**IDENTIFICATION OF DOWNLAND: RESEARCH BRIEF**

**Please treat as confidential**

# Background to Natural England

1. Natural England is the government’s advisor on the natural environment. We provide practical advice, grounded in science, on how best to safeguard England’s natural wealth for the benefit of everyone.
2. Our remit is to ensure sustainable stewardship of the land and sea so that people and nature can thrive. It is our responsibility to see that England’s rich natural environment can adapt and survive intact for future generations to enjoy.
3. Natural England was formally established on 01 October 2006 following the successful passage of the [Natural Environment and Rural Communities (NERC) Act 2006](http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1) through Parliament. We are an independent statutory Non-Departmental Public Body.
4. The NERC Act sets out Natural England's purpose: to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development. The Act states that this purpose includes:
* promoting nature conservation and protecting biodiversity
* conserving and enhancing the landscape
* securing the provision and improvement of facilities for the study, understanding and enjoyment of the natural environment
* promoting access to the countryside, open spaces and encouraging open air recreation
* contributing in other ways to social and economic wellbeing through management of the natural environment

# Background to the specific Natural England work area relevant to this purchase

1. Following a statutory process of consultation and appeal, the Countryside Agency (CA) issued in 2004 and 2005 eight conclusive maps of open country (land consisting wholly or predominantly of mountain, moor, heath or down) and registered common land (RCL) in England, which became the basis of the open access rights that the public now enjoys over the mapped areas, subject to the limitations set out by the Countryside and Rights of Way Act 2000 (CROW).
2. Natural England (NE) has a duty under CROW section 10 to review these maps and ensure they correctly reflect the land types in question today. Following two deferrals of the review deadlines because of the resource demands of England Coast Path Delivery, NE now intends to prepare for the process of reviewing the maps. This study is intended to contribute significantly to that process.
3. While the parts of the CROW maps relating to RCL and to areas of mountain, moor and heath have in general been regarded as reasonably accurate and fit for purpose, there have been repeated criticisms from some stakeholders that the maps failed to capture most of the downland landform, and that as a result in the areas in question they are fragmented, inconsistent and of little use for public access purposes. NE now wishes to take a fresh and evidence-based look at what down-like land should rightly appear on the maps, and whether any particular types of down-like land should be excluded from them, and if so why.
4. The starting point for doing this research is that in its preliminary engagements with this subject over a number of years, NE has been consistently unable to locate:
5. any standard definition of “down” or “downland” that is in widespread use within the geographical, geological, landscape or land management professions, or
6. any existing national dataset depicting such land as a whole on detailed maps.

The term “down” has however been in common use for centuries and is believed to derive from the Old English word “dun”, meaning hill. There is also reasonable public consciousness of the concept of downland, perhaps in part because of the widespread use of down terminology in relation to areas people are familiar with, whether on maps and road signs or through the names of well-known designated areas etc featuring such land.

1. NE has therefore concluded that some new fact-based investigation is required to provide it with a firmer footing for agreeing a working definition of “down” to guide NE’s review of the existing conclusive maps in relation to their downland component. The following are the provisional guiding principles for that subsequent review:
2. The review process is able to use the resulting definition in an efficient and cost-effective way to map qualifying land consistently wherever in England it occurs, so that:
3. NE can capture, at scale and with confidence, ‘classic’ downland such as occurs in Wiltshire and the South Downs together with any other land with the same topographical ‘look and feel’, wherever it may occur in England;
4. NE can exclude with equal confidence land which lacks that topographical look and feel, even where it has some superficial similarities with a downland landscape such as the presence of some undulating ground.
5. By being based on known facts and reliable evidence sources, the definition limits the scope for statutory objections, including those based on occupiers manipulating elements of land use or land cover following the inclusion of land on NE’s Reviewed Maps which will form the basis for any objections.

# Requirement & scope

1. Accordingly, NE now wishes to commission a new piece of objective research to:
2. take a fresh, independent, evidence-based look at the concept of downland and its relevance to different parts of England;
3. propose in the light of that evaluation exercise how NE should define downland for the purposes of its review of the statutory maps;
4. propose how existing evidence or datasets could be used to support the efficient and cost-effective capture of qualifying land on the reviewed maps, in line with the proposed definition; and
5. identify any related practical issues or difficulties that may arise in mapping such land, and make workable recommendations for addressing these.

Relevance of the downland concept outside the ‘classic downland areas’

1. While individual dictionary definitions etc tend to associate downland only with chalk geologies, or with chalk and limestone geologies, some other English geologies feature hills with long-standing names such as “X Down” or “Y Wold” that display many of the familiar visual characteristics of downland. NE wants to gather independent evidence on the extent to which this is so, and wants to see a selection of such areas objectively compared and contrasted with downland found in chalk or limestone areas. This is to ensure before beginning the mapping exercise that the Review Methodology is best placed to reflect the way in which the term “down” has historically been understood within different parts of England.
2. Writing in “Protecting special landscapes — the wildlife and countryside acts and national parks”, published in *Landscape Research* in 1986, Josephine Meredith (a well-regarded landscape expert then working for the Countryside Commission) commented:

“The primary dictionary definition of "down" is simply that of "a hill". More particularly the word is used in the South of England to refer in the plural to the treeless undulating chalk uplands but in this general context it can simply be seen as the inclusion of another word to refer to open hill country. It does not necessarily carry connotations about the underlying geology or soils. In both Exmoor and Dartmoor National Parks there are areas called downs which have no geological basis of limestone or chalk”.

On this same theme, the types of land which it has been argued to NE should have been depicted on the CROW maps by virtue of forming part of the downland landform include:

* Calcareous sand dunes,
* Rolling country on ironstone, sandstone or shales, and
* Comparable areas within the Culm Grasslands of Devon.

Some key parameters for the study

1. In undertaking this work and proposing a suitable definition, the study should place no special weight on:
2. the approach taken by the CA’s original Mapping Methodology (a copy of which can be supplied for background information),
3. the land included on or excluded from the existing conclusive maps of open country, or
4. the partial definition of “down” supplied by CROW section 1(2) (excluding areas of improved or semi-improved grassland). This is likely to be considered for modification in due course on the basis that the legislation intended to open up downland for public access instead prevents it being mapped as the landform it is.
5. We want the study to explore whether it is practicable and workable for the whole downland landform in each case to be defined and identified on maps, rather than any individual land parcels occurring within each identified down being considered individually and separately from each other, as happened under the original mapping process.
6. While the range of land use or land cover currently observed on different parts of the land should be recorded as part of the attribute data for the areas studied, these factors should not limit the land that the successful bidder considers to be down, if mapping the whole downland landform (including for example any settlements or roads it may contain) appears practicable. Not all of the downland landform would have public access rights if NE were subsequently to use this kind of landform mapping approach. In particular, buildings and their curtilage, parks and gardens and arable land would all be automatically excepted from new public access rights over any mapped areas of downland. Various other legal and practical protections would also be in place to limit any impacts of new access rights on existing uses of the land, on protected habitats etc, once NE’s national mapping exercise for downland has taken place. This includes, where necessary, the use of local exclusions or restrictions of the resulting public rights on a range of grounds set out in CROW. It may also include focusing CROW rights solely on a suitable path network on more productively farmed areas.

Consideration of possible detailed approach to study and outputs

1. NE wants this study to look afresh at the whole downland issue by independently and objectively evaluating the relevant evidence both on the ground and in terms of historical or contemporary studies, publications, maps, datasets etc. While tenders are free to propose any approach that it is felt would deliver the required outcomes of the study more effectively than what follows, we provisionally envisage a process along these lines:

	1. Identify in agreement with NE at least 8 search areas throughout England that appear suitable for detailed investigation at the next step. The search areas must cover in total between them at least 2,000 square miles (about 4% of England). The individual size and location of each search area should be chosen to add most value to the study. Consideration should be given to locating one search area in each of the [eight original CROW mapping areas](http://www.openaccess.naturalengland.org.uk/wps/portal/oasys/maps/Section4), if it is considered that this will yield useful information for this study. At any rate, no more than three of the search areas may be located in the south-east or home counties.
	2. Use a mixture of relevant documents, including both contemporary and historical maps, to identify within each search area every area of land named on such documents as X Down, Y Wold or similar. Areas of land with names using words felt to be comparable to down/wold should be included in this screening of the search area.
	3. Eliminate any qualifying names that appear to be merely village names etc if these appear to have no relevance to the study.
	4. For the remaining ‘Named Downs’, use a mixture of map data, aerial photography and, where practicable, site inspection from public places or from online sites such as StreetView to assess whether each Named Down has the overall ‘look and feel’ within the landscape of downs found in areas such as Wiltshire and the South Downs. Where this is felt to be the case, the area should be flagged as a ‘Provisional Down’. Where it is not felt to be the case, the area should remain flagged only as a ‘Named Down’.
	5. Associated data should record the particular characteristics of each Named Down which caused it to pass or fail this test, using photographs or screenshots where possible to illustrate the basis for the distinction. Where the conclusion is that the land is not down-like but may instead belong to one of the other “open country” types relevant to CROW access (mountain, moor or heath), this fact should also be recorded, with the key reasons why.
	6. Produce point maps for each search area showing the spot location of both Named Downs and Provisional Downs - distinguishing between the two and indexing each to a summary of apparent extent, maximum height above sea level, other relevant physical characteristics such as slope, and the range of land covers and uses evident on the named area of land today. Where the setting for a Named or Provisional Down reveals a wider presence nearby of down-like landforms, that information should be recorded here too.
	7. Compare and contrast the recorded characteristics captured through this process nationally, in order to propose a written definition of the term “down” that NE could best use as the basis for its subsequent review of the current CROW conclusive maps in relation to their downland component.
	8. Whether as part of this definition or otherwise, suggest any existing datasets or other readily available information that could be used at scale to identify this land efficiently, cost-effectively and in a way that would be least open to objection or legal challenge.
	9. Based on the datasets and information so identified, pilot the detailed boundary mapping of the full extent of one Provisional Down in each search area, and deliver these pilot maps as one output of the study together with a summary of any lessons derived from doing this.
2. As noted earlier, NE expects the successful bidder to investigate early in the contract the existence and relevance of related datasets, maps and documents. We seek advice as to these but they are likely to include:
	1. Ordnance Survey 1st Edition maps and comparable historical maps.
	2. A selection of Integrated Landscape Character Assessments from around relevant parts of the country.
	3. Relevant AONB management plans and national park information.
	4. Landcover maps, e.g. NERC 2015.
	5. Topography Mastermap layers.
	6. Geology information – both historic and current mapping attempts.
	7. Land utilisation survey maps from the 1930s and 1960s, and any later ones
	8. Returns from local planning authorities to the Minister under section 61 of the National Parks and Access to the Countryside Act 1949 about land in their area of the type specified in section 59(2), which included down. (At the time this related to the potential for statutory access agreements etc over the land.)
	9. ‘Section 43 maps’ produced under the Wildlife and Countryside Act 1981 as amended, prepared by local planning authorities in relation to areas of (inter alia) down which it was felt particularly important to conserve. These maps were prepared in accordance with national guidance from the Countryside Commission.
3. At paragraphs 26-40 is a list of pertinent questions for consideration during the study that must be responded to as part of the final report. The successful bidder will be expected to engage with these issues, with particular reference to the search areas; discuss them in detail with NE; and reflect the conclusions drawn about them in the proposed definition, the pilot mapping that is undertaken and the analysis set out in the final report.
4. In summary, the envisaged sequence for the Study (subject to any counter-proposals included after discussion in a tender) is:

1. Research all relevant existing datasets, publications, and modern and historical mapping that may inform the work to be done under the contract. (Examples are listed earlier in the Project Brief.)
2. Agree search areas across England, taking these sources into account.
3. Find down-type names on maps of those areas
4. Eliminate irrelevant names
5. Identify ‘Provisional Downs’ from the longer list of ‘Named Downs’
6. Point map the locations of Named and Provisional Downs, with attribute data for each site
7. Drawing on the characteristics so recorded, propose a definition for “down” for use by the subsequent Mapping Review process, identifying what existing datasets etc can contribute to efficient and cost-effective capture of such land when NE compiles its Comment Maps
8. Map in detail the full extent of the boundaries of one of these sites in each search area, and identify any lessons learned from doing this.
9. Bidders are expected to discuss the detail of their intended approach as necessary with the NE Project Manager. In the light of such discussion, bids may propose a different or modified approach from that shown in this Brief if the bidder considers this more likely to facilitate subsequent cost effective and consistent mapping of downland in England by NE when it undertakes the review.
10. While regular liaison with the Project Manager can take place during the contract as and when necessary, it is envisaged that at least three structured meetings between NE and the successful bidders will be organised, including:
11. A start-up workshop to discuss and agree in detail the approach to be taken to the work in the light of the successful bid.
12. A mid-contract workshop to take stock on progress and issues.
13. A final set of site visits at which NE staff are shown two or three of the areas that have been pilot-mapped, with discussion of issues and challenges that arose during the process nationally.

1. Consideration should also be given to holding one or more seminars of relevant experts, under Chatham House Rules - to exchange views and, potentially, peer review summaries of emerging findings and recommendations.

# Outputs and Contract Management

Summary of required outputs from the study

1. The study report (copyright to which will vest in NE) must contain:
2. a full account of the work undertaken
3. a summary listing of all evidence sources used to inform the results
4. reasoned responses to the issues set out in paragraphs 26-40, following discussion of them with NE officials during the course of the study
5. a definition of downland that is proposed for subsequent use by NE in mapping downland for CROW purposes
6. an outline proposed methodology for capturing such land on the CROW maps, including identification of specific datasets or other pre-existing information that will facilitate its efficient and cost-effective mapping
7. a candid analysis of lessons learned from the study including the key challenges to and practical considerations for mapping this land, with proposals for minimising impact on the subsequent NE mapping process and its related costs, and
8. any additional recommendations that may be relevant to the subsequent mapping of downland by NE.
9. Unless there is an agreed variation of the outline approach set out in this Project Brief, the following must be delivered to NE in association with the report, with the copyright in these again vested in NE:
10. a database of the working maps, photographs etc , including full attribute data,
11. the pilot maps, and
12. any specific surveying tools, data collection templates etc devised for the purposes of the contract.

Use of study outputs

1. All outputs from the study are to be treated as confidential advice to NE, to help it develop its methodology for subsequently reviewing the conclusive maps insofar as they relate to English downland. NE will have the exclusive right to share or publish the outputs (or relevant parts of them) if it considers it appropriate to do so. This is subject to any agreed decision to hold one or more expert private seminars to consider emerging findings.

Some specific questions to be addressed by the study and report

1. Some down-like hills have a wide open appearance (what might be called ‘bare down’), while others are divided into small enclosed fields (what might be called ‘hedged down’). Some are heavily wooded or scrubbed over. Some contain roads, buildings, hamlets or even significant settlements. What impact if any are such differences in land cover and land use considered to have on the status or otherwise of the underlying landform as downland?
2. In some areas, for example parts of the Cotswolds, down-related names tend to be associated not with hills that are clearly visible as such when passing through the land, but with very extensive, relatively flat but lightly rolling areas of land sitting high above the surrounding slopes. Their typical appearance as ordinary farmland or woodland is more redolent of low lying ground than of the high plateau they typically comprise. Are such areas best regarded as part of the surrounding downland landform, or as a ‘hole’ within it?
3. Some areas of downland have been extensively quarried (for example for stone, or minerals such as iron ore), leaving them lacking the characteristic smooth rolling hill shapes normally typical of a downland landscape. Do such man-made changes prevent such areas from being considered part of the downland system?
4. Where do intervening dry or river valleys that run between down-like hills fit into this type of topography? Do they separate the downland, or form part of it?
5. What weight if any should be accorded to the official recognition of some relevant landscapes through designations etc (for example South Downs, Lincolnshire Wolds, Kent Downs, Cotswolds, North Downs Way, Blackdown Hills)? Is such formal recognition relevant or irrelevant to whether land within their boundaries should be regarded as downland?
6. How well placed would relevant AONB conservation boards or national park authorities be to identify to NE the downland lying within their boundaries, either from existing data they hold, or by drawing on their existing intimate knowledge of their area and its key attributes? How could this kind of collaboration best work in practice?
7. Is **height** a key factor in defining down? If so, is the concept about absolute height above sea level, or about the degree of elevation above the immediately surrounding landscape? Is it about a minimum height that is reached somewhere – anywhere - within the downland system in question, or some other approach? Should down-like rolling landscapes be discounted If such a minimum height is not reached somewhere within them? In which case what is the minimum height that should be adopted as the cut-off?
8. Is **slope** a key factor in defining down? If so, is it about a minimum degree of slope that is reached somewhere – anywhere - within the downland system in question, or some other approach? Should down-like rolling landscapes be discounted If such a minimum slope is not reached somewhere within them?  In which case what is the minimum slope that should be adopted as the cut-off?
9. Where in the surrounding area does each down start or end, given that the nature of the terrain is such that a sharp break of slope may often not be evident? How much of a problem does the identification of this boundary with ‘non-downland’ represent?
10. In particular, on a long dip slope that drops away from a downland escarpment and extends onwards over tens of miles, where is the boundary of the downland area to be drawn?
11. What relevance if any do terms like “permeable”, “calcareous”, “sedimentary”, “carboniferous” and “argillaceous” have to considering whether there is any inherent association between the concept of downland and the underlying geology? Would any different terms prove useful in articulating this association? (See paragraphs 7-8 of the Brief.)
12. To the extent that it is considered that downland is limited to certain types of geology, does this limitation relate to the bedrock, or to any soils or materials that may cover the bedrock?
13. To what extent are the foothills of high fells, moors etc capable of being recognised as downland, for example where the bedrock is different?
14. The original CROW Part 1 mapping provisions (now spent) included at section 4(5) two discretions for the mapping authority:
15. to determine not to show as open country on the CROW maps areas of such land whose inclusion would serve no useful purpose2, and
16. to determine that an open country boundary should be moved to correspond with a particular physical feature for clarity, whether the effect is to include other land as open country or to exclude part of an area of open country.
17. Would regulating for some version of one or both of these discretions to be included in the review process help to make sense of the mapping of downland in a practical and useable way that provides joined-up and cohesive public access?

Natural England Project Management arrangements

1. The Project Manager will be Ben Nichols, NE’s Senior Adviser for Statutory Access. Email: ben.nichols@naturalengland.org.uk
2. Outside of the key contact points already specified in the project brief above, the frequency and method of contact between the supplier and the contract to be agreed upon prior to the contract commencing.

# Supporting Documentation

1. Bids must include the following information:
* Which specific individuals will be involved in each aspect of the work – indicating which key tasks each person will undertake, and itemising their related qualifications and experience.
* Initial proposals for search areas and/or for the most effective way to select them in discussion with NE.

# Sustainability

1. As a delivery partner, the successful contractor is expected to pursue sustainability in their operations, thereby ensuring Natural England is not contracting with a supplier whose operational outputs run contrary to Natural England’s objectives. The successful contractor will need to approach the project with a focus on the entire life cycle of the project. The successful contractor is likely to be able to provide a copy of their environmental policy and any environmental accreditation schemes which they have been awarded or are working towards.
* **Operational Sustainability -** Explain to Natural England what your organisation is doing to incorporate sustainability within its operations. This may include any details you are able to provide in relation to steps you may be taking to reduce your carbon footprint.
* **Environmental Management -** Detail what you will do to assess the environmental impact of completing this project and provide mitigations. Examples may include operational measures to reduce emissions and noise impacts, efficient energy use, efficient use of raw materials and minimisation of waste where possible.

# Evaluation Criteria

We will award this contract in line with the most economically advantageous tender (MEAT) on a 40% commercial, 60% technical. For further information please refer to the Request for Quotation form.

#  Bid Format

1. Please refer to the Request For Quote Document.
2. The successful bid will be able to demonstrate:
* Experience in delivering evidence reviews/ literature reviews, including that of datasets, publications, and modern and historical mapping.
* Experience in landscape field survey and mapping.
* Expert knowledge of Earth observation, remote sensing data and processing techniques etc.
* Demonstrated expertise in mapping and modelling.
* Clearly how each required output will be delivered and the likely timescales for each.
1. Bids may propose a different or modified approach from that shown in this Brief if the bidder considers this more likely to facilitate subsequent cost effective and consistent mapping of downland in England by NE when it undertakes the review.

# Quote/Tender

Prices will remain fixed for the duration of the contract award period. We may at our sole discretion extend this contract to include related or further work. Any extension shall be agreed in advance of any work commencing and may be subject to further competition.

# Key Contacts

1. The Project Manager will be Ben Nichols, NE’s Senior Adviser for Statutory Access. Email: ben.nichols@naturalengland.org.uk.

An alternative contact is Paul Johnson, NE’s Principal Adviser for Statutory Access. Email: paul.johnson@naturalengland.org.uk