

## Urban Geology in London's Theatreland: St Martin's Lane to Shaftesbury Avenue

Ruth Siddall

This walk takes us along St Martins Lane and Shaftesbury Avenue to St Giles, near the intersection of Tottenham Court Road and Oxford Street. There are a fine selection of buildings in this area, serving London's Theatreland; churches, restaurants and of course theatres are found amongst pubs, shops and gentlemen's clubs. Those with interesting building stones are described below. Architectural notes are from Pevsner (Bradley & Pevsner, 2005; Cherry & Pevsner, 1998) unless otherwise cited. This walk begins at the church of St Martin's-in-the-Fields at the north end of Trafalgar Square. The nearest tube station is Charing Cross, and a number of buses stop on the east side of Trafalgar Square, near to the church.



### St Martin-in-the-Fields

The 18<sup>th</sup> Century church of St Martin-in-the-Fields dominates Trafalgar Square. A church of this name has stood on this site since the late 12<sup>th</sup> Century. However the current building (above) was built between 1721-6 by architect James Gibbs. At the time, the design was revolutionary, with the prominent, pedimented portico across the west front, and the steeple rising to a height of 58.5 m above the entrance to the church. The design was revolutionary and much copied in the UK, but also notably also in the USA. St Martin-in-the-Fields has recently (2008) undergone a major restoration, led by Eric Parry Architects with stone conservators Stonewest. The fruits of these labours are mainly observed in the interior where Early Cretaceous **Purbeck** and Lower Jurassic **Blue Lias** Limestones have been used for paving. Additionally the exterior stone was stabilised and a new roof was put on the church.

Like so many monumental buildings of this period, the church is built of **Portland Stone Whitbed**. This is best observed on the steps and portico of the church. The columns are built of drums, which are clearly made of a layer of Whitbed that rapidly became very shelly near the top. The ~ 3 ft high column drums show this transition clearly. On the steps, several varieties of variably shelly and cross-bedded Whitbed are seen. These are noticeably rich in debris of the coralline algae *Solenopora portlandica*. Also apparent on paving flags are the classic trace fossils of the Portland Stone, with marks resembling double-ended letter

Ys. Portland Stone is of Tithonian, uppermost Jurassic, in age, deposited approximately 145 million years ago in shallow tropical seas. It is an oolitic limestone with variable, shelly fossil content, with many species, including the *Solenopora* algae endemic to its region, now the peninsula of Portland Bill in Dorset. Its use became widespread in London following the Great Fire in 1666. The history of stone quarrying on Portland has been described by Hackman (2014).



Slate from the Palaeozoic slate belts of North Wales has been used on the roof of the church, supplied by Welsh Slate, who are the main quarry operators in the region today. Two broadly parallel slate belts run across North Wales. In the North West, parallel to the coast, lie the multi-coloured green, purple, red and blue Cambrian Slates. These are quarried today from Penrhyn near Bethesda. Inland, NE and SW of Blaenau Ffestiniog lie the predominantly dark grey Ordovician slates. Both slate belts were metamorphosed and deformed, imparting a strong cleavage in the latest phase of the Caledonian mountain building episode, which was a transpressive, collisional event. A combination of **Heather Blue Slate** from Penrhyn and **Blue Grey Slate** from Blaenau Ffestiniog have been used for the St Martin's roof.

### Crypt Pavillion

This elliptical building stands on Church Path, just to the north of St Martin-in-the-Fields. It provides access as well as natural light and ventilation to the facilities in the Church's crypt, below pavement level. The foundations of this glass and steel building are of beautifully shaped gabbro, making it appear to rise, seamlessly from the flagstones. The stone used here is **Nero Impala** gabbro from the Rustenburg Complex of South Africa. Part of the 2 billion year old Rustenburg Layered Series, the gabbros overlie the World's largest platinum deposits, the Merensky Reef. Nero Impala is composed of plagioclase, pyroxenes and needle-shaped hornblendes. This stone is often used polished, therefore it is interesting to be able to observe the textures in these honed surfaces. This variety is predominantly quarried near the town of Brits.

Church Path is paved in **York Stone**. Where this was lifted during the restoration, it was salvaged and where possible, re-laid. Slabs of newly quarried York Stone were sourced from Haslington in the Pennines (Anon, 2008).

### Edith Cavell Monument

Just beyond the church, in a plaza in front of some cafes, stands the impressive memorial to Edith Cavell. Cavell was a British nurse who was working behind enemy lines in Brussels during WW1. She helped over 200 allied soldiers to escape the Germans, until she was discovered, court-martialled and then executed on 12<sup>th</sup> October 1915. This year will mark the centenary of her death. This monument commemorates her and is by Sir George Frampton, erected in 1920. The plinth is of Cornish **De Lank Granite** and the statue is of **Carrara Statuario Marble**. De Lank is quarried from Bodmin Moor in the valley of the River De Lank near St

Breward. It is a two-mica granite, intruded as part of the Cornubian Batholith around 290 million years ago. De Lank is the only Cornish granite quarry still being worked for dimension stone today. Statuario is the highest quality of marble quarried in the Carrara district of western Tuscany. It has been extracted from all the main marble 'basins' at Carrara, Massa and Serravazza. It is a granoblastic, fine grained, white, calcite marble with thin talc bands. Quartz may be found crystallising in cavities in the marble up to 1-2 cm diameter. These are known as 'Carrara diamonds'. Unfortunately it is not possible to get close enough to Edith Cavell's effigy to see if these features can be observed.

### **National Portrait Gallery**

On the left, across the road, is the National Portrait Gallery, in rather yellowed, dirty Portland Stone. Of more interest is the arched doorway framed in **Cornish Granite**. This has sub-aligned, 'small-megacrysts' of white feldspar set in a medium grained groundmass of brownish potassic feldspar, quartz, biotite and muscovite. This variety of granite was won from several of the plutons of the 300-290 Ma Cornubian Batholith, including De Lank and Hantergantick quarries on the Bodmin Pluton and from near Penryn in the Carnmenellis Pluton.

*From the memorial, turn right, passing the The Chandos public house on William IV Street, and then turn left into Chandos Place.*

### **Institute of Chinese Medicine**

A large, carriage-height arch frames the entrance to the Institute of Chinese Medicine at the end of Chandos Place. This is constructed from pink **Peterhead Granite**, quarried at Stirlinghill in Aberdeenshire. This is a late Caledonian granite, intruded at 406 Ma. Characteristically, this stone is salmon pink, though the colour can vary with intensity, from greyer to more red varieties. This colour is imparted by pink potassic feldspars. Characteristically, this stone contains grey-brown smoky quartz, often with grain boundaries stained by cherry-red hematite. The mafic phases are hornblende and biotite. Xenoliths of a finer grained, doleritic material frequently occur in this stone.

### **53-59, Chandos Place**

Continuing along Chandos Place, a striking building occupies the corner with Bedfordbury. This building, with upper stories in red brick was designed by architects Rock Townsend in the 1990s (Weinreb et al., 2008). The first two stories are clad in a 'damson' sandstone with dressings around doorways, windows and foundations in gabbro. The red sandstone is of unknown origin, but it is almost certainly one of the Permo-Triassic, fluvial sandstones from northern England or Scotland, the St Bees Formation and its equivalents. The stone shows strong laminations and evidence of channel cross-bedding. Grain size ranges from fine to coarse sand. The stone very much resembles Corsehill Stone from Annan in Dumfriesshire (Triassic), but this cannot be confirmed. The black gabbro used on the door casings takes an extremely high polish. Close observation shows this to be composed of medium-grained crystals of plagioclase and slightly bronzy, black pyroxenes. It is speckled with magnetite which is responsible for the black colouration. Black gabbros are predominantly sourced from Mashonaland, in Zimbabwe. They are quarried from a series of 1.9 billion year old sills intruded into a large area to the east of Harare. The stone is marketed as **Nero Zimbabwe**.

### **65, Chandos Place**

The white stones cladding part of the portico superstructure of 65 Chandos Place are easy to miss. But look at the greyish panels on the square-section columns at the doorway. This is a medium to fine grained, pale metamorphic rock, a metagranite which is studded with red garnets, around 3-5 mm in diameter. The rock is otherwise composed of feldspar, quartz and biotite. This is a variety of stone generically known in the stone trade as '**Kashmir**'. It is quarried in several localities in Tamil Nadu, India and belongs to the Proterozoic Southern Granulite Terrane. Texturally, these rocks grade from metagranites to migmatites. However, similar stones, marketed under the same trade name are reputedly also quarried in Brazil.

*Retrace your steps towards the Edith Cavell Memorial, and then turn right onto St Martin's Lane.*



Above left; 53-59 Chandos Place; middle, detail of the red sandstone and right; detail of the garnet-bearing meta-granite at 65 Chandos Place.

### Notes Café

The first building of geological note encountered on St Martins Lane is Notes Café which has an attractive, arcaded façade in pink granite. This is **Corennie Granite** from Tillyfourie in Aberdeenshire. The Corennie pluton is a very narrow intrusion, for the most part less than half a kilometre wide, really a large sill, cross-cutting the much larger Tillyfourie Granite. It is a medium-grained microgranite, with weak foliation defined by streaks of quartz. Most obvious is the pink feldspar with irregular shapes and relatively little mica. Geologically it is one of the so-called Caledonian Late Tectonic granites of the Grampian terrane, probably dated to around 450 Ma. The stone has been quarried since at least the 10<sup>th</sup> Century and is still worked today.



### The Coliseum

Home of the English National Opera, the Coliseum, was originally built as a variety hall in 1902-04 by legendary Edwardian theatre architect Frank Matcham, who also built the Hackney Empire and the London Palladium amongst others. The upper storeys are clad in architectural terracottas made by Hatherns of Leicestershire. A dark red-brown granite, which from a distance rather resembles blocks of chocolate, is used to clad the door and window surrounds on the lower storey of the opera house. On closer inspection this granite is medium to coarse-grained, dominated by large, red orthoclase feldspars which appear to

have been crushed. Also present are distinctly bluish, strained quartz, with clots of mafic minerals. These textures are typical of a suite of alkaline granites emplaced in Southern Sweden at the end of the Sveco-Fennian Orogeny, between 1.8-1.6 Ga, forming the Småland and Värmland Massifs and also referred to as the Trans-Scandinavian Igneous Belt. These form several of a number of coarse-grained granites which have been quarried along the Kalmar coast of Sweden. Known as the 'Coastal Reds' these were shipped direct from the quarries and often brought into Aberdeen for dressing and polishing, before being sent down to London by train. There is little published in the literature to distinguish and identify these granites, though their names were well known. The variety used here is **Vånevik Granite** according to Ashurst & Dimes (1998), and indeed Elsdon & Howe (1923) rave about the beauty of this stone, but unfortunately they do not describe it. Zandstra (1988) and the new website illustrating this work have been more helpful in securing the identification of this stone.

#### **Quaker House, 52 St Martin's Lane**

This building (right) was built in 1956 by Hubert Lidbetter, renovating a former bomb site. The doorway is framed with **Cornish Granite**, of the so-called 'small-megacrystic' type. This, as the name suggests, contains orientated phenocrysts of white feldspar, around 2 cm long, set in a brown groundmass. This is a very similar stone to that seen at the National Portrait Gallery, described above.



#### **Green Man & French Horn**

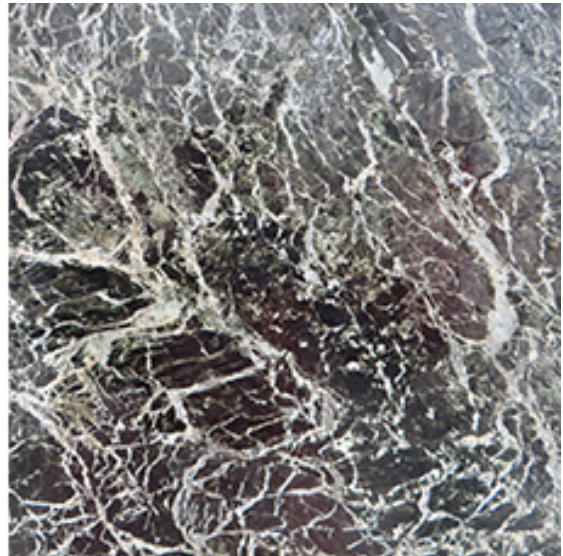
A tall and narrow pub is slotted in at 54 St Martin's Lane, with a three-dimensional sign depicting the eponymous Green Man blowing his horn. The façade of this pub is fitted out with pretty standard late Victorian pub rocks, the pairing of pink **Peterhead Granite** on foundations of grey **Cairngall Granite**. The two stones come from adjacent intrusions near Peterhead north of Aberdeen. Grey Cairngall Granite, also known as 'Peterhead Blue' is the oldest geologically, intruded early in the Caledonian mountain building episode, c. 475 Ma. It is quarried at Cairngall Quarry near the village of Flushing. The 406 Ma Peterhead Granite comes from Stirlinghill. The stones used in this pub are also listed in Siddall (2014).

#### **60, St Martin's Lane**

60 St Martin's Lane houses the Eat sandwich bar and offices, the latter with a somewhat incongruous but elaborately carved wooden lintel. Interestingly, a plaque tells us that this building stands on the site of cabinet maker Thomas Chippendale's workshop. The ground floor frontage has a dentilated coving, supported by square-section engaged columns of **Peterhead Granite**, as seen at the pub described above. The stone is polished but the ashlar is dressed in a rusticated manner. They stand on foundations of grey, **Marina Pearl Larvikite**, a coarse grained monzonite from the Oslo Graben in Norway.

#### **61-62, St Martin's Lane**

Next door is the rather ornate front of 61-62, St Martin's Lane. The columns and door frame are of rather grubby looking **Verde Alpi** serpentinite. This term is a rather generic one which encompasses a number of serpentinites outcropping in the Val d'Aosta in Piedmont region of the Italian Alps, and just over the border in France. They represent deformed slivers of ancient seafloor emplaced as part of the Zermatt-Saas nappes during Alpine Collision in the late Cretaceous. Although some varieties of Verde Alpi have distinctive textures which enable them to be provenance, many are simply tectonised serpentinites, cross-cut with calcite veins and could be derived from any of several localities in this region.



### Verve Bar, 1 Upper St Martin's Lane

The Verve Bar is a classic Edwardian pub, and typical of its architectural style, the ground floor is clad with a riot of decorative granites. Starting at the doorway, the entrance is framed by **Dark Shap Granite**, with characteristic pink, tabular phenocrysts. This is one of England's greatest decorative granites, quarried at Shap Fell in Cumbria. It was intruded towards the end of the Caledonian Orogeny around 400 million years ago. **Marina Pearl Larvikite** is used to clad much of the rest of the building, interspersed with columns of **Bon Accord Granite**. Larvikite is named after the town from near where it is quarried, Larvik in southern Norway. It is a grey monzonite, packed with schillerescient feldspars. It was intruded at 290 Ma into the extending Oslo Graben. Finally, the red Bon Accord Granite is also of Scandinavian origin, from Kalmar Province in eastern Sweden. This is by far and away the oldest rock used here. It dates from 1.4 Ga, and it is one of the rapakivi granites, a pyterlite, intruded into the Småland Massif. It is probably derived from the Götemar Granite and the quarries at Kråkemåla. The main distinguishing characteristic of this stone are the large, brick-red feldspars. This pub is also listed in Siddall (2014).

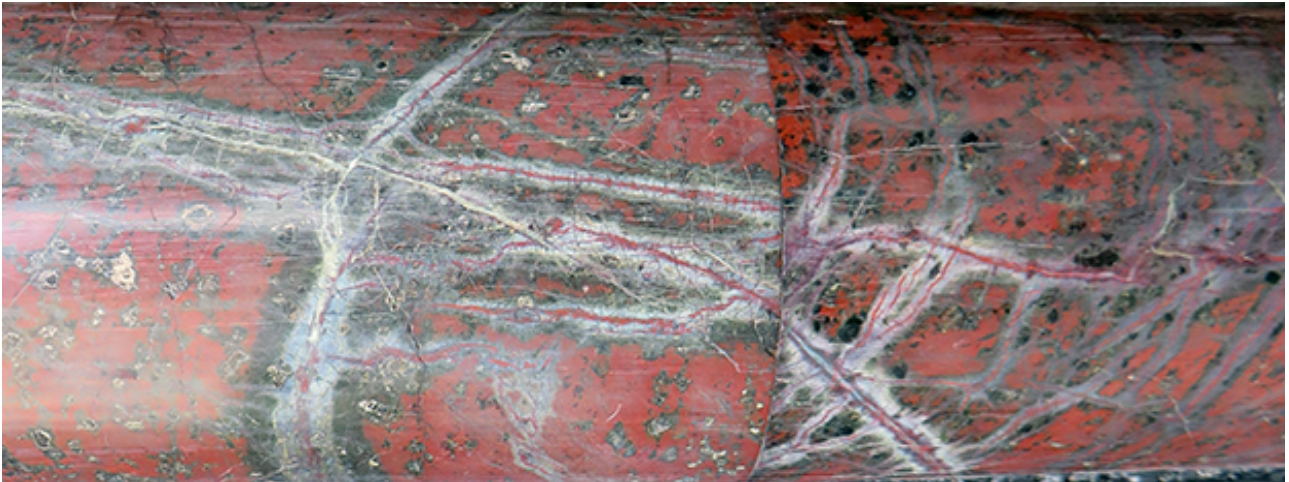


Turn to the right along Garrick Street to the booksellers Waterstones.

### Waterstones, 9-11, Garrick Street

This lovely Victorian shop front, dating from the 1860s, has windows divided by slender pillars of red serpentinite set on pedestals and plinths in shades of green serpentinite. All varieties used here are **Cornish Serpentinite**, quarried on the Lizard Peninsula. There are two main types of serpentinite, both occurring in a wide range of colours, outcropping on the Lizard. Tremolite-serpentinites, representing deformed, upper

mantle occur in the minority. However, the bulk of the stone worked here is a bastite-serpentinite, exhibiting a porphyroblastic 'igneous' texture, with prominent crystals of 'bastite'; talc-tremolite pseudomorphs after orthopyroxene which are distinctively bronzy in hand specimen, and often half a centimetre in diameter. Bastites are clearly visible in the red serpentinite observed here (below). A green bastite-serpentinite is found in the (original) pedestals to the pilasters.



Serpentine was worked small-scale from the Lizard since antiquity, with more industrial cutting and polishing works set up in the early 19<sup>th</sup> Century. However the stone was admired by Prince Albert when he visited Cornwall in 1846 and it was subsequently well received at the Great Exhibition of 1851. However, this building is a rare remaining example of Cornish Serpentinite wearing up well on the streets of London. It was found not to do well in exterior and polluted environment and surfaces often developed a dull, chalky patina. As a consequence, architectural use of Cornish Serpentinite went into decline in the late 19<sup>th</sup> Century and today the stone is mainly used for small ornaments (Sagar-Fenton, 2005).

*Return to the junction and turn right into Upper St Martin's Lane.*

### **Orion House & 3 Meridian Place**

This complex, housing publishing offices in the Orion House Tower as well as shops and cafés was erected in 1990 by architects RHWL Partnership. It is a classic bit of post-modernism, characteristically clad with flashy granites. Most of the granite used is grey, and it is indeed **Sardo Grigio** (Sardinia Grey Granite) from Buddosò in Sardinia. It is used on this building in both polished and honed (that is, smooth, but not polished) slabs, so it is a good place to observe granite textures. The stone is porphyritic with pale grey feldspars, set in a medium grained matrix of potassic feldspar, biotite, plagioclase and quartz. It is quarried at S' Istria from the Buddosò Pluton of the early Permian (300-290 Ma) Corsica-Sardinia Batholith (Puccini et al., 2014). A band of red granite is also used on this building, unfortunately above eye-level. Consequently its textures and origin cannot be deduced. Red granites, popular in 1980-90s architecture were derived from Sweden, Brazil and India.

*It is worth taking a short diversion here to the left along Litchfield Street to the Ivy Restaurant and Club.*

### **The Ivy**

A detailed description of the rather nice and highly fossiliferous stones used on The Ivy restaurant is given in Siddall (2015). It is a building worth the attention of the urban geologist or palaeontologist with excellent examples of rudist and nummulitic rocks used on the façade. On Litchfield Street, the walls are clad with **Aurisina Fiorito**, a Cretaceous rudist limestone from the Trieste Region of Italy. The doorway on West Street is clad with Ordovician **Lake District Green Slate**. Further down West Street at the entrance to The Club, the walls are clad with a spectacular Eocene nummulitic limestone from Turkey, '**Rustic Green**'.

*Return to Upper St Martin's Lane.*

### 12-14, Upper St Martin's Lane

This block houses office-space, retail and restaurants and also backs onto St Martin's Courtyard behind. It was designed by architects MR Partnership with Stone Contractors Putney + Wood and was completed in December 2010. The upper stories are clad in **Jura Gelb**, a yellow-brown limestone from Bavaria. This is from the Treuchtlingen Formation, a lithographic limestone of Kimmeridgian (Upper Jurassic age). It is rich in fossils, including algae, sponges, ammonites, corals, forams and belemnites. Close inspections reveals tiny white flecks, 'tubiphytes' - *Tubiphytes morronensis* (a foraminifera with an overgrowth of cyanobacterial crust). The stone used here is 'vein-cut' i.e. orthogonal to bedding. The foundations are of a stone simply described as '**Grey Granite**' by Putney + Wood. It is a medium-grained grey-blue granite containing xenoliths of darker material. It is derived from China, but further provenance beyond this is unknown.

### St Martin's Courtyard (Slingsby Place)

Turning into the pleasant courtyard behind this façade, the same stonework as at 12-14 Upper St Martin's Lane is seen on the rear of this building. Of most interest here are the polychromy setts used to pave the courtyard. These are also Chinese Granites of which two are identified. The dark grey setts are a pyroxene-phyric tholeiitic basalt from Fuding in Fujian Province, marketed as **Black Pearl**. The phenocrysts are clearly visible and around 5-10 mm in diameter. These basalts were erupted between 143-130 million years ago. This stone has become very popular in paving and other settings in architecture over the last decade. The dark red stone is **Great Wall Red**, a porphyritic rock with a red groundmass and white feldspar phenocrysts also from Fujian. The grey and white setts are of unknown origin, but almost certainly Chinese as well. Multi-coloured granite setts, probably also derived from China are also seen on Monmouth Street.



### Sundial Pillar, Seven Dials

The area of Seven Dials, with the seven streets radiating out from a central point, was originally laid out in the 17<sup>th</sup> Century by MP Thomas Neale. Part of Neale's plan was the erection of the sundial pillar, and this was constructed by mason Edward Pierce in 1694. Then as now, the pillar was a focal point for people to meet. However back in the early 18<sup>th</sup> Century, those who made their rendezvous at the sundial pillar were considered 'undesirable' and their meeting point was removed<sup>1</sup>. However The Seven Dials Trust raised funds to erect a new pillar and this was unveiled by Queen Beatrix of the Netherlands in June 1989. The Dutch connection being that Thomas Neale was close to the court of King William of Orange. Artist Caroline Webb designed and made the 6 dial faces; the seventh dial is the pillar itself. The sundials are reputedly

<sup>1</sup> The Seven Dials Trust; [http://www.sevendials.com/the\\_seven\\_dials\\_monument\\_charity.htm](http://www.sevendials.com/the_seven_dials_monument_charity.htm)



accurate to within 10 seconds. The pillar is constructed from **Portland Stone Whitbed** and was carved by Ashby & Horner Stonemasonry Ltd. The oolitic texture of this stone is clearly seen in the plinth, along with a number of fossil shell fragments.



#### **Mercer Street Hotel**

Facing Seven Dials, on the corner of Mercer Street is the Mercer Street Hotel (left), a slick, modern refurbishment of the former Mountbatten Hotel. The porch is clad with a very classy-looking black marble, cut by relatively straight calcite veins. These are stained to variable degrees by yellow iron oxides. Unfortunately I have not been able to find out anything further about the architects and designers of this hotel and therefore have not been able to elucidate the origin of this marble.

*Turn left along Mercer Street to Shaftesbury Avenue, and then turn to your immediate left.*

#### **164 Shaftesbury Avenue**

The soffits of the porch of 164 Shaftesbury Avenue are clad in a chocolate brown, blotchy, bioturbated limestone. The identity of the stone is revealed by the stone contractors for this building, Keystone. It is called **Moroccan Leather** and is presumably from the eponymous country. Unfortunately I have not been able to find any further information regarding a more detailed provenance of this stone either geographically or stratigraphically. Nevertheless it is an interesting stone; heavily bioturbated, with burrows showing curved laminations known as '*spreite*'. The burrows are possibly the variety known as *Rhizocorallium* (below). Shell fragments are also present. The picture windows of this block enclose Michael Chaikin's articulated 'kinetic sculptures' of fish in an installation fittingly called 'Fish Tank'.



#### **Odeon Cinema, Covent Garden**

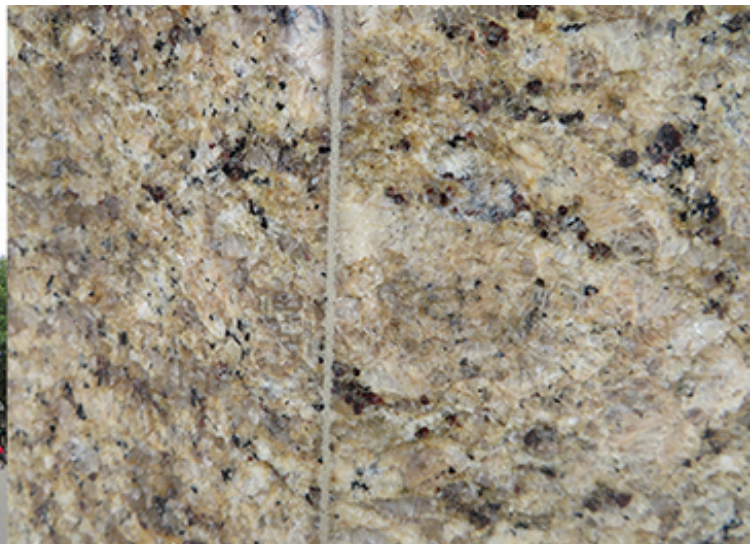
Opposite is the Odeon Cinema. Formerly the Saville Theatre, this building was designed by T. P. Bennet & Bertie Crewe in 1931. The relief spanning the façade, illustrating 'drama through the ages' is in cast stone by Gilbert Bayes. Below this frieze, the ashlar masonry is in Portland Stone Whitbed, and examples of oyster and other shell fragments can be seen in a number of places on the walls. Much more unexpected in the black 'marble' used for the foundations and the cladding in the porch soffits and square-section columns. The most noticeable thing about this stone is the streak-like veining of white calcite cross-cutting

the rock. The pattern of the veining suggests that this stone has been weakly deformed. Look more closely and this 'marble' is clearly a limestone as it is full of fossils. Most obvious, but easily mistaken for calcite veins at first glance, are large, fist-sized, fossils of thick walled brachiopods. Less obvious are blotchy, slightly greenish fossil corals, which are to be found throughout this rock. The black-colour is due to finely disseminated carbon particles. The origin of this stone is unknown, but it very much resembles varieties of the **Devon Marbles**, of Upper Devonian age and it is possibly one of the varieties from Plymouth or even Chudleigh Marble (see Watson, 1916).

*Continue up Shaftesbury Avenue, passing glass-fronted shops to St Giles High Street. Cross over this road to the tail end of Shaftesbury Avenue, opposite the Shaftesbury Theatre. Two buildings are worth seeing here, one for its spectacular granite and the other for its exotic architecture.*

### **Optical Express, Shaftesbury Avenue**

Optical Express is housed in a modern, flat iron-shaped block opposite the crossing (below). Of geological interest are the single column in the doorway and the paving on the accompanying steps. This is **Giallo Veneziano**, a coarse grained, garnet-bearing granite, with pink-yellow, foliated, megacrystic, perthitic K-feldspars, often with diffuse grain boundaries. It also contains biotite, quartz and silimanite. The yellow colouration is the result of iron staining due to tropical weathering. This granite is quarried from the Carlos Chagas Suite, a series of late Neoproterozoic plutons intruded in the region of Novo Venecia in Espirito Santo state, Brazil (Pedroso-Soares, 2011).



### **Hend House, 233 Shaftesbury Avenue**

Next door is Hend House, originally Britannia House, built at the height of the Egyptomania which swept through England after the discovery of Tutankhamen's tomb by Howard Carter in 1922. This building was completed in 1929, by architects Hobden & Porri. Its intention is to resemble an ancient Egyptian pylon, with a large, winged scarabs emblazoned across the portico and the penultimate register. However it is built in that most English of materials, **Portland Stone Whitbed**. A few, slightly weathered out fossils of oyster shells can be seen on the fluted columns.

*Across the road in a triangular traffic island is a Victorian drinking fountain.*

### **Shaftesbury Avenue Drinking Fountain**

Surrounded by shrubbery (and litter) this elaborate drinking fountain was set up in 1897, commemorating Queen Victoria's Diamond Jubilee. Much of the fountain is built from pink, **Corennie Granite** from Tillyfourie, as seen at Notes Café on St Martin's Lane, above. Panels and basins are of a blue-grey, medium- to coarse-grained granite with blotchy white feldspar phenocrysts. This is probably a variety of **Cairngall**

**Granite**, a 475 Ma, early Caledonian granite, quarried from the Forest of Deer Pluton at Flushing in Aberdeenshire.

*Return to St Giles High Street, cross over and turn right to the Victorian pub, The Angel.*

### **The Angel, St Giles High Street**

The upper storeys of the pub are built from brick and architectural tiles, however, as is typical of many London Pubs of the 1880s and 1890s, the lower storey is in 'pub rock', **Emerald Pearl Larvikite**. A similar stone has been described for the Verve Bar, above and is an early Permian monzonite from Larvik in southern Norway. This pub is also listed in Siddall (2014).

*The pub is the final point on the walk. From here it is a short walk to Tottenham Court Road tube station on Oxford Street or to the many buses stopping at Tottenham Court Road.*

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