



# How to carry out archaeological fieldwalking

## What is fieldwalking?

**Surface Artefact Collection**, or archaeological fieldwalking, is the **systematic** recovery and recording of artefacts found on the surface of cultivated ground (i.e. ploughed fields). It is a relatively rapid, non-invasive and low-tech method for surveying large areas of landscape in order to generate a basic picture of past human activity in a study area, how it changed over time, and how it used the landscape. It can be carried out by people of all ages, who do not need to have any previous archaeological experience.

**HOWEVER**, to be effective, fieldwalking:

- **Must** be carefully planned with a defined objective.
- **Must** be conducted in a controlled manner using a standardised collecting and recording methodology.
- **Must** have simple statistical analysis applied to the collected data.
- **Must** be reported on and its results released to the public domain (e.g. via the Historic Environment Record).

This guide provides information on setting up and carrying out fieldwalking. How to process archaeological material from your field walk is detailed in **Fieldwork Guide #5**. How to interpret fieldwalking data is detailed in **Fieldwork Guide #2a**.

## How do artefacts appear on the surface?

Fields are ploughed to break up and aerate the ground, improve drainage and bury weeds and crop remains (to add organic material and nutrients to the soil). Ploughing inverts topsoil (and subsoil and natural ground if the topsoil is shallow) potentially disturbing buried archaeology. Artefacts buried in lower soil layers may be picked up by the plough and turned over in the furrow, appearing on the surface.

**REMEMBER:** Some archaeology may be too deeply buried to be disturbed by ploughing - absence of evidence **DOES NOT** necessarily mean evidence of absence.

Artefacts will circulate around in the topsoil, move, rebury and be uncovered again by repeated ploughing. New artefacts will be introduced to the topsoil every time the plough disturbs buried archaeology but particularly deep ploughing may completely rebury a site again.



Ground too rough, light too bright (shadows)



Perfect, well-harrowed ground & flat light



Poor visibility because of crop germination



## Equipment

- 30m or 50m survey tapes
- c.30 coloured flags, or garden canes with visible streamers/flags fixed to their tops.
- Permanent markers (1 per walker), pen, pencil, rubber, clipboard etc.
- Large resealable plastic finds bags (e.g. 8"x11")
- Compass and/or handheld GPS
- Camera
- OS maps of the study area (1:25000, 1:10000 or 1:2500 are best because they show field boundaries)
- A Fieldwalking Record Form (which can be downloaded from: <http://leicsfieldworkers.co.uk>)
- Suitable clothes and footwear for all weathers and muddy fields
- Rucksack for carrying equipment and finds

**NOTE:** Nothing specialist is needed, this equipment is all easily obtainable from garden centres, hardware stores, outdoor shops or online.

## When is fieldwalking best carried out?

Fieldwalking can **ONLY** be carried out on ploughed fields and typically takes place in autumn and winter months (October – March).

Fields should be ploughed, harrowed and allowed to weather for a time. Freshly ploughed fields are unsuitable:

- Rough, uneven surfaces created by furrows make walking difficult.
- Large clods of unbroken earth leave artefacts trapped in the soil.
- Dark shadows cast by furrows, particularly in bright oblique sunlight make visibility poor.

Well germinated crops, thick frost and snow are all also unsuitable because of poor soil visibility.

Fieldwalking is **BEST** carried out in dull uniform light, 2-3 weeks after ploughing or after crop has been planted but before complete germination (after heavy rain or frost is also good because it will weather the surface, better exposing artefacts).



### Before you start

Here are some useful questions to ask yourself before you start fieldwalking. For more information on setting up archaeological projects, read **Fieldwork Guide #1**.

What are my aims?

- What do I want to find out?
- What fieldwork method is the most appropriate to achieve my objective?
- What background research will I need before I start (e.g. HER, historic maps, photos etc.)?

What permissions will I need?

- Are there any restrictions? Will I need extra permissions (e.g. Scheduled Monument Consent)?

How will I carry out the work?

- Who will be involved? Will they need training? Who will be in charge?
- How will I communicate the details to the team? How will I ensure everyone knows how and what to do?
- What fieldwalking method will I use and how will I record the fieldwalking?
- What equipment will I need and where will I get it from? How will I get it to the site?
- Do I need to arrange parking and access? Will I need welfare facilities?
- What will I do with the finds & records once my project is complete? Will I need an accession number?
- What will I do if I find treasure?
- Will I produce a report and/or upload to the HER
- Have I planned time for setting up and walking the field (it always takes longer than you think!)?
- Have I planned time for washing and recording the finds (it always takes longer than you think!)?
- Have I budgeted for equipment and professional find specialists to analyse the finds (if needed)?

How will I keep participants & the public safe?

- What are the main health and safety issues and how will I deal with them?
- What will I do if there is an accident? What happens if it rains?



Make a record of the fieldwalking conditions, location and methodology on a **Fieldwalking Record Form**

### What to pick up

Generally, **anything** which has been made by, altered by or has interacted with humans.

**REMEMBER:** What is collected should be agreed before fieldwalking & explained to fieldwalkers so everyone is clear on the collection policy (a general survey will pick up everything, a targeted survey may be selective).

As a rule, the following material groups are usually collected:

**Ceramics** – pottery, clay tobacco pipe and building material (e.g. bricks, tiles & tesserae), but **NOT** modern field drainpipes.

**Lithics** – worked flint (e.g. flakes, tools, cores) & burnt flint.

**Building stone** – only if it is obviously worked, shaped or decorative.

**Glass** – both bottle/vessel & window glass.

**Metals** – all metal objects & industrial residues (e.g. slag).

**Bone & shell** – worked bone & shell, obviously butchered bone but **NOT** unworked animal bone unless specific research question requires its collection.

**REMEMBER:** If in doubt, it is better to collect artefacts, which can be discarded later, rather than reject them in the field.

### Recording your field

To fully understand the results of a fieldwalking survey, it is important to note during the fieldwalk any constraints which may influence/bias the data collection.

During fieldwalking, fill out a **Fieldwalking Record Form** for every field walked, so there is a permanent record of what work has been done.

Include:

- Details on where the field is, including a grid reference.
- Notes on weather, topography, geology etc.
- What type of fieldwalking survey was carried out
- Who was present
- A sketch map showing important details including field boundaries, area walked, location of first traverse/grid etc.

Complement the Fieldwalking Record Form with photographs illustrating the nature of the survey and the ground conditions.

Blank forms can be downloaded from

<https://leicsfieldworkers.org/resources/fieldwork-guides/>

### Reporting your results

**REMEMBER:** It is important to make the results of your fieldwork accessible to others:

- So others know what fields have previously been fieldwalked and don't needlessly duplicate results.
- So results can be viewed in a wider archaeological and historical context.
- And because our heritage is a shared resource and others have a right to know what was found – **HERITAGE FOR ALL**

The best way to make results available is through a report sent to the Historic Environment Record (HER).

HER contact details for England can be found here

<https://www.heritagegateway.org.uk/gateway/chr/default.aspx>



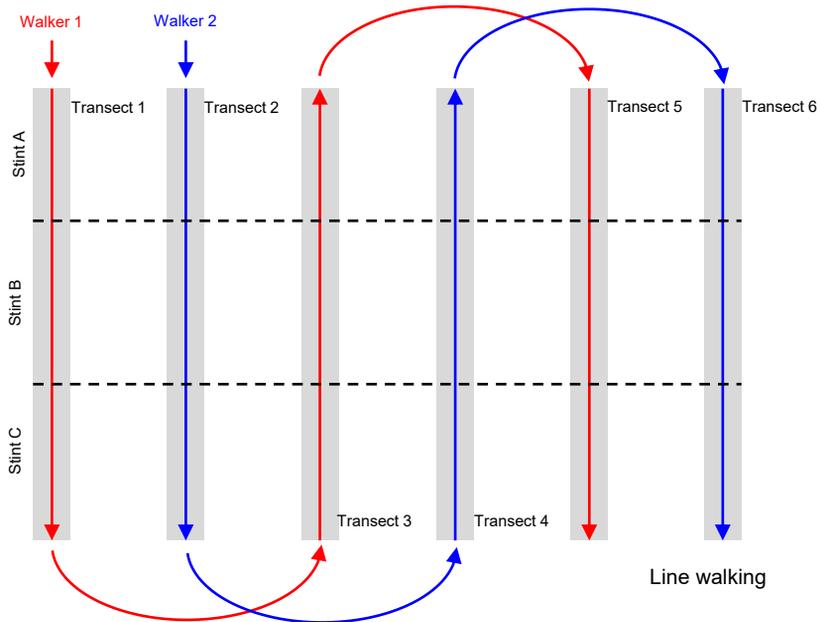
### Line walking

**Also known as:** transect walking, transect and stint and traverse and stint.

**Use:** Expansive survey allowing rapid assessment of large areas. It is usually used on areas of unknown potential.

- The field is divided into series of regularly spaced parallel lines (transects), usually at 10m or 20m intervals.
- Transects are further divided into regularly spaced intervals (stints), typically 20m to 60m in length.
- Each transect is walked, with artefacts collected from a band 1m to either side of the transect line (see diagram below).
- Transects spaced 10m apart with a 2m band of collection will provide a 20% sample of a study area.
- Transects spaced 20m apart with a 2m band of collection will provide a 10% sample of a study area.
- Artefacts are collected and bagged per transect and stint with each bag labelled with a unique code (e.g. bag 1A contains artefacts collected from transect 1, stint A etc.).
- Once a transect is completed, the walker moves to the next unwalked transect and starts again. These alternate transects are usually walked in reverse to save time.

**TIP:** Remember to be consistent with your methodology. If you walk different fields using different techniques are your results comparable? Use the same technique in all fields then repeat using different methods if needed.



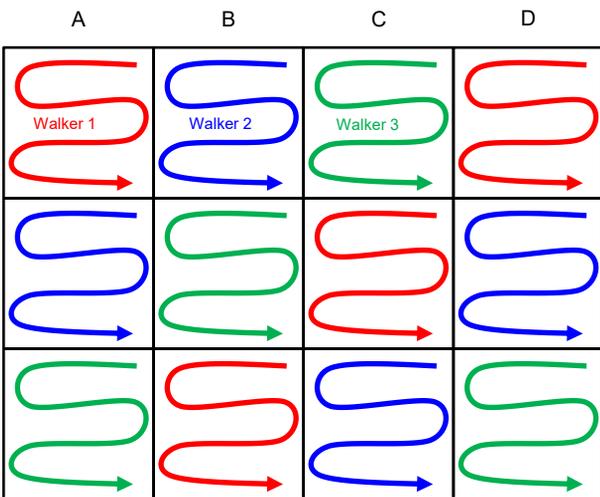
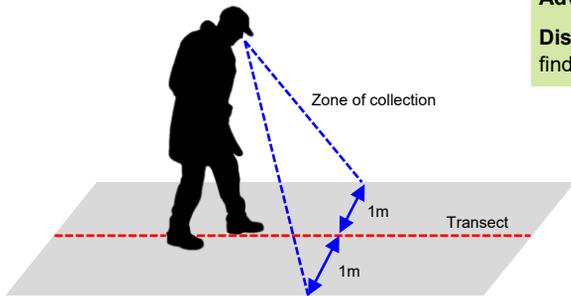
**Line walking variation**

Known as: Transect and GPS

- The field is divided into transects and each transect is walked, with artefacts collected from a band 1m either side of the transect line.
- Artefacts are individually collected and given a unique find code and a GPS grid reference. A hand-held GPS unit with c.3m accuracy is adequate for logging find spots.

**Advantage:** Data can more easily be imported into GIS software.

**Disadvantage:** In finds-rich fields you end up with a lot of individually bagged finds.



Grid walking

### Grid walking

**Also known as:** square walking

**Use:** Intensive survey allowing detailed or total examination of small areas. It is usually used with areas of known activity (to define boundaries or locate specific structures or areas of activity).

- The area is divided into a series of carefully measured equal-sized squares or grids (typically with sides of 5m to 20m).
- Each square is completely searched by an individual walker, sometimes for a set period of time to make the search of each square more consistent (e.g. 15-20 minutes).
- Grid walking effectively provides a 100% sample of the study area.
- Artefacts are collected and bagged per square with each bag labelled with a unique code (e.g. bag 1A contains artefacts collected from grid square 1A etc.).
- Once a square is completed, the walker moves to the next unwalked square and starts again.

**REMEMBER:** Laying out this type of grid takes a significant amount of time. As this technique provides a detailed collection of finds from a known site, the grid needs to be accurately tied to the national grid.

Grid walking is **NOT** an appropriate strategy for areas of unknown potential. It is a **GOOD** technique for providing greater definition for potential sites identified by line walking or geophysical survey.



### Setting out a grid

- Set out an initial baseline. It is usually easiest to do this along the longest and straightest field boundary.
- Run a 30m or 50m tape from your first point (e.g. in the corner of the field).

**REMEMBER:** When setting out the grid it needs to tie in to obvious landmarks in the locality which appear on Ordnance Survey maps (e.g. roads, field boundaries, buildings).

### Line Walking

- Mark off individual traverses with flag markers.
- To set out the first traverse, take a second tape and lay it out at right-angles to the baseline at 0m on the baseline (see creating a right-angle method).
- Mark off individual stints with flag markers.
- Repeat the process with the final traverse and lay out traverse intervals along a second baseline at the opposite end of the field.
- This creates a framework in which the other traverses & stints or grid squares can be set out.

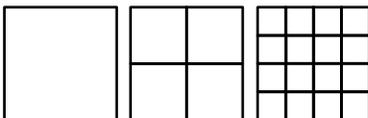
**TIP:** Straight field boundaries and obvious plough/seed lines in fields can help set out a grid quickly.

**TIP:** Set your first traverse c.5m away from the field edge so the walker has a clear line of ploughed soil to view.

### Grid Walking

- To set out the first grid square, take a second tape and lay it at right-angles to the baseline at 0m on the baseline (see creating a square method).
- Mark off the corners of the square with flag markers.
- Repeat the process with additional squares to complete your grid.

**TIP:** A 20m square can be used for smaller survey grids. Once an accurate square has been created it can easily be sub-divided into smaller units.



### Creating a square using a triangle with two equal sides

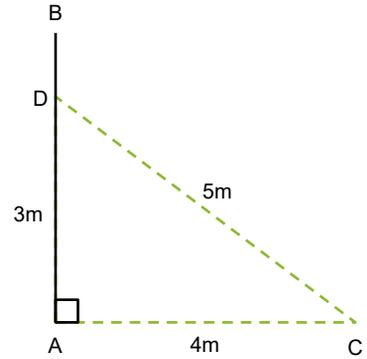
**You will need:** 1-3 measuring tapes, flag markers & 2-3 people

Using Pythagoras' theorem ( $a^2+b^2=c^2$ ) we know the hypotenuse of a:

- 5m square is 7.07m
- 10m square is 14.14m
- 20m square is 28.28m

- Lay out a baseline (A-B)
- To create a right angle from A to C.
- Measure 20m along the baseline (A-B)
- Measure 20m out from the baseline (A-C)
- Measure 28.28m between B and C.
- The two lines at A will now be at right angles to each other.
- Mark the three points with flag markers.
- Use the same process, using A-C as the baseline and C as the right angle to work out the fourth corner of the square (D).

Once the first square is created, other squares can be added to its sides following the same process.



### Creating a right-angle using a 3-4-5 triangle

**You will need:** 1-3 measuring tapes, flag markers & 2-3 people

If the lengths of the sides of a triangle are in a ratio 3:4:5 then the angle opposite to the side of length 5 is 90°. This can be scaled up to a multiple of the same ratio (e.g. 6:8:10 or 9:12:15 or 18:24:30)

- Lay out a baseline (A-B).
- To create a right angle from A to C.
- Measure 4m out from the baseline (A-C).
- Measure 3m along the baseline (A-D).
- Measure 5m between C and D.
- The line between A and C will now be at right angles to the baseline.

**NOTE:** If you only have one tape, the person at A can hold the tape at the 0m and 12m marks, the person at C holds the tape at the 4m mark and the person at D holds the tape at the 9m mark. When the tape is stretched you will get a triangle with a 3:4:5 ratio and a right angle at A.

