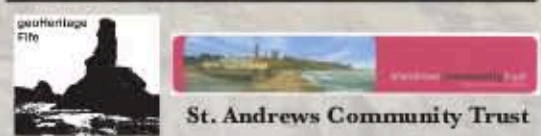


# BUILDING STONES OF ST. ANDREWS



This leaflet takes you on a guided walk around the town to see a selection of stones used for over eight centuries in the construction of buildings in St. Andrews. The stones themselves span an age range of 550 Million years, from 700 Million year-old Dalradian rocks (Ballachulish slates) to 150 Million year-old rocks from the Jurassic Period (Portland Limestone) when dinosaurs roamed the Earth.



**84c Market Street**  
*(Formerly Luchterbooth, then Ness and now Sam Brown)*  
 The shop to the south of the fountain at No.84c Market Street has a stone frontage beneath its windows of what is known by stonemasons as "blue pearlite". Its geological name is **larvilitite**, named after the town of Larvik in Norway where it is quarried. The rock, of Permian age, is mostly made up of a blueish **feldspar** mineral and the shimmer effect seen in the crystals is caused by light being reflected by thin layers within the crystals.

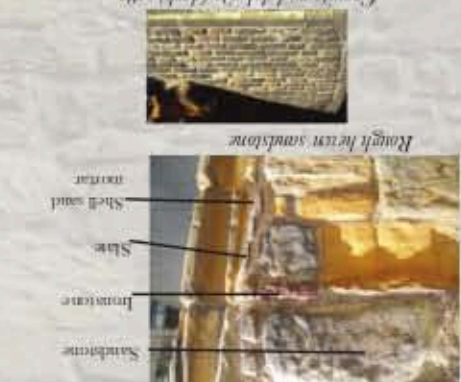


View of larvilitite quarry, Norway

## LOCALITY 1



**West Port**  
 The West Port is the only remaining port in the town. The contract for its construction dates from 1389 and states that it was to be made of "fine ashlar" (rectangular shaped cut stone). Reconstructed in the 1840's, it shows no sign of good cut stone, but is made of stone rubble. The main stone is Carboniferous **sandstone** of various colours, with odd pieces of rock in between reddish fossiliferous **limestone**. The stone nodes and slivers of **slate**, suggesting that they were scavanged from other buildings and nearby beaches and fields in the 1980's a pavement made of **dolerite** and **granite** sets was laid on the West side.



*(Rubble and dolerite (dark) sets)*  
 Rough heavy sandstone  
 Shell sand mortar  
 Slate  
 Sandstone

## LOCALITY 2

## LOCALITY 2



**Blackfriars Chapel**  
 Built in 1525, this arch formed part of the north transept and is all that remains of a 13thC Dominican monastery or Blackfriars Chapel. It is made of Carboniferous **sandstone**, probably from Strathkinness. The blocks are large and evenly cut for the time. While most of the stone is white or brownish in colour, some is reddish and resembles Carboniferous **sandstone** from Craighead Quarry at Crail. Rubble infill can be seen where other walls existed and this material was probably collected from the local fields and beaches. Some **sandstone** blocks have been laid with the bedding perpendicular to the base, along the layers.



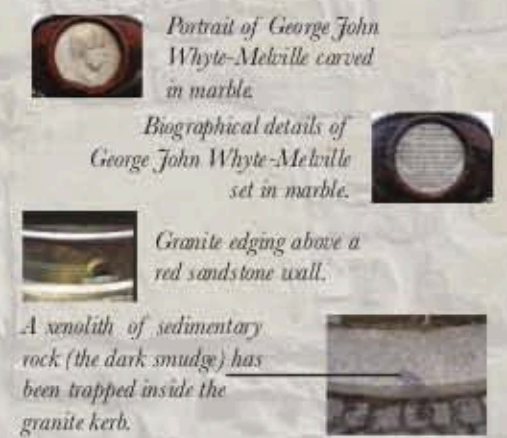
*(Rubble and rough heavy sandstone from Craighead Quarry, Crail)*  
 Cut blocks of Strathkinness sandstone

## LOCALITY 3

## LOCALITY 3



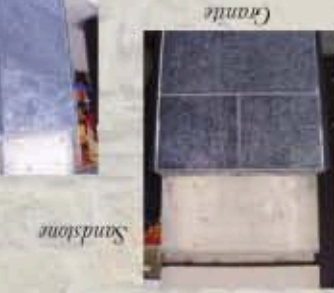
**Whyte-Melville Fountain**  
 This fountain was built in memory of George John Whyte-Melville who died in 1878. It is made of red **sandstone** of Permian age from Dumfriesshire. The central bowl rims and the small pillars supporting the upper sections are made with polished **granite** from Dalbeattie. The pink tinge is due to crystals of pale pink potassium **feldspar**. It also contains some dark patches called **xenoliths**, which represent pieces of sedimentary rock plucked by the **granite** when it was molten.



*Portrait of George John Whyte-Melville carved in marble*  
*Biographical details of George John Whyte-Melville set in marble.*  
*Granite edging above a red sandstone wall.*  
*A xenolith of sedimentary rock (the dark smudge) has been trapped inside the granite kerb.*

## LOCALITY 4

## LOCALITY 4



**Queen's Gardens**  
 It was built in 1962 of **sandstone** from England. The lower courses are faced with polished and rough cut **granite** from Craighead Quarry in Dumfriesshire. The dark polished rock around the door is a **gabbro** from Sweden.



*Gabbro*  
*Granite*

## LOCALITY 4

## LOCALITY 4



**78 Market Street**  
*(Formerly the Electricity Board showroom, now Rogerson Footwear)*  
 This building has been faced with large cut slabs of greenish-grey **slate**, probably from Broughton Moor quarry, Westmorland (now Cumbria), which shows up sedimentary layering very well. The green colour comes from the mineral chlorite, which results from the breakdown of iron- and magnesium-rich minerals in volcanic ash produced in large volumes in the English Lake District during the Ordovician Period. That volcanic episode occurred when the "England" crustal plate collided with the "Scotland" plate.



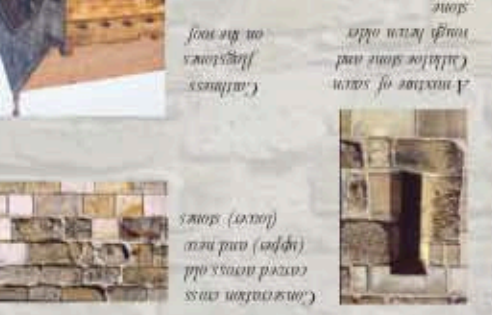
*Detail of Westmorland slate showing horizontal bedding structures.*

## LOCALITY 5

## LOCALITY 5



**Holy Trinity Church**  
 A church was founded on this site in 1410-12. The tower is the oldest part and is probably made of Strathkinness or sea **sandstone**. The rest of the church was rebuilt in 1909 of Carboniferous **sandstone** from Callaloe Quarry. Black patches seen on some stones are probably traces of oily organic material oozing from the **sandstone**. On the west wall is a circular cross carved at consecration. The roof is covered with slabs of **limestone**, which while heavier than **slate**, is much more robust.



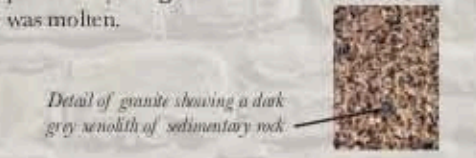
*Callaloe sandstone and limestone on the roof*  
*Callaloe sandstone and limestone on the roof*

## LOCALITY 6

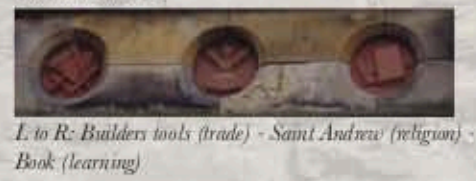
## LOCALITY 6



**19 Church Street**  
*(Formerly Henderson's Bookshop, now White Stuff)*  
 This shop frontage is made of polished pink **granite** from Peterhead. The same stone has been used in the pillar of the shop at the corner of Church Street and Market Street *(currently Bonkies)*. The **granite** contains a few blotches (or **xenoliths**) of a darker rock, which are pieces of the surrounding rock plucked by the **granite** when it was molten.



**80 Market Street**  
 From the East side of Church Street, with your back to the shoe-shop, look up to the roof line opposite to see three circular carvings in a red **sandstone**, probably of Permian age from Dumfriesshire.



*L to R: Builders tools (trade) - Saint Andrew (religion) - Book (learning)*

## LOCALITY 7

## LOCALITY 7



**94 South Street**  
 This building, currently *WH Smith*, used to be the *National Bank of Scotland*, which then became the *Royal Bank of Scotland*. At the entrance are columns made of **sandstone**, which are part-faced with **granite** (pale grey) on the sides. Above the entrance there is a fine sandstone carving of the coat-of-arms of the former National Bank of Scotland.



*Rubble and rough heavy sandstone from Craighead Quarry, Crail*  
 Rubble and rough heavy sandstone from Craighead Quarry, Crail

## geoHeritage Fife

- \* publicise Fife's geological heritage
- \* provide educational resources in geology
- \* promote geotourism

If you would like to assist with these aims, consider joining the group or making a donation by contacting:  
 geoHeritage Fife  
 T: 01334 828623

Scottish Charity No. SC032509

## Fife LGS/RIGS

RIGS were Regionally Important Geological and Geomorphological Sites, but are now known as Local Geodiversity Sites (LGS).  
 Fife LGS is concerned with identifying and assessing important sites and notifying the statutory planning authority of these sites. Fife LGS was incorporated into **geoHeritage Fife** in 2005.

## SAFETY INFORMATION

This trail is about 2 km long, and involves walking on public footpaths and crossing roads. Wherever possible, use pedestrian crossings.

## TRAVEL INFORMATION

Rail: The nearest railway station is Leuchars, served by Scotrail, Virgin East Coast and Cross Country services.  
 Bus: St. Andrews is served by Stagecoach services from Dundee, Edinburgh, Glasgow and Glenrothes.  
 Road: A91 from Stirling, A915 from Kirkcaldy, A917 from Upper Largo, A914/A919/A92 from Dundee.