DRAFT VERSION 6

Hadrian's Wall Path National Trail
Generic Scheduled Monument Consent

Management of the Hadrian's Wall Path National Trail: The management of the grass sward and infrastructure in archaeologically sensitive locations

Version 6 (Confirmed by DCMS on xxxx xxxxxxx xxxx)

Purpose of the Generic Scheduled Monument Consent

This document explains the terms of reference and conditions attached to a regime of field based maintenance prescriptions, agreed with [1]English Heritage, for certain works permitted within the Scheduled Monument along the 84 mile course of Hadrian's Wall Path National Trail. It exists because Scheduled Monument Consent has already been granted for every individual structure within each monument along the route. It is intended, therefore, as a follow up to a Scheduled Monument Consent instead of being a substitute for one.

Not all works are permitted under the aegis of this consent. As well as its role as a field based management tool, laying out clearly what methods may be undertaken, and when, it will also be used as a basis for deciding when further applications for Scheduled Monument Consent are required.

It is essential that the prescriptions are enacted only by trained and experienced staff with a working knowledge of Hadrian's Wall and its nearby associated archaeology and a clear understanding of the tenets of the Scheduled Monument Consent. Staff must respect the entire assemblage of monuments within the World Heritage Site and they are responsible for ensuring that in gaining access to a site on the Trail they do not cause damage to any other intervening upstanding or buried earthworks.

All works undertaken are lodged within individual Trail section management plans.

Introduction

Frontiers of the Roman Empire: Hadrian's Wall World Heritage Site is an archaeological monument of both national and international importance. Its uniqueness and fragility, two of the qualities that led to its inscription onto the UNESCO list of World Heritage Sites, must continue to be respected by all concerned with its use as a recreational resource. This document sets out to explain both why this is so important and how the National Trail project, under the auspices of Natural England, aims to do this.

The modern history of Hadrian's Wall has witnessed increased access and mobility by the general public and, in common with many countryside destinations, this has led to a concentration of visitors in particular 'hot spot' sites. In the case of the Wall these localised and concentrated pinch-points have resulted in the development of problems of overcrowding and erosion to the fabric of the monument that we seek today to protect. The problems were documented in the Dartington report (1976) and in 1984 the Hadrian's Wall

[1] In 2015, some of the functions carried out by English Heritage, in particular those referred to in this document and undertaken by the Inspector of Ancient Monuments: Hadrian's Wall, on behalf of the secretary of State, will be undertaken by a new organisation called Historic England. Throughout this document, therefore, all mentions of English Heritage refer also to Historic England.

Consultative Committee published its *Strategy for Hadrian's Wall* which proposed the creation of a long distance route the length of Hadrian's Wall. In 1993, following a period of research into a possible route, a *Submission Document* was presented to the government with the important undertaking to manage the Trail's surface, with very few exceptions, as a green sward:

> *"The most appropriate footpath surface is a green sward path. This will be aimed for wherever practical, using vegetation management techniques as part of a regular maintenance regime. Where this is not possible, engineering solutions will be used but these will be kept to a minimum and will only be used in situations where lack of action would increase risk of damage by erosion".*

Finally in November 1994 the Secretary of State for the Environment granted conditional approval for the Trail's creation. (A copy of the Secretary of State letter, together with extracts from the *Submission Document* are enclosed within each Trail section management plan. See also Appendix 5 for list of reports referenced in this document).

The Trail's aims then, as now, are clear: to manage the path in a way that, wherever possible, does not compromise the integrity of the World Heritage Site, not only in terms of the direct impact of the Trail on archaeological remains, but also in terms of its impact on the setting of the monument. The Secretary of State granted permission for the Trail on the understanding that its underpinning aim must continue to be the long term protection of the Wall and its associated archaeology. Thus, while the Trail's aims clearly have to include the provision of public access and amenity, and acknowledge the needs of the farming community, its underpinning conservation aim must take precedence. It is, after all, in the long term interests of the regional tourism economy to protect the very thing that people travel from far and wide to visit. This aim will apply both to the need to address the impact of the Trail, and also with reference to measures to alleviate this impact.

In the planning of the Trail, its detailed route has been aligned to keep the path, wherever possible, away from the most sensitive areas of archaeological interest. However, the route of the Trail still crosses highly fragile archaeological sites and remains and, as a consequence, a key component of the focus of the maintenance of the Trail has been to ensure that these remains are not adversely affected by it.

This should be done through a very regular programme of maintenance of the existing grass sward. From the planning stages of the Trail the maintenance of a healthy grass sward was not only acknowledged as vital to the protection of the earthworks and buried archaeological deposits but it is also considered to be the most appropriate and sympathetic setting for the Wall. For most of its length, the Trail runs within the area around Hadrian's Wall that is legally protected as a series of Scheduled Monuments. This scheduling controls activities affecting the monument. For this reason, the maintenance of the Trail must comply with the Ancient Monuments and Archaeological Areas Act 1979.

It must be noted that this document covers only the archaeological and monument issues associated with Trail maintenance. By concentrating only on these issues it does not seek to represent guidance on the complex balancing of sometimes competing interests and sets of legislation that relate to works on Hadrian's Wall. Such issues are invariably complex and require discussion so that they can be worked through on a case-specific basis.

It does not explain the procedures for other permissions and statutory consents which may be required, for example: management and interventions within SSSIs that might also be necessary prior to works being undertaken within the Scheduled Monument area. *Working*

on farmland also brings with it specific responsibilities; staff should pay particular regard to bio-security and always obtain landowner and tenant farmer consents. Trail staff should refer to the section management plans (refer section 1.2) for details of other designations or points of note that require special attention.

Fundamental to this process it is vital that the following is understood:

- there is a range of maintenance tasks, listed below, that require Scheduled Monument Consent (SMC); the underlying cause of damage is immaterial – whether from recreational or farming pressures or indeed natural causes, for example burrowing animals, the same principle will apply;
- to undertake such a task without SMC is illegal. Likewise varying a specification without consent is also illegal. Either of these could result in the prosecution of both the individual concerned and the commissioning body;
- in addition to the actual planned works, preparatory works, transport to and from a site and the storage of materials are nearly always part of an SMC and have conditions attached which must be adhered to.

Applying for SMC every time that a routine (and sometimes proactive) task is undertaken is a time-consuming process. For this reason the Secretary of State has agreed that a range of maintenance operations can be given consent and, therefore, undertaken on a routine basis within the scope of a generic SMC that will still provide the necessary safeguards to ensure that this work does not compromise the monument. It enables trained staff and contractors to operate in the field in the knowledge that, as long as they are operating within this consent's parameters, then what they are doing is both pre-approved and legal. This should allow routine maintenance work to be undertaken without the need for an SMC application for every piece of work. Equally, in providing this document in a written form, this generic prescription will give all parties certainty about what activities are allowed under this prescription and what are not.

Emergency works and class consent

In certain circumstances, works on the Trail may benefit from a process called Class Consent. This covers those activities which are deemed not to require an application for SMC as they are considered to have consent already.

With reference to the Trail, the most likely Class Consent is that covering works urgently necessary for health and safety reasons, for example, if a structure, following an accident, is rendered in a dangerous condition or is no longer stock proof. Importantly, such works have to be immediately necessary, and they must be limited to the absolute minimum in order that the structure or area may be rendered safe.

If this is the case, staff working on the Trail are empowered to undertake the minimum works necessary to secure public safety. However, those making use of such procedures will have to demonstrate both why the works they undertook were immediately necessary and also how they were the minimum of works necessary. All works should be properly recorded, photographically and by written records as appropriate and recorded in the Trail management plans. **Such works should always be discussed with the National Trail Archaeologist (NTA, currently at Northumberland National Park Authority (NNPA)) and the English Heritage Inspector of Ancient Monuments: Hadrian's Wall (IAM).**

This menu of generic prescriptions replaces: *Management of the Hadrian's Wall Path National Trail: The Management of the grass sward in archaeologically sensitive locations. Version 5: 29th November 2007*. The prescriptions have been agreed with the IAM. (Refer

Appendix 2 for current contact details). It also represents current best practice in environmentally sustainable recreation and monument management. The National Trail Officer (NTO) will monitor and consider new ideas for materials and techniques and consider them for revised versions of this document.

Sources of archaeological advice available to National Trail staff

The first point of reference for National Trail staff in seeking archaeological advice is always the NTA and the onus is on Trail staff to avail themselves of this service.

Note that the term archaeology does not refer simply to matters of Roman interest, and that not all archaeology is afforded statutory protection as a Scheduled Monument. If staff are ever in any doubt about maintenance works on or off the Trail, either at the planning stage or when actually on site, they must contact the NTA for advice, whose **advice must at all times be adhered to.**

English Heritage provides its own archaeological cover for the World Heritage Site (WHS). The role includes the monitoring and care of Guardianship Sites which English Heritage manages on behalf of the Secretary of State.

While English Heritage is prepared to offer informal advice through the IAM to the National Trail project, the first point of reference is the NTA who will decide when it is appropriate to approach the IAM. For example, if *type 3 or type 4* works are proposed (refer section 2) the first contact must be the NTA.

Role of the National Trail Officer

The National Trail Officer (NTO) has strategic responsibility for all 84 miles of the Trail's route, agrees and oversees its day-to-day operations and ensures that everything is managed according to its rules and protocols. **The NTO must be made aware of everything that is proposed for the National Trail.**

1 Background to Generic Prescriptions

1.1 Scheduled Monuments

The Secretary of State compiles and maintains a list of monuments that are considered to be of national importance; when a monument is added to the list it is thereafter referred to as a Scheduled Monument. The principal effect of scheduling is that the monument is provided with statutory protection, which means that any intervention, however much to the good of the monument, requires the approval of the Secretary of State (Scheduled Monument Consent) for any works to the monument.

Most of Hadrian's Wall and its associated earthworks are scheduled and for much of its length the Hadrian's Wall Path National Trail is within a Scheduled Monument. This means that the National Trail project must obtain Scheduled Monument Consent before any works are undertaken. Works undertaken without consent are carried out illegally and could render both the individuals concerned and the Trail project itself liable for prosecution (see also Introduction above).

1.2 National Trail Management Plans

The management plans lie at the heart of the National Trail project. They not only record the Trail's aspirations, aims and objectives, but also archive everything that happens

to the Trail and monument. **In turn, within each management plan is embedded a detailed consultancy document. Written between 1996 and 2004 by the Trail's former consultant archaeologist at Oxford Archaeology North it is the essentially important archaeological opinion that informs and guides the way that the Trail has been, and continues to be, developed and managed.**

Altogether some thirty-four sectional management plans document the Trail from the Newcastle city/Northumberland county boundary near Newburn in the east to Bowness-on-Solway on the Solway Firth. In decades to come it should be possible to track every event and management activity that has occurred over time to the Trail, also within each Scheduled Monument.

Fundamentally, the plans use colour coding to refer to all areas of archaeological, and sometimes nature conservation, sensitivity, together with measures taken to mitigate for the effects of visitor and other pressures. The management plans, therefore, provide the background information necessary to ensure that all works undertaken on behalf of the Trail have all the necessary legal permissions, and must be referred to and updated on a routine basis and read in conjunction with any Scheduled Monument Consents, including works permitted within this document.

1.3 Training of Staff

The National Trail Partnership must ensure that only suitably trained staff (including contractors) undertake works on the National Trail. It is vital that they understand the significance of the archaeology of the World Heritage Site and appreciate that works should be undertaken in a sympathetic manner and are intimately aware of the conditions of each Scheduled Monument Consent. They should also understand that it is always preferable to seek clarification, by telephone if necessary while on site, rather than commit to something that might not be permitted.

2 Maintenance works

This document sets out a hierarchy of works, which are categorized throughout into four main types, as follows:

type 1 works: works not requiring SMC, for example: repairs to an above ground structure such as a bridge and where no works involve ground disturbance, unless the structure is itself part of a Scheduled Monument;
type 2 works: works of generic type that can be undertaken because of SMC having been granted for the generic prescriptions, for example: grass cutting, top dressing, spiking the ground surface;
type 3 works: works where the principle of their use is covered by generic prescriptions, but where specific agreement in writing from the Secretary of State advised by English Heritage must be obtained first for the location of usage, for example: the use of polyacrylamide granules or the maintenance of sacrificial surfaces;
type 4 works: works that require a specific SMC application, in other words any new works not covered by the above.

Special Note: staff and contractors must have in their possession on site a copy of this Generic SMC for reference. If they are undertaking type 4 works they must have in their possession a copy of the SMC and they must be fully briefed as to its aims, objectives, terms and conditions.

2.1 <u>The maintenance of an existing grass sward using top dressings</u>

2.1.1 Application of seed and fertilizer for large areas of intact grassland *(type 2 operation)*

Subject to any SSSI consents, spread either by hand or by means of an automatic spreader from a moving quad bike. **The vehicle should not be used in areas of sensitive archaeology (refer to colour coded sections in management plans) and, in any case, should be driven only when ground conditions are dry enough to take the load without causing any damage to the surface and, therefore, to underlying deposits.** Fertilizers are normally granular and are either organic or inorganic. Where practicable, for larger areas, seed may be sown using a seed drill up to a maximum depth of 25mm. A spiked drum (**type 2 operation**, refer section 2.4.1) is driven behind a moving quad bike **(noting the restrictions for vehicular use, see above)** with seed sown into the spaces created.

2.1.2 Application of other top dressings for small areas of intact grassland *(type 2 operation)*

Applying top dressings of soil/sand/grit, of preferably local provenance, to established grass surfaces helps to promote a free draining layer of topsoil. Where available and practicable to do so, locally (same farm) gathered upcast soil from mole hills should be used for this purpose, especially when working within biologically sensitive SSSIs when it is important to source materials as locally as possible. Consider also using BSI PAS 100 compost which is certified weed and contaminant free. The dressings may be brushed into the aeration holes created by the spiking action (**type 2 operation,** refer section 2.4.1).

Other top dressings may be applied, for example: live mulch; horticultural top dressing (prepared sand/compost mix).

2.1.3 Application of other novel horticultural top dressings (*type 3 operation)*

New horticultural top dressings are becoming available, for example: various mixtures of sand and coir; pulverized blast furnace fuel ash, which may be considered. Discuss first with the NTO/NTA and other land managers/farmers and owners.

2.1.4 Application of ground rubber granules *(type 3 operation)*

Subject to landowner approval ground rubber granules, or other granulated materials, may be brushed into aeration holes in order to promote improved soil drainage.

2.1.5 Application of polyacrylamide granules *(type 3 operation)*

Polyacrylamide (water retaining granules) may be applied once per year only and brushed into aeration holes. If it is necessary to apply more frequently (refer section 2.5.2 - repair of large pinch-points) it is to be treated as a **type 4 operation.**

2.1.6 Application of farm yard manure *(type 2 operation)*

Farm yard manure should be spread in such a manner (and in accordance with measures to ensure bio-security) that in areas of erosion it does not exceed the turf line; it can be used both as a filler and as a general fertiliser.

2.2 <u>Burrowing animals</u> (Refer also to section 3.6 and 3.6.1)

2.2.1 Manual spreading of mole hills and other animal upcasts (t*ype 2 operation)*

If left unchecked, the upcast soil from mole hills and other animal upcasts will kill off the small area of grass affected; this can lead to a pinch-point if exacerbated by the effects of trampling. However, experience has shown that upcast mole hill soil can also be beneficial to the sward; it is desirable, therefore, to spread the soil into the surrounding sward, including the path itself.

With the exception of badger setts, where it is illegal, spread upcast soil into the grass surface with a rake or other suitable implement. Refer also to section 2.1.2; upcast soil, when gathered, can be useful as a component of a top dressing.

2.2.2 Spreading of animal upcasts using chain harrows (t*ype 2 operation)*

This should be used in relatively flat areas only and avoiding sensitive archaeology (refer individual management plans) **and, in any case, should be driven only when ground conditions are dry enough to take the load of a quad bike without causing any damage.** (Note that this operation is illegal if the upcast soil is from badger setts). The harrows measure approximately 8 feet square and draw one inch long steel tines across the surface. They scatter any small lumps and level the ground.

2.3 <u>Grass mowing, verge and hedge maintenance</u> (*type 1 operation)*

This is necessary where the ground is not regularly grazed, also where the mowing of a new desire line is necessary to spread the visitor load of the Trail. **Grass mowers should be used only when ground conditions are dry enough to permit the load of a machine without causing the land to be marked.** Consideration should be given to the type of mower most appropriate to the ground conditions, for instance in areas of earthworks, and this should be agreed with the NTO. The path must be mowed to the full available width and adjoining hedges managed throughout the season so as not to reduce the available width. Consider removing the arisings if the grass has been cut long so as to prevent the build up of thatch. Cutting blades should also be set in order to avoid scalping any visible earthfast stones (which may be of archaeological interest and part of a larger structure).

2.4 <u>Removal of compaction within, and aeration of, topsoil</u>

The aim here is to ameliorate the effects of soil compaction and promote a healthy sward. The techniques are as follows.

2.4.1 Use of spiked drum *(type 2 operation)*

Use a spiked drum driven behind a moving quad bike. **The vehicle should not be used in areas of sensitive archaeology (refer to colour coded sections in management plans) and, in any case, should be driven only when ground conditions are dry enough to take the load without causing any damage.** The drum is approximately 1m wide containing 4 rows of 4 solid tines that are themselves approximately 30mm long. With each revolution of the drum, therefore, there are 4 rows of holes in the topsoil each approximately 25mm apart. It will normally be necessary to make 2 or 3 runs of the drum over each section of path depending on the degree of compaction. **The action should have no effect on**

archaeological deposits but in any case it will not be used on areas of sensitive archaeology. If in any doubt consult the NTA.

2.4.2 Hand forking *(type 2/3 operation)*

Where necessary, the ground may be either hand-forked using a 4–tined fork pressed 30mm into the ground or spiked using a hand pushed aerator with a 300mm drum which has 6 rows of 30mm solid tines. Situations where this might be necessary will include the following: very close to or on sensitive archaeology; on steep or very uneven slopes; close-up to gates and stiles; where the path is too narrow to allow access for the quad bike; in woodland. Generally speaking, when away from sensitive archaeology it is a type 2 operation; when close to or on sensitive archaeology it is a type 3 operation, in which case **there is a need to agree in writing with the Secretary of State, as advised by English Heritage, the location and extent of the use of this technique.** In such circumstances or for clarification as to whether or not a site has sensitive archaeology discuss first with the NTA.

2.5 Repair of pinch-points, including erosion around individual posts, with top-dressing mix and/or turves (*type 2/3/4 operation)*

Repair pinch-points that occur within the topsoil horizon with top dressing mixes, sand, locally gathered upcast mole hill soil, BSI PAS 100 compost or turves, preferably cut locally (but definitely outwith archaeological earthworks that are Scheduled), but including "Grassfelt" (grass sown on a felt medium), or similar turf-derived material.

Aerate the soil (as per section 2.4.1 – **type 2 operation**) and consider first adding both a top dressing mix (as specified in section 2.1.2 – **type 2 operation**) and polyacrylamide granules (**type 3 operation**) before laying the turves. If considered necessary, secure the turves with pins (which may be either metal or plastic), the maximum dimensions of which should be 100mm length by 10mm diameter. The type of operation should be established beforehand with the NTO; if a type 3 operation is required it is necessary **to secure an agreement in writing with the Secretary of State, advised by English Heritage, for the location and extent of the use of the particular technique close to or within sensitive archaeology before any on-site works commence.** In such circumstances discuss with the NTA.

Do not allow the turves to dry out. Water in the turves and consider re-watering depending on the time of year and especially if drought conditions are forecast. *(This is* a **type 1 operation***, but seek advice from the NTA if a water bowser needs to remain on site for a period of time. If necessary, apply for SMC).*

2.5.1 Harvesting small quantities of turf growing from the ground up the base of Hadrian's Wall where it survives as a standing structure *(Type 2 operation)*

With the landowner's permission small quantities of turf may be teased away from the base of Hadrian's Wall, by hand lifting, without affecting mortar or the surface of stones, for use in pinch point repair. Note that if it is proposed to harvest turves within Guardianship Sites then permission must first be obtained from the IAM.

Turves growing up the base of Hadrian's Wall can sometimes impede the drainage of water through the lower courses of masonry and through the Wall's foundations in which case the turves may also be teased away in an attempt to dry up an ares of footpath where there is a risk of wear-and-tear and livestock poaching.

2.5.2 Small pinch-points *(Type 2/3 operation)*

A small area is defined as being up to 2m in diameter, or for up to 20m of narrow linear erosion of up to 300mm in width, with no loss of depth beyond the topsoil horizon. Normally a type 2 operation, it becomes a type 3 operation if the topsoil has been completely eroded exposing sub-soil below.

Repair small pinch-points by filling in with the top dressings specified in section 2.1.2 (and in woodland by applying woodchip to wet and muddy areas, if necessary on top of a water permeable membrane or Grassform-type matting). Consider scattering seed over the affected area, also its protection using tree brashings (section 3.1), electric fence stakes (section 3.2) or people deflector barriers (section 3.3). **Note that there will be a need to agree in writing with the Secretary of State, advised by English Heritage, the location and extent of the use of this technique close to or within sensitive archaeology before any on-site works commence.** In such circumstances discuss with the NTA.

Staff should consult the NTA for advice on whether or not a site lies within sensitive archaeology.

2.5.3 Large pinch-points *(type 4 operation)*

A large area is defined as being more than 2m in diameter and where there is likely to be a visible loss of the topsoil horizon. Typical examples will be large areas around gates that have been badly poached by cattle. **Such repairs will in the first instance require Scheduled Monument Consent (type 4 works). Following this initial work,** repeated top dressing of such repairs will normally be allowed, as per section 2.1.2 (also with woodchip, section 2.5.1), without the need to re-apply for SMC. If in any doubt consult the NTA for advice.

Scatter seed over the affected area, also consider its protection using tree brashings (section 3.1), electric fence stakes (section 3.2) or people deflector barriers (section 3.3).

2.6 <u>Repairs to areas of specially laid turf</u> *(type 2 operation)*

Where Scheduled Monument Consent has already been granted to prepare the ground for the laying of turf, its repair, including re-laying new sections of turf, is permitted under this generic consent. Before the turf is laid it might be necessary to remove soil compaction but this should be done according to section 2.4.1 (spiked drum, **type 2 operation**) or 2.4.2 (hand forking, **type 2 operation**) and a fine tilth established by carefully raking over the surface of the soil.

2.7 <u>Spraying of invasive weed species using herbicides *(type 1 operation)*</u>

Subject to relevant landowner and appropriate statutory consents (Environment Agency and/or Natural England, including agri-environment schemes) being obtained, invasive weed species may be sprayed with prescribed herbicides according to statutory health and safety procedures.

3 Protecting repaired pinch points and the prevention of wear and tear

3.1 <u>Protect repaired pinch points and wear lines using tree brashings</u> (t*ype 2 operation)*

With the prior agreement of the land holder fix tree brashings to the ground with pins (refer section 2.5 for permitted maximum dimensions). Do so only for as long as is necessary in

order to promote recovery of the sward. Move the brashings around from time-to-time so as to spread the visitor/livestock load. **Those using pins should be aware that they are working within the Scheduled Monument area; use only the minimum number and press them in only as far as is necessary**.

As well as Trail staff and trained contractors, volunteers may undertake this task but only under the supervision of Trail staff. The latter are responsible for both defining the area within which brashings can be spread, and initially positioning them.

3.2 Use of electric fence stakes to influence the desire line *(type 2 operation)*

Influence the walked desire line with electric fence stakes linked with tape or rope. They may also be used individually if the intended purpose is to present notices to the public. The stakes should penetrate no more than 100mm into the ground. Move them around from time-to-time so as to rest any emerging wear lines. **Their use and location is to be notified to the NTO who will maintain a record and inform the IAM and NTA as appropriate.**

3.3 Using people deflector barriers *(type 2 operation)*

Influence the walked desire line with approved-design temporary deflector barriers. Move them around from time-to-time so as to rest any emerging wear lines. This operation can be undertaken by volunteers but Trail staff must first explain to them the area within which they can be moved around.

3.4 Temporary surfaces *(type 2/3 operation)*

3.4.1 Alleviation of stress wear-and-tear to grass surfaces *(type 2 operation)*

This is used as a mechanism both to prevent anticipated problems from developing as well as to mitigate in response to unforeseen circumstances, for example sudden weather events.

The experimental use on the National Trail of temporary light weight and portable ground reinforcing products has demonstrated their value in helping temporarily to alleviate walker, and sometimes livestock, pressures to grassed surfaces. The aim is to provide a means of managing predictable issues, such as preventing pinch point wear following seasonal changes in soil moisture, as well as a rapid response where less foreseeable events have occurred, for example flooding, blocked or burst drains or where a change in livestock levels, together with existing walker pressure, combine to present a risk of damage to the grass surface.

The aim is to provide a protective medium for the ground in order to promote the recovery of an existing grass surface. It is necessary to move the sheets at regular intervals so as to ensure an even rate of recovery. Their use is now a routine part of the Trail's management where they are used both proactively and reactively in response to pinch-point pressures. At some sites their use is anticipated, typically towards the end of a season, as a temporary seasonal measure.

Products currently researched and used are Golpla, Ritter (rigid plastic matrix of varying sizes of sheet, Grassform (flexible plastic/rubber compound matrix) and Playsmart (flexible rubber matrix). An open weave flexible plastic sheet material may also be considered. Depending on the characteristics of a site the mesh may be fixed to the ground with temporary 100mm maximum length x 10mm diameter either steel or plastic pins. The rigid

plastic sheets do not normally require fixing with pins although on occasion it may be necessary to do so.

3.4.2 Other temporary surfaces and structures *(type 3 operation)*

Other short-term temporary surfaces may be constructed in response to more serious and unexpected management issues, for example where drainage problems have occurred and there is an urgent need to prevent damage to the path and monument. These surfaces may be constructed using materials as suggested by the NTO, as agreed by the NTA and IAM; **they should normally not involve ground disturbance.** The cause of the problem should then be investigated with a view to finding a long-term solution. Consult the NTA before installation. They should normally not remain on site for longer than six months without the specific consent of the IAM, who should be informed of their presence. They may be constructed using both natural materials, for example flagstones (for stepping stones); biodegradable sand bags; and manufactured materials, for example ground reinforcing grids and mats as described above; and other bio-degradable products. Consider defining the existing ground level with a water permeable landscape fabric membrane or with a suitable marker such as sand, in consultation with the NTO/NTA.

Short-term temporary above ground structures may be considered as agreed by the NTA and IAM; **they should normally not involve ground disturbance.** For example, a portable temporary kit form footbridge may be required if a stream has suddenly altered its course rendering the existing footbridge unsafe but this measure does not over-ride the highway authority's legal responsibility for the public's safety which may be that the PROW should be either temporarily or permanently closed.

Maintain a log of the date that temporary surfaces and structures are installed and the reasons why they are necessary, informing the NTO who will maintain a record and inform the NTA and the IAM, as appropriate.

(The use of such materials must be agreed with landowners/tenants in keeping with the safety requirements of the site. As detailed above, this document is only intended to provide a menu of possible management options and the associated Scheduled Monument Consent. This document cannot recommend a particular solution; every issue has to be evaluated on its individual merits).

3.5 <u>Temporary protection of earthworks damaged by livestock</u> *(type 2 operation)*

Where livestock have created erosion scrapes in sensitive archaeological earthworks the scrapes may be temporarily filled with aggregate- or soil- or sand or BSI PAS100-filled compost sacks. This is to deter the livestock from making the problem any worse until a long-term solution is agreed. Permanent repairs of earthworks achieved by filling in erosion scrapes and re-profiling are a **type 4 operation**.

3.6 Filling in rabbit and fox holes that are no longer in use where walker safety is an issue *(type 2 operation)*

Note that Natural England consent may be required within SSSIs.

If rabbit and fox holes are causing an obvious hazard to walkers then consider filling them in with locally sourced material such as mole hill soil.

3.6.1 Badger setts

It is illegal to fill in or interfere with badger setts without a licence granted under the appropriate statutory consents. Any management issues arising as a result of badger activity should be reported to both Natural England and English Heritage.

4 Protecting large areas of woodland surface with hardwood chips (*type 4 operation initially, thereafter type 2*).

Subject to any necessary SSSI consents, **in the first instance it is necessary to apply for Scheduled Monument Consent (SMC).** Thereafter, repeated top dressing with additional wood chips will normally be allowed without the need to re-apply for SMC. If formal edgings have been installed to contain the material then their replacement is a type 3 operation.

5 Maintenance of sacrificial and other surfaces (*type 2/3 or 4 operation*)

These are engineered surfaces. They can be: pitched, flagged or made of aggregate.

5.1 <u>Repairs to metalled surfaces used both by vehicles and the National Trail</u>

A new top surface may be applied to repair wear lines and pot holes but only to the extent that it does not exceed the depth of the existing aggregate **(type 2 operation).**

5.1.1 Repairs to metalled surfaces previously subject to an initial Scheduled Monument Consent *(type 2 operation)*

Repairs to these surfaces to repair wear lines and pot holes with new aggregate will normally be a type 2 operation.

Repairs to aggregate and metalled surfaces that were not subject to an initial Scheduled Monument Consent *(type 2/3 or 4 operation)*

Such surfaces will typically include existing farm tracks and gateways that are also used by the Trail. Each structure will be considered on its merit but if previously constructed for agricultural purposes they may, at the discretion of the IAM, be made good with new aggregate as a type 3 operation. In some circumstances a type 4 operation may be required.

5.2 <u>Aggregate paths</u> *(type 4 initially, thereafter type 2)*

These may be re-dusted with aggregate but only to the extent of filling in a rut that has not exceeded the depth of the existing aggregate **(type 2 operation).** Contact the NTA if this type of work is proposed.

5.3 <u>Re-setting pitched stones or flagstones</u> *(type 2 operation)*

This operation normally covers only single stones or very small areas of stones. Such works would normally require a watching brief; seek advice from the NTA. **If the IAM is agreeable to the operation, conditions may be imposed to establish the level of archaeological mitigation required to keep the work within the scope to which consent was given by the Secretary of State.**

It is emphasized that this only covers isolated and small areas of re-setting, and does not apply to wholesale repairs, which require a specific SMC.

Work will normally be undertaken manually except where, for health and safety reasons, it is necessary to use a machine to move a stone or transport materials to site. **A machine should not be used in areas of sensitive archaeology and, in any case, should be driven only when the ground conditions are dry enough to take the loads without causing any damage.**

5.4 Re-setting masonry that forms part of the archaeology *(type 4 operation)*

Loose masonry found lying on the Trail that it is clear has fallen from the monument should **not** be put back in place. A note must be taken of the location (if possible with GPS grid reference), together with a photograph, and sent immediately to the IAM. If it is known that the IAM is unavailable, for example on leave, then inform the NTA who will advise on the best course of action to take.

5.5 Setting deflector stones *(type 3 operation)*

A deflector stone is a large temporary boulder used to deflect walkers from particular areas. **The position of any such stones must be discussed beforehand with the NTA and specific agreement obtained in writing from the Secretary of State as advised by English Heritage.** Set such stones in places where it would be helpful to influence the walked line. If the situation does not improve within a defined period (agree this with the NTO) discuss a more permanent solution with the NTA.

5.6 Protecting buried masonry that has become exposed *(type 3 operation)*

Before masonry has worked loose, re-profile the ground as closely as possible to the situation before wear started using either Suretrac (sand/coir), sand, locally sourced upcast mole hill soil, BSI PAS 100 compost soil and/or turf and consider temporarily reinforcing the repaired area with plastic reinforcing mesh or a sheet of coir matting. Consider temporarily protecting loose masonry with sand bags. Always attempt to influence the walked line so as to allow the area concerned to rest and recover and always photograph the feature both before and after the works. Lodge copies of the images with the NTO and the NTA for reference in the Trail management plans and consultancy document respectively.

5.7 Boulder and turf dams *(type 2/3/4 operation)*

This concerns linear pinch points on steeper slopes worn into narrow trenches where it is intended to effect a repair using either BS PAS 100 compost, locally gathered mole hill soil or turves, combined possibly with small sections of temporary ground reinforcing sheets. Occasional boulder or turf dams may be placed into the pinch points as a means of providing purchase for the imported material. The number of boulders or turves should be kept to a minimum and the action must not create the impression of a stone stepped effect which would in any case require Scheduled Monument Consent. Each site is to be decided on its merits and any proposals should be discussed first with the NTA.

6 Short-term protection of damaged earthworks using ground reinforcement sheets and mesh *(type 2 operation)*

As a short-term measure only, and for a maximum period of three months, damaged earthworks may be protected by pinning a layer of plastic ground reinforcement sheets or mesh so as to provide a temporary wearing layer. Products currently researched and used

are Golpla, Ritter (rigid plastic matrix), Grassform (flexible plastic/rubber compound matrix) and Playsmart (flexible rubber matrix). Depending on the characteristics of a site the mesh may be fixed to the ground with temporary 100mm maximum length x 10mm diameter either metal or plastic pins. The rigid plastic sheets do not normally require fixing with pins although on occasion it may be necessary to do so. Other similar products should be agreed with the NTA.

The pins must NOT be located directly into the most sensitive archaeology, for example, upstanding stone and earthworks; such areas must be agreed with the IAM before works take place. The IAM will expect that plans for dealing with such a damaged area, and a timetable for their implementation, will be outlined at the same time as the application for use of such materials.

6.1 Maintenance of artificial ground reinforcing products that are designed to be used on a permanent basis (*type 4 operation for installation, thereafter type 2 operation for maintenance).*

Ground reinforcing products such as Ritter, Golpla (plastic matrix sheets) and Grassform (plastic/rubber compound matrix sheets) and Playsmart (rubber sheets) that have already been granted Scheduled Monument Consent for use on a permanent basis *(type 4 operation),* typically to reinforce a grass sward prone to livestock wear will, from time-to-time, need to be maintained. They may be maintained by either partial or total lifting prior to levelling (using sand, BSI PAS 100 compost, or upcast mole hill soil), cleaning out of the cells and re-laying onto the ground surface *(type 2 operation).*

7 <u>Removal of redundant structures</u> *(type 3 operation)*

Structures (typically timber but possibly concrete or other materials) no longer required that were originally subject to Scheduled Monument Consent for their installation may be removed either by cutting away at the base or by their careful extraction, provided that the posts are sufficiently loose that there is no widening of the resultant hole left behind. The hole should then filled with preferably locally sourced soil (such as sand, BSI PAS 100 compost, or upcast mole hill soil.

If a metal or concrete structure that was not originally subject to Scheduled Monument Consent is considered to be redundant, for example, a very old highway authority finger post, the structure should in the first instance be cut away at the base. Such structures are normally fixed to the ground with large concrete plugs in which case any proposal to remove the plug is also a **type 3 operation** and in the first instance should be discussed with the NTA.

7.1 Removal of redundant flagstone landings when structures are permanently removed *(type 3 operation)*

When redundant boundary structures are no longer required the associated flagstone or plastic (Ritter) landings may be removed. If necessary make good the ground level with preferably locally sourced material (sand, BSI PAS 100 compost, or upcast mole hill soil, locally sourced turves) and/or re-seed. See also 2.5 and 2.5.1 for use of turves.

7.2 Adding additional flagstones or plastic ground reinforcing sheets to already established landings at boundary structures and at the end of stone pitched paths (type 2/3 operation)

Up to 2 metres (linear or square) of flagstones or ground reinforcing sheets such as Ritter or Grassform may be added to an existing landing as a first phase (type 2). If this proves to be inadequate any subsequent extension is likely to be a type 4 operation but consult the NTA and NTO for guidance.

8 Maintenance of Drains

Definition: for the purpose of this document a drain is any means of conducting water. It can take many forms: an open cut drain, a buried pipe (ceramic or plastic), stone cundy, rubble drain, French drain etc.

Identifying and clearing previously open cut drains; also underground drains and cundies *(types 1, 2, 3 and 4 operations)*

Note that Environment Agency and/or SSSI consent from Natural England may be required for this operation. If in any doubt consult both organisations.

8.1 Clearing blocked cross-drains

These may be cleared of accumulated débris by hand provided no other excavation is necessary, as long as the limits of recently accumulated débris can be easily distinguished **(type 1 operation)**. Note that the construction of additional cross-drains and major clearance (by machine) would be a **type 4 operation** and require SMC. Contact the NTA if the latter type of works is proposed.

8.1.1 Open cut ditches and drains, gutters, field dykes etc (type 2,3,4 operation)

Note that Environment Agency consent and/or SSSI consent from Natural England may be required for this operation. If in any doubt consult both organisations.

Proposals to use hand tools to periodically clean out previously open cut drains, or to reveal a drain that has clearly become impeded by the build up of silts and débris, should be agreed with the NTA and NTO who may decide to discuss with the IAM.

Silt, vegetation and débris may be removed from open cut drains and ditches using hand tools (*Type 2 operation*). The clearance should be confined to the relatively recent layer of silt and débris and must not alter the original profile of the drain. If there is any possibility of archaeological deposits then a watching brief may be required and the work becomes a type 3/4 operation. In other circumstances it is likely to be a type 2 operation.

Proposals to use earth-digging machines to clean out impeded open drains will probably require a watching brief *(type 3 operation)* but may also require an application for Scheduled Monument Consent *(type 4 operation).* In the event of any such proposal then consult the NTA. In any case and as a general safe guard the NTA should be consulted prior to any investigations in order to agree the *type* of operation proposed and to decide if an archaeological watching brief is required.

8.2 Underground drains (these may be clay tile, modern plastic, stone cundy)

Always consult the farmer/landowner for local knowledge of the existence and pattern of field drains. Look for an inspection chamber or an open end where a drain exits to a ditch or river.

Attempt also to locate the drain by probing with a 20mm diameter steel pin *(type 2 operation).* Look also for the presence of any tell-tale signs such as a water "blow-up", blistered ground or yellow ochre deposits; or by surface water going to ground.

If an underground drain can be positively identified from above then the following (type 2/3 operations) apply:

(a) rod the drain from the outlet as far as any blockage;
(b) excavate a trench (as narrow as practicable and no more than the width of the original ground disturbance) through the previously disturbed ground above the drain in order to expose the problem;
(c) having identified and removed the blockage use the same technique to rod the next section of drain in order to identify any further blockage;
(c) continue the process along the line of the modern day drain;
(d) replace or realign sections of drain or rebuild sections of stone cundy, only ever removing the backfill of the original cut in order to install the new material;
(d) photographically record the works undertaken (before, during works and after photos) showing evidence of any repaired drains. Make a drainage diagram for future reference for the farmer, EH and National Trail management plan records;
(e) back fill the trenches.

Note concerning excavation trench width: initially no more than 0.5 metre wide but as narrow as practicable. This work should not extend to more than 1.2 metre in depth for health and safety reasons; consult the NTA/NTO in these circumstances. Excavation beyond the original cut should not be undertaken; if proposed, similarly if a trench needs to be more than 1 metre wide, for example if a junction of drains is identified, then before enacting the works contact the NTA for advice.

If an underground drain cannot be positively identified or repaired by the above method then any further excavations will only take place following agreement by the IAM on the estimated number, size and location of such excavations which may be either Type 2 ,3 or 4 operations – the latter will be subject to an application for Scheduled Monument Consent)

8.2.1 Rubble drains

Consult the NTA if a rubble drain is suspected of being the cause of the problem to discuss the estimated number and possible size of investigation trenches.

8.2.2 Modern roadside ceramic, concrete drains and inspection chambers

Subject to necessary permissions inspection chambers may be cleared of accumulated silts, also rodded clear (type 1 operation), similarly modern ceramic or concrete drains and conduits.

8.3 Cleaning vegetation impeding natural water courses

Note that Environment Agency consent and/or SSSI consent from Natural England may be required for this operation. If in any doubt consult both organisations.

Proposals to use hand tools to periodically clean out previously open cut drains, or to reveal a drain that has clearly become impeded by the build up of silts and débris, should be agreed with the NTA and NTO who may decide to discuss with the IAM.

Silt, vegetation and débris may be removed from water courses using hand tools (*Type 2 operation*). The clearance should be confined to the relatively recent layer of silt and débris and must not alter the original profile of the water course. If there is any possibility of archaeological deposits then a watching brief may be required and the work becomes a type 3/4 operation. In other circumstances it is likely to be a type 2 operation.

Proposals to use earth-digging machines to clean out impeded water courses will probably require a watching brief *(type 3 operation)* but may also require an application for Scheduled Monument Consent *(type 4 operation).* In the event of any such proposal then consult the NTA. In any case and as a general safe guard the NTA should be consulted prior to any investigations in order to agree the *type* of operation proposed and to decide if an archaeological watching brief is required.

8.4 Removal of accumulated débris from water courses *(type 1 operation)*
(refer also to section 8.1.1)

Water courses should be checked periodically for accumulated débris which should be removed if it is causing water to erode the bank side. Débris in a water channel can cause damage to structures when it is released under pressure during periods of high water flow (note that the Environment Agency requires owners of riparian interests to ensure that water channels are kept clear and not impeded).

Vegetation found to be choking a stream may be pulled clear using an implement such as a hay rake or a tyned fork.

8.4 Removal of silts and débris following extreme weather events *(type 2/3/4 operation)*

Extreme weather events that suddenly alter the course of a stream or open cut drain and deposit large volumes of silts and débris, potentially some distance from the stream or drain, should be discussed with the NTO and NTA who in turn may discuss the situation with the IAM. If this is not practicable then health and safety considerations should prevail and the minimum necessary of newly deposited materials may be removed in order to make the site safe and in order to try and prevent the situation becoming any worse. All work should be recorded prior to starting and after completion.

Consider using sand bags (type 2) in order to contain the water within the water course or drain.

9 Protection and maintenance of footbridge abutments exposed to water course erosion *(type 1/2/3 operation)*

For all works in watercourses note that Environment Agency consent may be required if a watercourse is designated as "main river". Natural England consent may also be required if the water course is a SSSI. Obtain landowner consent.

Water courses are dynamic and their flow can be unpredictable. Where footbridge abutments lie within the Scheduled Monument Area it is vitally important that water course erosion is not allowed to compromise the integrity of either the monument or the abutments. Fallen trees, deposited boulders, gravels and other water-borne débris can affect the flow of a water course with the potential to cause both gradual erosion and sudden damage to both.

9.1 Emergency repairs to pinch points to bank sides and footbridge abutments caused by water erosion *(type 2/3 operation)*

Bank sides may be reinforced using temporary sand bags *(type 2);* bags of aggregate *(type 2)*; plastic matrix sheets such as Ritter, Grassform or other perforated plastic sheeting (type 2); edges formed using boulders back-filled with smaller aggregate and or turves (type 3). After a suitable period of time the resulting situation should be evaluated and if, in the opinion of the NTA, the bank-sides or abutments have become settled with no further loss of material and/or silts have accumulated with a natural re-establishment of vegetation then the works may be recorded as permanent.

9.3 Repairs to water erosion pinch points to bank sides and footbridge abutments requiring engineering design *(type 4 operation)*

Such works require Scheduled Monument Consent and Environment Agency consent for main rivers. Consult Natural England if the water course is a SSSI. If in any doubt consult the relevant organisations for advice.

10 Rolling small stones into the ground surface *(type 4 operation)*

This will be agreed on a site-by-site basis with the IAM; stones should not exceed 30mm diameter. The procedure, which requires Scheduled Monument Consent**,** will normally be undertaken only once. **The creation of a metalled surface is to be avoided**. In the first instance discuss with the NTA.

11 Earthfast stones *(type 4 operation)*

(See also 5.6: protecting buried masonry that has become exposed)

Earthfast stones are those that protrude from the ground surface and present a trip hazard to walkers. Note that they may be a part of the archaeology.

A note must be taken of the location (if possible with GPS grid reference), together with a photograph, and brought to the attention of both the NTA and the IAM on a case-by-case basis. They should not be moved until SMC or the agreement of the IAM has been obtained.

If in any doubt seek advice from the NTA and instruct grass-cutting contractors to avoid clipping visible stones with their machines.

12 Maintenance of path furniture

12.1 <u>Repairs above ground</u> *(type 1 operation)*

These may be undertaken without SMC unless the upstanding structure is Scheduled. (Examples of above ground structures that form part of the monument would include dry-stone walls along the line of Hadrian's Wall and its associated earthworks and their repair would be a ***type 4 operation***).

12.2 <u>Repairs that involve below ground disturbance</u> *(type 3 / 4 operation)*

Whilst All new structures installed since 1995 by the National Trail project have required Scheduled Monument Consent a very small number have not had this process enacted therefore always check status with the NTO before replacement is agreed.

For most instances involving below ground disturbance (when a structure needs to be either replaced or repaired) the works will be **type 3 operations** as long as the structures go back into the original holes and there is no extra ground disturbance. The NTA will decide if the works should be accompanied by an archaeological watching brief. Consult the NTA beforehand for advice on archaeological considerations to determine whether the task is a **type 4 operation.** If the latter applies an SMC will be required.

For specific health and safety issues covered by class consent discuss the procedure beforehand, or at the earliest possible opportunity, with both the NTA and NTO.

13 Access to sites for maintenance works

The above sections explain situations when machines or vehicles should not be driven, for example, in areas of sensitive archaeology and when ground conditions are not dry enough to take the loads without causing any damage. **These rules also apply when gaining access to a site for maintenance purposes.** While you do not need Scheduled Monument Consent to drive vehicles across a monument it is an offence to damage it. If there is ever any doubt consult the NTA and consider using temporary plating and tracking **(type 3 operation)*.*** The WHS is a complex pattern of archaeology, both masonry and earthworks that can either be above ground or buried, and it is vital that all of this archaeology is respected and not damaged. The management plans will help Trail staff to plan their access to maintenance sites but if they are ever in any doubt they should contact the consultant archaeologist for advice.

Appendix 1: Type 3 operations

As detailed above, these are works for which the principle of their use along the Trail has been agreed, and has received Scheduled Monument Consent. However, as made clear in the main document, to ensure that such activities are not damaging to the archaeology of the Wall and its associated features, or indeed any other archaeology, these techniques are only suitable for use in particular circumstances. As such, although the principle of their use on the Trail is accepted, and a new SMC application is not necessary for every time such works are proposed, their use needs to be formally agreed before any works take place. Type 3 works therefore require agreement prior to their usage.

Although English Heritage is consulted on applications for SMC, the decision as to whether consent is granted is taken by the Secretary of State for Culture, Media and Sport (DCMS). This means that the agreement to undertake type 3 operations must also be gained from the DCMS.

In the situation of Trail works of type 3 being proposed, this issue should be raised first with the NTA prior to approaching English Heritage, who will advise on whether it is likely to be acceptable. Provided English Heritage endorses the proposal, they will then write to the DCMS to ask for the approval of the Secretary of State. Once confirmation of this has been given, works on site can take place.

Appendix 2: Contact details for archaeological advice

(a) For English Heritage

Mike Collins
Inspector of Ancient Monuments: Hadrian's Wall
Bessie Surtees House
41/44 Sandhill
Newcastle upon Tyne
NE1 3JF

Telephone 0191 269 1212

(b) For the National Trail Archaeologist

Chris Jones
Northumberland National Park Authority
Eastburn
South Park
Hexham
NE46 1BS

Appendix 3: Other contact details

For the National Trail Officer

David McGlade
Northumberland National Park Authority
Eastburn
South Park
Hexham
NE46 1BS

Appendix 4: Generic "Operations Likely to Cause Damage" Consent

This consent (forthcoming), for works within SSSIs in Northumberland National Park, to be inserted with the agreement of Natural England.

Appendix 5: References

Countryside Commission, 1993 *The Hadrian's Wall Path Submission to the Secretary of State for the Environment,* Countryside Commission CCP 409, Cheltenham

Dartington Amenity Research Trust, 1976 *Hadrian's Wall: A Strategy for Conservation and Visitor Services,* Countryside Commission CCP 98, Cheltenham

Hadrian's Wall Consultative Committee, 1984 *The Strategy for Hadrian's Wall,* Countryside Commission, Cheltenham

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David McGlade
National Officer

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Version 3: 6th June 2006:
Version 2: 13th June 2005;
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