

Managing geological specimen collecting: Fowlmead Country Park case study

This case study has been written to help explain the guidance provided in TIN111. It illustrates fossil collecting from mine dumps in Kent. Fowlmead is recognised for its geological significance and is a material consideration in the planning process through its non-statutory designation as a Local Geological Site. Fossil collecting on the site is managed using a controlled collecting approach.

Background

Fowlmead Country Park is an 80 ha landscaped, disused spoil tip of the former Betteshanger Colliery located approximately 3 km northwest of Deal in Kent.

The former colliery opened as a Country Park in 2007 and amongst the leisure and recreational activities offered is a designated fossil collecting area where a rock store of mining waste has been created. This gives visitors an opportunity to find fossil plants from the Carboniferous Period.

Fossil arthropods have also been recovered from the site, including millipede-like species.

Understanding the fossil resource

Nature of the site

This is a finite site with limited resource (fossiliferous mining waste). Complete removal of the material would destroy the features of interest.



Fossil fern leaves from Fowlmead.
© GeoConservation Kent

The process of exposure

There is a predictable exposure of fossils through regular artificial turning over of the mining waste. A greater abundance of fossils is available immediately after the rock store is turned over.

The nature of the interest

Abundant Carboniferous fossils: fossil plants are common, fossil arthropods are rarer.

Managing geological specimen collecting: Fowlmead Country Park case study

Specimens recovered from this site are key in understanding the changing climatic conditions and habitat during the Carboniferous Period.

Fossil plant finds can be taken off site by amateur collectors, but rarer fossil insects must be recorded or handed over for further study and conservation.

The nature of collecting

The collecting pressure is low as this is a newly established site (in 2007). Visitor numbers are currently within sustainable limits. Specimens are abundant and can be easily recovered then studied off site by specialists. There is no possibility for studying *in situ*.

Ownership

Straightforward: single ownership although management responsibilities lie with a separate company who have diverse interests in the use of the park.

The nature of the access

Access is controlled effectively by:

- fencing;
- restricted opening hours; and
- mandatory site supervision by geological volunteers.

The skills of collecting

Low level skills are required and the cost of collecting is low. Specimens can be recovered easily from loose spoil. Supervision and tools are provided for visitors at all times by GeoConservation Kent volunteers.

Research and museum collections

Local finds are housed in geological collections at Maidstone Museum.

Management options and issues

The collecting pressure on the geological resource at Fowlmead is low at this stage as it was relatively recently established as a collecting site and visitor numbers are carefully managed.

The threat of that pressure to the resource is also low because new material is exposed every six months or so through artificial turning over of the mining waste and there is an abundance of fossil specimens to recover.

However, the finite nature of the resource means both the collecting pressure and threat to the resource could increase in the future if visitor numbers grow and the resource becomes depleted. Management of the fossil collecting area should consider the benefits and pressures of collecting and also the management requirements related to other recreational uses of the country park.

Selecting the management approach

Fowlmead Country Park is under the ownership of the South East England Development Agency (SEEDA), but the management responsibilities lie with a private company. In most cases, the enforcement of various management approaches relies upon the efforts of dedicated staff on site. GeoConservation Kent currently provide volunteers to assist with aspects of management of the fossil collecting area and geology-based activities. However, the absence of dedicated geological staff at Fowlmead, due to insufficient resources, is recognised as a management constraint.

Fossil collecting activity is kept within sustainable limits by promoting a 'controlled collecting' approach. Access to the designated fossil collecting area is controlled through the Country Park's restricted opening hours and all visiting parties must pre-arrange access to the designated fossil collecting area through GeoConservation Kent, who also supervise all visits to the fossil collecting area. This is important for:

- health and safety reasons;
- promoting good specimen collecting practice; and
- for sharing geological and scientific knowledge with visitors.

All supervised groups are provided with appropriate safety equipment and guidance for

Managing geological specimen collecting: Fowlmead Country Park case study

using the tools available at the site to recover fossil finds.

Low fencing is in place to control the extent of fossil collecting and digging, particularly to prevent encroachment into an adjacent area where lichen is of biodiversity value.

As part of the Education Programme at Fowlmead, a range of supervised activity sessions are organised including one focusing on fossil collecting. This allows children to learn about fossil formation and to dig for their own fossils under close guidance from geological experts. Support is again provided by the GeoConservation Kent.

Fossil collectors are currently allowed to take home most specimens they uncover, but rare insect finds must be recorded with Maidstone Museum.

A small selection of local finds are displayed in a temporary visitor centre on site, which offers visiting groups the use of classroom space and educational resources including interpretation boards on the geology of the Fowlmead area.

Monitoring and progress

At present no formal monitoring and reporting is undertaken to assess the success of the various management approaches in place at Fowlmead. The regular presence of GeoConservation Kent group members on site to supervise visiting parties acts as a form of site condition monitoring.

Further information

GeoConservation Kent. Fowlmead Country Park web pages. Available at URL:

www.kentrigs.org.uk/index.php?option=com_content&view=article&id=24&Itemid=21

[Accessed March 2012].

Natural England Technical Information Notes are available to download from the Natural England website: www.naturalengland.org.uk. In particular see:

- TIN111: *Managing geological specimen collecting*
- TIN112: *Managing geological specimen collecting: responsible collecting*
- TIN113: *Managing geological specimen collecting: caves*
- TIN114: *Managing geological specimen collecting: Charmouth case study*
- TIN116: *Managing geological specimen collecting: rock coring*
- TIN117: *Managing geological specimen collecting: Whittlesey Brick Pits and King's Dyke Nature Reserve case study*
- TIN118: *Managing geological specimen collecting: Wren's Nest case study*
- TIN119: *Managing geological specimen collecting: Writhlington case study*
- TIN127: *Managing geological specimen collecting: Caldbeck Fells case study*

For further information contact the Natural England Enquiry Service on 0300 060 0863 or e-mail enquiries@naturalengland.org.uk.

Authors and acknowledgements

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Table 1 Summary of management approach at Fowlmead Country Park

Management approach taken	Controlled collecting approach
Benefits of chosen management approaches	<ul style="list-style-type: none"> • Safe and responsible learning encouraged and supervised by geological experts. • Controlled access prevents damage and depletion of geological resource and damage to adjoining important biodiversity areas. • Controlled collecting contributes to sustainable exposure of new material.
Drawbacks of chosen management approaches	<ul style="list-style-type: none"> • Reliant on volunteer input while sufficient funding and staff are not available.
Current monitoring situation	<ul style="list-style-type: none"> • Visitor numbers are estimated but not formally monitored. • There is currently no formal Management Plan or written best practice for fossil collecting. • Regular on site presence of GeoConservation Kent volunteers acts as a form of site condition patrolling / monitoring. • Possible requirements for future site condition monitoring under Local Geological Site status.