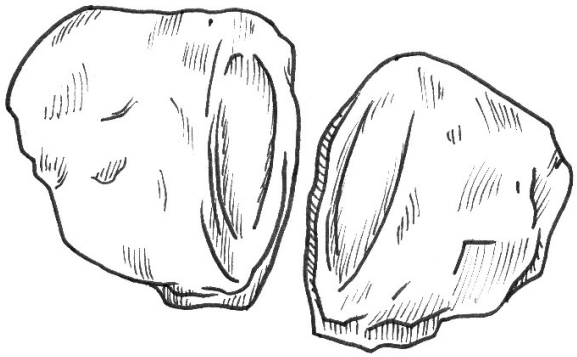
Geology fact sheet:

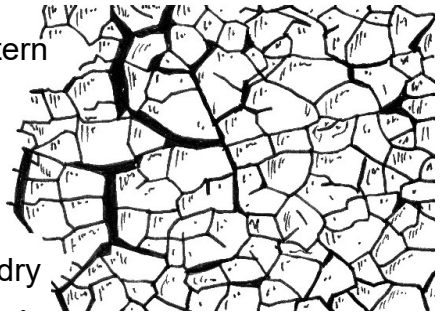
IRONSTONES



Iron is a naturally occurring element and is found in many different rock types. Iron oxides are often found in rocks – giving them a characteristic red/brown rusty colour. Ironstone nodules (or just ironstones) are sedimentary rocks that are usually a mixture of iron oxide and clay. Ironstones are often spherical, conical or rounded in shape as they generally formed around a central nucleus of a small fossil or piece of gravel.

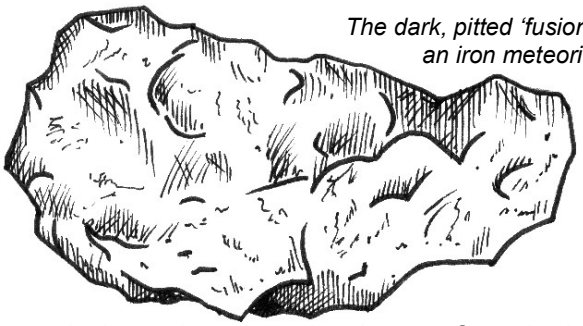
In Norfolk many of the ironstones come from what's known as the 'Wroxham Crag' – a concreted, iron-rich sand, gravel and clay deposit, about 1.5 to 3 million years old. This rock layer (although much younger) is found on top of the chalk deposits along the east Norfolk coast.

Ironstones sometimes have a mud-crack pattern on their surface. This occurred when water evaporated from the sediment surface (a similar pattern occurs when muddy puddles dry out).



Ironstones can often be confused with other iron-rich materials.

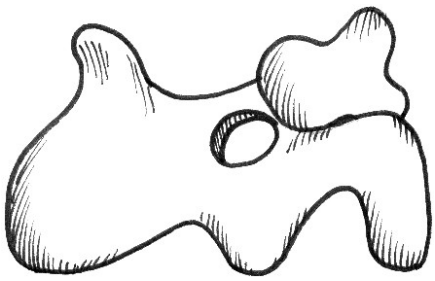
Iron meteorites are extremely rare and have a thin, black 'fusion crust' which forms when superheated during atmospheric entry. Ironstones do not have this characteristic fusion crust.



The dark, pitted 'fusion crust' of an iron meteorite

Man-made iron slag can also be confused with natural ironstone. Iron slag is also a mixture of iron oxides (but does not contain any clay). Iron slag often has a lava-like appearance, which sedimentary ironstones do not have.

Ironstones can become highly polished by being washed around on the beach. Sculptors such as Henry Moore and Barbara Hepworth's work were influenced by the ironstone nodules they found on the beaches of Norfolk.



A Barbara Hepworth sculpture influenced by the ironstones she found on Happisburgh beach

The molten appearance of a piece of iron slag

NORTH NORFOLK DEEP HISTORY COAST

Norfolk Museums Natural History