

Family Geology Trail



Treasure Trove!

How many different types of rock can you see in the cemetery? Why are there so many different types of stone?

How old?

The dates on the stones are in the 1800s and 1900s but the actual stones are millions of years old!

Why stone?

Stone is extremely durable and can be carved or shaped.

Which stone?

There are three main types of rocks: igneous, metamorphic and sedimentary rocks.

What are igneous, sedimentary and metamorphic rocks?

- **Igneous rocks** are rocks that are formed from a molten magma that has cooled and solidified.
- **Sedimentary rocks** are rocks that are formed from grains eroded from other rocks which are cemented together.
- **Metamorphic rocks** are rocks that are changed – or metamorphosed – by heat and pressure to form new types of rocks.

Well-travelled!

Rectory Lane Cemetery is a Victorian cemetery that was opened in 1842. At that time the road, canal and rail networks were opening up, making it easier for stone to be brought in from around Britain and around the world.

None of the stones used for memorials in this cemetery are local. Where have they come from? How far have they travelled? How do you think the stone was transported to the cemetery from the train station or canal wharf in Victorian times?

Although the stones themselves may have come from elsewhere, they were often carved by stonemasons in Berkhamsted.

Climate change!

What do the stones help us to find out about weathering, lichens, wildlife, plants? Should the stones have the plants removed to preserve them or should they be encouraged? Given our carbon footprint concerns, should stones be quarried and transported around the world for memorials in the future?

Follow the geology trail...



1. Metamorphic rock: Marble



Marble is a metamorphic rock. It is formed when a limestone is squeezed and heated deep in the Earth's crust. These conditions cause the limestone to form tightly interlocking crystal grains. Marble, generally from quarries near Carrara in Italy, became fashionable for use as gravestones in the nineteenth century and is still often used today. Marble can be polished and carved into interesting shapes. It also demonstrated status. The more elaborate memorials were put on the terrace or alongside paths as these were the best places to be buried.

Memorial: Philip Wagstaff and Ada Mosley

Philip Wagstaff was born in 1840. He was appointed to a position with the East Indian Railway Company in 1865, most likely as an engineer. The East Indian Railway Company introduced railways to eastern and northern India. In 1876 he married Ada Mosley, in a Swedenborgian church. Philip and Ada's memorial in Rectory Lane Cemetery shows two figures – male and female – kneeling at the feet of Jesus. Look at the lead lettering – can you see how it is now standing out from the stone? This is due to acid rain weathering away the stone. You will find this on other memorial stones in the cemetery

Think about: Why is this marble no longer white?

2. Sedimentary rock: Portland Limestone



Limestone is a sedimentary rock composed mainly of calcium carbonate – the same compound that forms the limescale in our kettles. It is made up from fragments of shells of sea creatures who lived in warm shallow seas millions of years ago. Some of can be seen as fossils in gravestones. Some limestones can be relatively easy to carve and shape, so gravestones made of them are often very decorative. There are many types of limestone, those used here come mainly from the Limestone Belt, which runs from Portland and Purbeck on the south coast, northwards along the Cotswolds and into Yorkshire.

Memorial: Ann and Joseph Gomm

Ann Halsey and Joseph Gomm married in 1817 and had ten children. Joseph was registered as a carpenter on his marriage certificate and later became a builder.

Think about: How many different colour lichens can you find on this memorial?

3. Sedimentary rock: Mansfield stone



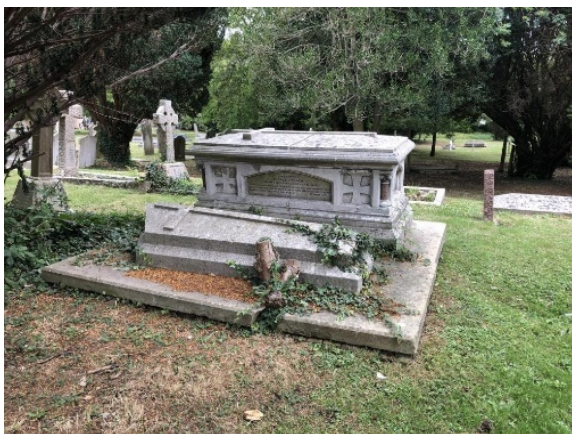
Red Mansfield Stone is a type of limestone that comes from the quarries in Mansfield, Nottinghamshire.



The Seat of Remembrance: Erected in 1934 by Lucy Foot in memory of her husband, Brigadier General Richard Mildmay Foot (1865-1933), pictured here together. Foot was a champion breeder of Irish red setters, winning at Crufts, hence the choice of red stone. The Red Mansfield stone was particularly difficult to find when renovations of the seat took place during the restoration project due to the quarry being closed. The dogs' snouts have been replaced with Corsehill stone which was considered the nearest match to Red Mansfield.

Think about: What design and colour stone would you choose for your memorial and why?

4. A colourful combination



This chest tomb is made of 3 different types of stone: Peterhead granite pillars, Portland Stone limestone top and marble panels. Peterhead granite was used extensively throughout the UK and abroad during the 19th century and comes in both red and blue varieties. The red variety is often used for ornamental construction – it's found in many buildings in London, Liverpool and Cambridge – while the blue variety is used for decorative purposes, including the fountains in Trafalgar Square in London.

Memorials: Keyser (1879 & 1876)

Can you find the sculptor's name – Lingard? Crosses were his trademark. There are several monuments carved by him in the Lower Cemetery. His workshop was in Castle Street. Alfred Keyser qualified as a doctor and surgeon and in 1838 he was appointed House Surgeon at University Hospital, London. He had come from a rich banking family who could afford better materials for the memorial.

Think about: This memorial clearly makes a statement about the wealth of the family. Can you see any other grand memorials?

5. Sedimentary rock: Weathered sandstone



This is an example of a weathered sandstone – more on one side than the other. Sandstones are quarried in various locations in the UK. Sandstones are made of sand grains that have been deposited in the sea, or in rivers or deserts and were later cemented together with other minerals. Although sandstones do not generally polish to a

sheen, for gravestones they have the advantage that they can be cut to present a flat, muted surface that takes an inscription well. Freezing and thawing of water that has entered the stone can cause sandstones to weather and crumble.

Memorial: Holliday (1903)

Fanny Holliday was baptised Fanny Carter at Long Crendon on 20 March 1836. She was the middle of three siblings, Mary born in 1833 and William born in 1838. By age of 11, Fanny was an orphan. Fanny married William Holliday, a widower of Northchurch, on 14th March 1885 at St Mary's Northchurch. William Holliday, who was 19 years older than his second wife, was the bailiff at Haresfoot Farm, working for the Smith-Dorrien family. By 1901 Fanny was a widow living in Charles Street. She died leaving no will, nor did she have any children.

Think about: What joke can you think of about holidays and sand?!!

6. Metamorphic rock: Marble



Stone masons generally define marble as any limestone that can take a polish, but in geological terms, marble is a limestone that has been squeezed and heated deep in the Earth's crust. These conditions cause the limestone to form tightly interlocking crystal grains. If you examine marble

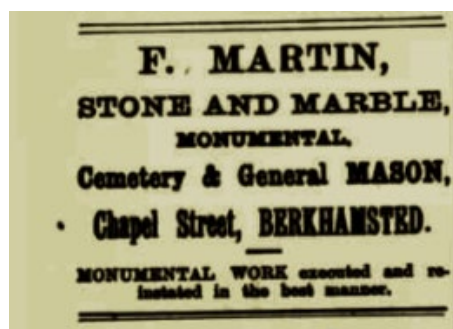
under a magnifying glass it looks like granulated sugar.

Memorial: Reginald Hughes (1904)

Reginald Hugh Hughes was born on 25th November 1839. He moved from London with his family to Great Berkhamsted in 1894. They loved Berkhamsted and took a full part in parish life.

Think about: Look at the photos – the headstone was recently restored to its former white glory. But pollution has already affected the marble, why do you think this is?

7. **Metamorphic rock: Marble, an example of a memorial made by the Martin family of monumental masons.**



This memorial bears the name of the sculptor Martin. The cemetery has examples of memorials carved by three generations of the Martin family. Their family are also buried in Rectory Lane Cemetery. Their workshop was established in 1871 by Frederick Martin and in Chapel Street from 1891 until his son, Arthur Martin, retired 70 years later.

Memorial: Edward and Alice Platt (1906 and 1927)

Edward took on his family grocery shop with his wife Alice's assistance at 130 High Street, Berkhamsted.

Think about: Can you find other examples of the Martin family's work?

8. **Artificial cement-based stone**



This richly decorated cross with intertwined sunflowers is not made out of stone, but a synthetic cement-based material. It is unusual to see such memorials in Victorian, or even modern, cemeteries.

Memorial: Byrne (1908)

Jessie Byrne, who lived at 2 Station Road Berkhamsted, never married but adopted Kathleen Duncanson aged 5 as her ward. Kathleen died in 1976 and is buried in front of Jessie's memorial.

Think about: Why do you think artificial stone was used for this memorial? Do you think it would have been easier to carve in marble, for example?

Following the trail from 8 to 9 you will see several examples of granite stone. If you are lucky with a sunny day, can you see the mica in the granite sparkling?

9. Igneous rock: Granite



Granites formed when large bodies of deeply buried magma slowly rose to the surface and cooled over thousands of years. As it cooled, minerals crystallised out and the magma solidified to form a very hard rock made of interlocking crystals.

Granite did not come into

widespread use for gravestones until the second half of the 19th century when the technology for working it was developed and the rail network had expanded to make it possible to bring in granites from Cornwall, Scotland, the Lake District and Northern Ireland, the main granite areas in the UK. The name of the sculptors who supplied the memorial is given on the kerb - (G.S Maile & Sons.) The advert appeared in the same year.

Memorial: Alexander McWhirter Renny (1925)

Renny was born in the Punjab and became a Colonel in Bengal Lancers. He fought in Afghanistan and Burma.

Think about: With a middle name of McWhirter, do you think the Granite might have come from Scotland?

10. Sedimentary rock: Portland Stone



Portland Stone is a type of limestone quarried in the Isle of Portland in Dorset. It is very light coloured and made up of small spheres called *ooliths*. It also contains broken fragments of fossil shells, such as oysters.

Can you see the fossilised oyster on the side of the memorial?

It is the standard stone used for Commonwealth War Grave Commission headstones – there

are 27 in this cemetery – chosen because it was readily available, held an inscription well and was easy to maintain.

Memorial: Private T.H Newns Pioneer Corps 17th October 1941

Thomas worked as a milkman for Stoney's Dairy. He married Catherine Emery in 1936 and they had one son. He joined the Army in 1940 as a private in the Pioneer Corps. Pioneers performed a wide variety of light engineering tasks – stretcher-bearing, handling stores, laying prefabricated track, and helping to construct bridges. In April 1941 he received a bad chill and contracted pleurisy which led to his death at 29. Catherine remained in Berkhamsted and died in 2000 aged 87.

Think about: Can you find other examples of the Portland Stone War memorials in the cemetery? How do the symbols on them differ?

11. Welsh Slate



The slate industry dominated the economy of north-west Wales during the second half of the 19th century and on a much smaller scale elsewhere. There were several different categories of workers in the quarries. The quarrymen proper, who made up just over 50% of the workforce, worked the slate in partnerships of three, four, six or eight, known as 'bargain gangs'. A gang of four

typically consisted of two 'rockmen' who would blast the rock to produce blocks; a splitter, who would split the blocks with a hammer and chisel; and a dresser.

Memorial to Brown (1942) and Haines (1964)

Ismay Frances Brown (nee Tisdall) was born in India. Her father was Major General Archibald Tisdall. She married John Anderson Brown, a church minister, in Rajputana, India in 1885 and had two children there: Gladys Rae and Ismay Edith.

On the death of her husband Ismay moved to England to live with her daughter Gladys, initially in Devon and then in Berkhamsted. This memorial commemorates a widowed mother and daughter, whose husbands are both buried overseas.

Think about: What other uses of slate are very common, you may be able to see some examples if you look at the view over the Berkhamsted houses.

12. Palette of stone materials

This cluster of memorials were erected within a year of each other, during World War 2. They represent all the main types of stone you will find in the Cemetery. On the Rectory Lane Cemetery website (www.rectorylanecemetery.org.uk) we encourage you to discover the history of the people buried here by typing in their name into the burial search.

Limestone: memorial to Gascoigne

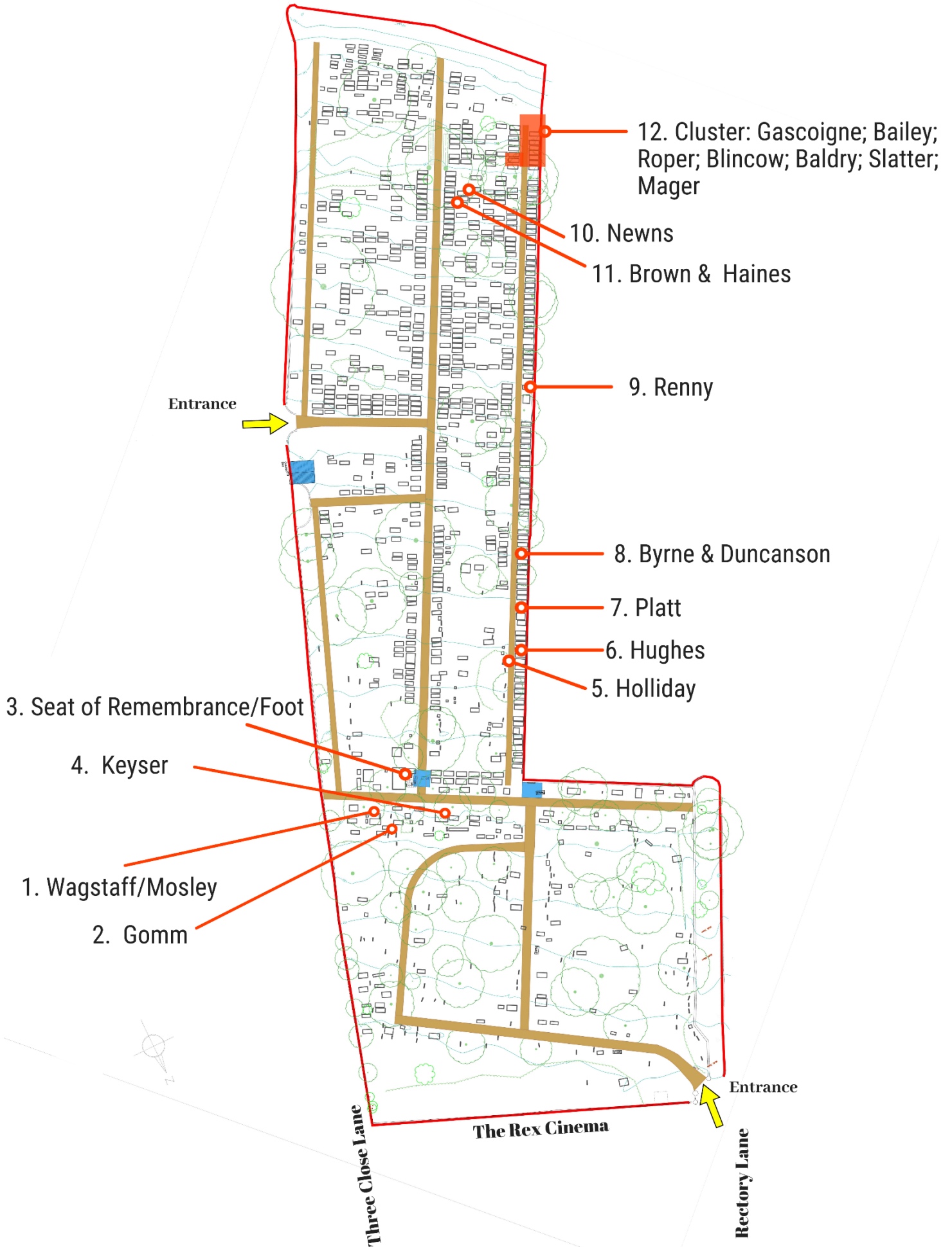
Granite: memorials to Bailey, Roper, Blincow, Slatter

Marble and Granite: memorial to Baldry

Red Granite: memorial to Mager



Think about: What are the benefits of allowing the plants to grow over these memorials?



Acknowledgements and further information

We are grateful to the **Curry Fund of the Geologists' Association** for funding the preparation of this booklet and accompanying sample collection – for use by families, schools, and everyone interested in gravestone geology and what it can tell us. The information was compiled by Dr James Moir and Catherine Walker, with invaluable input from Nina Morgan and Philip Powell, authors of *The Geology of Oxford Gravestones*.

Rectory Lane Cemetery was rescued from neglect, restored and landscaped through a transformational programme funded by the National Lottery Heritage Fund – ***From Dead Space to Living Place*** – between 2017 and 2021. There are over 1,200 memorials in the Cemetery – each with its own geological and biographical story. Over 60 of them were restored during the project. Families are commissioning their own restorations, now that the Cemetery is once again a place which is appreciated and visited, from the stonemason who was trained as part of the project.

If you would like to discover more about Rectory Lane Cemetery and the award-winning project to transform it, visit our website: www.rectorylanecemetery.org.uk If you'd like to get involved yourself, contact team@rectorylanecemetery.org.uk

**Rectory Lane Cemetery Project
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