



THE NEW CERAMICS

additions to clay bodies

Kathleen Standen



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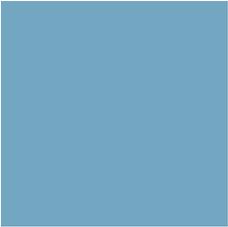
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FRONT COVER: Top: Kathleen Standen, *Haze II*, 2011. Porcelain clay body, organic additions, body stains and oxides, glaze, 40 x 22 cm (15¾ x 8¾ in). *Photo: Roland Paschhoff*. Bottom, left: Fred Gatley, *Erosion*, 2009. Pinch-formed and polished bone china bowl, with inclusions of iron oxide, fired to 1220°C (2228°F), diameter: 4 cm (1½ in.), with slabbed base, white St Thomas clay with additions of river silts, sand and brick grogs, 1020°C (1868°F) sawdust-fired, 6 x 15 cm (2½ x 6 in). Silver feet attached. *Photo: by the artist*. Bottom, centre: Dominique Bivar Segurado, *Calcium Bowl*, 2004. Porcelain clay, press-moulded and hand-cut, unglazed, fired to 1240°C (2264°F). *Photo: Dougal Waters*. Bottom, right: Kathleen Standen, *Green Rock Pool* (detail), 2009. Porcelain clay body, organic additions, body stains and oxides, glaze. *Photo: Roland Paschhoff*.

BACK COVER: Jim Turner, *Black and White Bottles*, 2009. Thrown and extruded altered forms, fibre slip on top of glaze with fibre, once-fired to 1300°C (2372°F), height: 65 and 55 cm (25½ and 21¾ in). *Photo: Roland Paschhoff*.

FRONTISPIECE: Kathleen Standen, *Landmarks II*, 2009. Porcelain clay body, organic additions, oxides, 26 x 15 cm (10¼ x 6 in). *Photo: Roland Paschhoff*.

RIGHT: Kathleen Standen, *White Rock Pools*, 2009. Porcelain clay body, organic additions, body stains and oxides, glaze, 10 x 11 cm (4 x 4¼ in). *Photo: Roland Paschhoff*.



Contents

Acknowledgements	7
Introduction	9
1 Clays	13
2 Hard materials	25
3 Combustible materials	45
4 Impressions, imprints and dipping	65
5 Fibres	75
6 Metal	95
7 Colour	111
Glossary	123
Suppliers	124
Bibliography	126
Index	127



1

Clays

One of the first decisions that a ceramicist will make concerns choice of clay. Most artists find something to suit them from commercial clays sold in bulk by pottery suppliers. But there are alternatives and this chapter introduces artists who want something different that is not just 'off the shelf'. Examples of artists who work in this way include Fiona Byrne-Sutton, who digs her own clay; David Binns, who collects granular materials from around the world to add to clay; and myself, Kathleen Standen, making clay from scratch using dry, raw materials.

Digging up your clay

Fiona Byrne-Sutton makes large press-moulded vessels, which explore the heritage of Central Scotland. She travels from her Glasgow studio to Clackmannanshire in the Forth River Valley area, where farmer Ian MacFarlane digs up orange firing clay for Fiona, on his own land.

Preparation

Byrne-Sutton does not process this clay in terms of 'washing' and 'sieving', and only removes large pebbles to prevent her pots 'blowing' in the kiln. There are risks in this, but she welcomes blisters appearing in the clay due to bits of coal or silica. The

LEFT: Kathleen Standen, *Horizon with vessel*, 2011. Photographed in the scenic village of Glandore, West Cork, Ireland, coloured porcelain clay fired to 1220°C (2228°F), 18 x 34 cm (7 x 13½ in). *Photo: by the artist.*

RIGHT: Ian MacFarlane digging up clay at Gartenkeir Farm, Coalshaughton, Clackmannanshire, Scotland. *Photo: Fiona Byrne-Sutton.*



Additions to clay bodies



Unfired Clackmannanshire clay, straight from the ground, is marbled grey and brown with iron ochre. *Photo: Helen Gilmour.*



Black Scarva Earthstone, vermiculite on left, perlite on right. *Photo: Helen Gilmour.*

boulders or fragments of clay are pressed into the surface of her large vessels, just as they have been dug up, to the extent that you can see the line of the shovel and the naturally occurring strata of secondary iron ochre and white clay.

Byrne-Sutton describes her Clackmannanshire vessels as 'rural pots embedded with ferns, Scots pine, boulders of clay from a farm; an embedded biodiversity echoing a local human population with strong communal links.'

The Clyde River area near Glasgow is another of her favoured locations for collecting clay samples and this **strath** clay is a deeper red than Clackmannanshire clay, due to a higher percentage of iron oxide. Her Glasgow vessels are 'urban, painted with topsoil slip. They are pressed with "weeds" that have arrived on the wind, growing out of roadside crevices, opportunist, seeking out their chances like migrant city residents.'

All these elements represent the personality of the material and the place.

Process

Byrne-Sutton's forms start off in a plaster mould lined with Scarva black Earthstone clay. Sometimes she presses **vermiculite** into the clay before filling the mould, which helps the thick walls dry evenly and reduces the overall weight, an important consideration in large forms. She advises that care be taken with vermiculite, as it can cause the clay to blister. It should be pressed, rather than wedged, into the clay.

Vermiculite in the black Scarva gives a warm, toasty speckle to the ceramic body, which Byrne-Sutton says makes the black clay 'sing'. She then partially paints the interior of the form with white **slip**, before pressing in lumps of found clay. This allows the orange tones of the dug clay to stand out from the black base. Seasonal plants are pressed in and painted over with Clackmannanshire slip, dug from the ground. The slip will fire white or different shades of orange depending on which clay strata it was dug from. White slip is sometimes mixed with found clay to give a greater range of colour tones. Red iron oxide, manganese dioxide and copper wire all give different blacks



ABOVE LEFT: Fiona Byrne-Sutton building up the wall of the vessel: Pressing and not wedging vermiculite into the clay body avoids creating air pockets, helps the thick walls dry evenly and makes the bowl lighter after firing. *Photo: Helen Gilmour.*



ABOVE RIGHT: Surface decoration: boulders of marbled Clackmannanshire clay are inserted into black-firing Earthstone. The grey clay fires white while the iron ochre in the clay body reverts to red iron oxide when fired; the boulders show the sedimentation patterns of the clay in the ground. Vermiculite is rolled into the surface and the golden speckle makes the black clay come to life. Unlike perlite, it doesn't disappear during firing. *Photo: Richard Campbell.*



RIGHT: Surface decoration: seasonal plants are pressed in and painted over with Clackmannanshire slip. The slip will fire white, or different shades of orange, depending on the clay strata from which it has been dug. *Photo: Helen Gilmour.*



ABOVE: Fiona Byrne-Sutton, *Clackmannanshire Roadside*, 2011. Black Earthstone, press-moulded, with vermiculite, Clackmannanshire clay slips from the ground, red iron oxide painted on Earthstone, copper wire, manganese and copper dioxide mixed to give gold, shoe polish, beeswax. Once-fired to 1160°C (2120°F), 19 x 53 cm (7½ x 21 in).
 Photo: Michael Wolchover.



LEFT: Top tile is Earthstone and vermiculite, showing brown husks of vermiculite remaining; bottom tile is Earthstone and perlite, of which only pock marks or small cavities remain. Both tiles were fired by Fiona Byrne-Sutton to 1180°C (2156°F).
 Photo: Fiona Byrne-Sutton.



Fiona Byrne-Sutton,
*Rhapsody in Orange and
Black Clackmannanshire*,
2010. Press-moulded black
Earthstone clay, vermiculite,
Clackmannanshire
boulders and slip from
the ground, red iron oxide
painted on Earthstone,
copper wire. Once-fired
to 1160°C (2120°F), 19
x 53 cm (7½ x 21 in).
Photo: Michael Wolchover.

when painted and fired onto black Earthstone, building up a painterly surface. She works intuitively and very quickly at this stage to create pattern, colour and texture.

A long soak partway through firing, before taking the temperature up high to 1160°C (2120°F), helps to set the colour in this once-fired work.

Collecting china clay and plants

The most southern region of the UK is where most businesses involved in the extraction and processing of high-quality china clay for the ceramics industry are based. It is also the home of **Jenny Beavan**, a ceramicist who has spent more than a decade making work here, and who has important links to this area. The industries have undergone much change in recent decades, including decommissioning, and in 2001 Imerys Minerals granted Beavan permission to study all aspects of their work at the Fal Valley China Clay Pits in Cornwall.

She has observed the important role of water in all stages of the extraction and processing of china clay and kept a diary of her observations. Her frequent visits to the pits were also recorded using photography, drawing and words, and this was the genesis for a new body of work.

When I first saw Jenny Beavan's ceramics, the words 'frozen movement' came to mind. And that was before I had read the titles: *Beach Erosion*, *Oscillation*, *Upsurge* and *Energised Water*.

What interests Beavan is movement in relation to natural change, such as decay,

Additions to clay bodies

disintegration, relocation and reformation, and in particular the role water plays in this action. She has collected materials from the pits, both combustible and non-combustible, which become part of the fabric of her unusual compositions. The series of four photographs below shows stages in the making of *Beach Erosion*. Beavan has arranged curved slabs of clay into a walled mould and then poured and placed a range of additions including molochite, sand, plants and china clay slip.

She continues to visit china clay pits in Cornwall and to create work that reflects her observations. Her ceramic works are held in public and private collections in the UK and abroad.



Adding molochite to the clay in the mould.



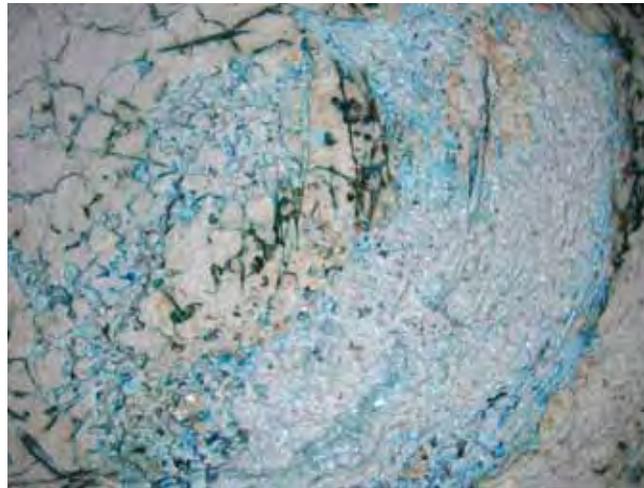
Adding sands.



Adding plants.



Adding china clay slip over the top of the slabs and additions.



Jenny Beavan, *Upsurge* (detail), 2001. China clay matrix with processed china clay, glazes and glass, 1260°C (2300°F), 55 x 55 cm (21½ x 21½ in). *Photos: by the artist.*

Jenny Beavan, *Beach Erosion*, 2011. Porcelain with china clay, combustible material, beach sands and pebbles, glazes and glass, fired to 1260°C (2300°F), 40 x 40 cm (15¾ x 15¾ in). *Photo: by the artist.*



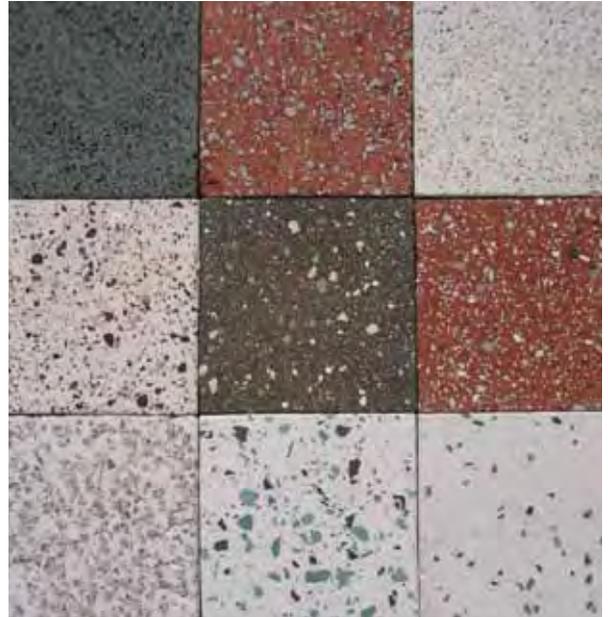
Collecting granular material

A brief introduction to the ceramicist **David Binns** is relevant here because, despite not digging up his clay, he does collect granular material from particular locations, which bestow each of his works with a specific sense of place.

His research and testing of found materials has yielded interesting results, with grey granite from the mountains of North Wales, beach shingle from the east coast of England, and pink granite gathered during a visit to Tasmania. He always travels with collecting bags, looking for the opportunity to gather interesting granular material.

Binns, however, tells a cautionary tale concerning the addition of found materials in ceramic work. In his enthusiasm to develop new surfaces, he collected and mixed beach shingle into porcelain clay, having picked out obvious pieces of seaweed and shell, and created a boat form. This was promptly exhibited, but fortunately failed to sell. Within a few weeks, the form had disintegrated. Binns concluded that the shingle must have included fragments of calcium-bearing rock, such as limestone. The stones had calcined and then slowly absorbed atmospheric moisture, creating a monumental case of lime spit. As a result Binns advises washing and pre-firing all found material. Any calcium

Additions to clay bodies



ABOVE LEFT: Examples of made, found and industrial aggregates, added in varying amounts to clay bodies. Clockwise from top left: copper-stained porcelain (5%), granular flint, recycled bottle glass, fused zircon, beach shingle, dense, fused mullite.

ABOVE RIGHT: Test samples of porcelain and terracotta, with additions of found and made aggregate materials in varying percentages.

LEFT: David Binns, *Two Piece Standing Form*, 2008. Porcelain with copper and terracotta aggregates, copper-stained porcelain with molochite aggregate, fired 1160–1220°C (2120–2228°F), ground and polished, 42 x 53 x 24 cm (16½ x 21 x 9½ in).
Photos: by the artist.

material will turn to soluble quick lime, leaving the remainder stable and inert.

The Thames and Deptford Creek in London is where artist **Fred Gatley** collects mud, pebbles and other hard debris, as well as organic material, for his work. The creek also provides much of the inspiration for his sculptural work, which explores the vessel arranged on a base.

Chapter 2 will look at both Binns' and Gatley's work in more detail (pp. 28–31 and 32–5, respectively).

Making your own clay

An alternative to using commercial clay or blends is to make your own clay from scratch, using the dry, raw minerals. I measure and mix the dry ingredients, add them to water, sieve this mixture and finally spread it out to firm up on plaster slabs.

Why do I go to all this trouble to make a clay body? The answer lies partly in where I live and work, as well as my background. My studio is in a coastal village in south-west Ireland and this place has a strong influence on my ceramic work. My work has a painterly quality, exploring the colours and textures of the location, influenced in part by my father, an artist who captured his impressions of the world using oils on canvas. The extra work of making my own clay allows me to add accurate amounts of colour (oxides and body stains) to the body, and to choose **grog** and other additions to mix in at any stage of the making process. This flexibility allows me to capture the spirit of my home.

I make my clay in quantities ranging from 1 to 50 kg (2¼ to 110¼ lbs) depending on the project I am working on, but the process is the same each time. I always work in a well-ventilated area and wear a face mask. If adding colour, I protect my hands with vinyl gloves.

Various grog materials collected from the Thames at low tide. As these are found materials, the artist has identified them as closely as possible.
Photo: Fred Gatley.



Brick



Mixed China



Dark Multi Stock



Red Stock



Staffordshire Blue



Yellow Stock

Additions to clay bodies

Recipe for porcelain clay

Provided by the technician at The City Lit Institute, Holborn, London

China clay	21
Flint	23
Potash Feldspar	18
Black ball clay	18
Silica sand	10
Molochite	10
(Fine, medium or coarse)	

If I want to make 10 kg (22 lbs), for example, then each item should be multiplied by 100. I always write down the exact measurements, as I need to weigh in batches of 500g (1 lb), and tick off as I go along. It is very easy to lose track.

Preparing clay with additions of cotton linter and perlite

I always wear a mask and gloves and work in a well-ventilated area.

RIGHT: Measure out the dry materials and the water into two separate buckets.

BELOW LEFT: Mix the dry materials together, then add them in scoops to the water. Allow each scoop to dissolve before adding the next. (This is a similar process to making plaster.)

BELOW RIGHT: Leave the wet mixture for about 20 minutes and then sieve through a 60-mesh sieve. Stir in any remaining dry materials that you did not want to sieve, such as molochite and silica. If this is the end of your process, the completed clay can be spread out on plaster to firm up, then wedged and stored, wrapped in plastic, for up to a week before using. If you wish to add fibres and perlite, the process continues on the opposite page. *Photos: Kathleen Standen.*



RIGHT: Soak strips of **cotton linter** in water and then break up into a mushy mixture.

BELOW LEFT: Squeeze out as much water as possible from the cotton linter.

BELOW RIGHT: Add the cotton linter to the wet clay and blend with an electric mixer, to give an even, smooth mixture. You have now mixed up your own paperclay.

BOTTOM LEFT: Add the measured perlite to the paperclay.

BOTTOM RIGHT: Spread out onto plaster to firm up a little and then put into a labelled bucket until ready to use.

Photos: Kathleen Standen.



