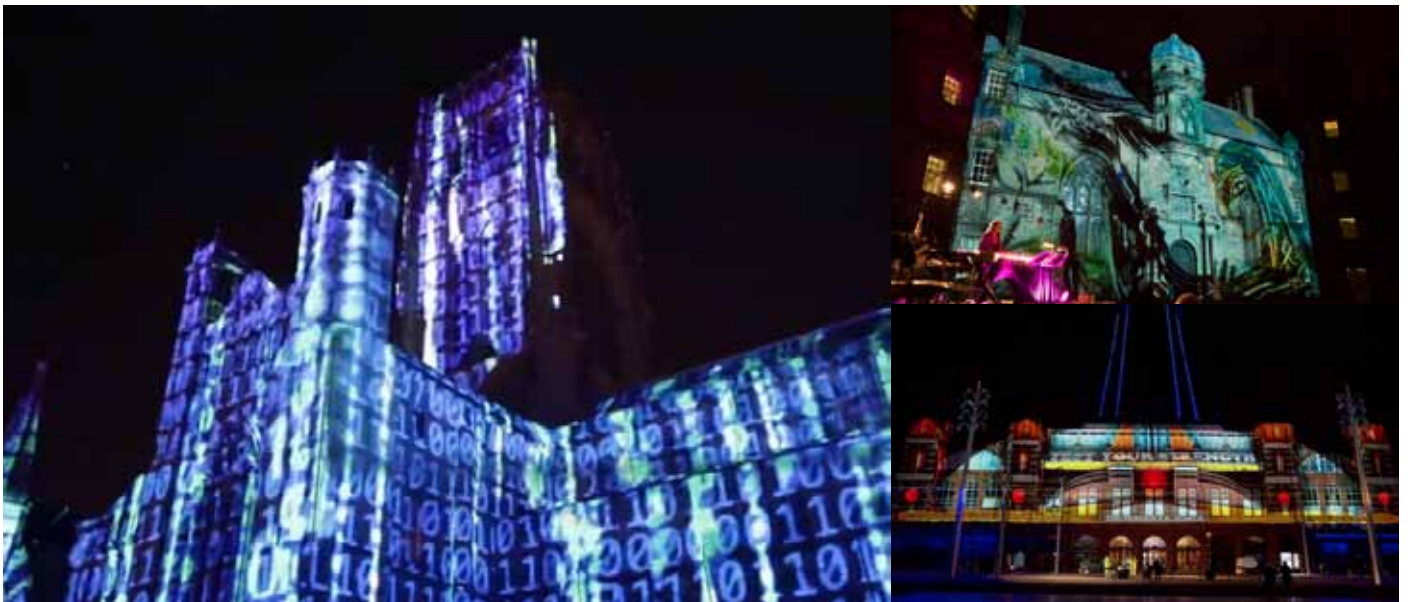


## ROSS ASHTON

*Projection artist. b.19*

In the same way that a painter understands all the skills needed to create a final piece, it is Ashton's belief that a projection artist must be able to execute every skill required in order to truly master the medium.

He is responsible for every stage of the piece; from choosing the site, surveying the projection surface and producing the imagery that will be projected. He is also involved with scripting and commissioning music and effects to realise his coherent single vision.





*This page: The work being carried out at the National Glass Centre by staff and students who are collaborating on Through a Glass Darkly with the Ordered Universe.  
Next page: Study by Alexandra Carr*

