

# 14 Withdrawal of management

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## Context

- 14.1 This chapter considers the implications of a significant drop in the level of agricultural activity across a block of land (several hundred hectares in the lowlands, several thousand hectares or more in the uplands). Withdrawal of forestry management has not been included here because:
- it is already part covered in the chapter on 'Tree felling and woodland clearance'.
  - it tends to lead to less immediate changes - there may already be long periods in a forestry cycle when little is done.
  - withdrawal of forestry management is less likely to lead in the short to medium term to large-scale changes in the nature or composition of forest habitats and species, unlike the case for agriculture.
- 14.2 Management has been withdrawn for 'rewilding' purposes on only a small number of areas in England, and only relatively recently. Many of the anticipated impacts are slight at present. Most of the evidence for this chapter has been extrapolated from experience in other countries, or from an understanding of natural processes.
- 14.3 Where management has been withdrawn due to 'abandonment', evidence is also sparse within an England context. True abandonment would imply that no farming or forestry activity is being carried out, and that no support payments are being drawn from Defra. Thus, the land may not be identified on the Rural Land Register under any management category. For this reason it is not possible to give an accurate estimate of the area that has been left unmanaged.

## Current practice

- 14.4 The vast majority of England is a cultural landscape shaped by thousands of years of human activity.<sup>1</sup> The wildlife and habitats that we value have survived in association with often long-established management regimes, from chalk grassland and coppice woodland to grazed uplands. Past and continuing management has developed the scenery that people associate with particular regions - the stonewall patterns of Derbyshire, the Chalk downs, the Cotswold beechwoods; and we value the traces of former land-use as part of the historic environment. For most of the land, most of the time, farming and forestry have been the dominant activities shaping its appearance and composition.
- 14.5 Significant withdrawal of agricultural and forestry management might be part of a deliberate policy for some: landowners, including Natural England on some of its reserves, have chosen to allow more 'natural' habitats to evolve, to explore how past and present management do affect the landscape and wildlife. On a relatively small scale there are already various woodland and some upland areas that have been under minimum intervention (no active management) for some decades.<sup>2</sup>

## Industry trends

- 14.6 There has been discussion on taking a 'minimum intervention' approach forward on a larger scale - sometimes referred to as 'rewilding'.<sup>3,4</sup> Often such discussions are associated with the use of free-ranging large herbivores<sup>5,6,7</sup> and possible species re-introductions.

- 14.7 There is also the possibility that agriculture might be scaled down/withdrawn from some areas of land due to lack of profitability, or the inability of the land manager to integrate a particular area into any of the surrounding enterprises. This is already a concern in some parts of the continent and possibly in parts of the English uplands.<sup>8</sup> An analogous process is happening on parts of the coast in England through managed re-alignment,<sup>9</sup> where similar questions arise over the benefits and dis-benefits of completely removing agricultural (and sea-defence) management and leaving the future of such areas to natural processes. It could be argued that this is a very deliberate form of management.
- 14.8 For current incentives, advice and regulation for landowners, see Annex I to this chapter.

## Key impacts

- 14.9 In the majority of cases, habitats will not revert to their original wild state, but will develop from their current starting point. Some of the changes resulting from allowing 'natural processes' a freer rein may lead to more diverse and interesting, albeit different, landscapes and wildlife.<sup>10</sup> There could be benefits for carbon storage and the creation of new areas for access and recreation.
- 14.10 One aim of deliberate 'minimum intervention' is the development over large areas of new mosaics and species assemblages. Even if conventional farming is withdrawn from such areas, domestic stock may still be used as replacements for the lost natural herbivores.<sup>11, 12</sup> Although the driving force has come from the biodiversity side, there may be potential benefits in carbon storage, recreation and tourism from such areas. There may also be potential improvements in water quality and flood mitigation deriving from enhanced interception of agricultural inputs<sup>13</sup> and increased vegetation cover,<sup>14</sup> respectively.
- 14.11 The alternative situation is where farming is significantly scaled down or abandoned for other reasons - including changing agricultural support, changes in the market for livestock or breakdown of local communities or ways of life. Historically, this happened between the 1920s and 1980s on some of the Dorset heathlands due to military use during the war, poor agricultural profitability and fragmentation caused by development.<sup>15</sup> Areas subject to such true abandonment are difficult to identify on a national scale. There are some places where the intensity of production has been substantially reduced so that some indication of the implications of complete withdrawal can be identified. In practice, most examples stay just within the definition of extensive agricultural systems because of the reliance in part on agricultural grants for support. An example of this is the Knepp Estate in Sussex.<sup>16</sup>
- 14.12 The various potential benefits from agricultural withdrawal may be translated into direct benefits to the landowners through reduced costs (where enterprises are currently unprofitable), new sources of income (perhaps increased tourism) or grant support, for example for biodiversity gains.<sup>17, 18</sup> There might be some benefits to water companies from reduced agricultural nutrients in water supplies. There are also potential increased costs/reductions in income - the direct loss of production income, and loss of Single Farm Payment if Good Agricultural and Environmental Condition rules are compromised, for example GAEC 12: Agricultural land which is not in agricultural production.
- 14.13 Environmentally, there are potential gains and losses which are likely to be site specific. A number of scenarios have been considered, for example in upland areas some less productive land may become abandoned, allowing managers to concentrate activities on more accessible and productive land in the valley bottoms. Whilst this might serve to enhance many moorlands in the short or medium term, it could have a detrimental effect on traditional hay meadows and other high value grasslands, which might become more intensively used as a result. In the early stages, for example, more management may be needed to get the landscape into a state such that there is more chance of the positive benefits emerging early on.

- 14.14 Current farm support payments and potential margins from active management are such that large-scale withdrawal of management in the lowlands, at first sight, seems unlikely. In some areas (particularly eastern England) livestock enterprises are only marginally viable and the land that was traditionally grazed is not worth using for arable land, or is protected from conversion to arable under Environmental Impact Assessment (EIA) regulations<sup>19</sup>. These areas are already in danger from the impacts of the loss of grazing, with the resulting loss of grassland habitats. There are also several high profile examples, for example the Great Fen Project in Cambridgeshire and the Knepp Castle estate in Sussex where, while the land is still under some management, this is moving away from farming in a conventional sense.
- 14.15 While reduced agricultural input may seem more likely in the uplands - Wild Ennerdale (Cumbria) provides an example of movement in this direction<sup>20</sup> - the land may still be very actively managed. For example, much of the moorland area of the North Yorkshire Moors, traditionally a sheep producing area, is now ungrazed due to the increasing difficulty of keeping sheep profitably on such land.<sup>21</sup> The relatively high financial value and level of interest in shooting has resulted in largely maintained levels of heather management by other means such as burning and bracken control programmes.
- 14.16 For further factual background to this section see Annex II to this chapter.

## Summary of impacts

### Biodiversity

- 14.17 Where management is withdrawn from agricultural land, there will be changes in terms of biodiversity. Whether these are judged to be desirable or unacceptable will depend on the particular area concerned, as well as the particular changes that ensue.
- 14.18 With the substantial removal of grazing, it is most likely that grassland and heathland areas will develop areas of scrub, ultimately becoming dominated by trees. Where this involves, for example, high nature value grassland or lowland heath, or the loss of mosaic habitats<sup>22</sup> currently maintained by low intensity farming, the result could be a loss of habitat of greater biodiversity value.

### Resource protection

- 14.19 The reversion of arable land to grassland, scrub or woodland would have a positive impact on water quality (nutrients, pesticides and sediment), flood mitigation and freshwater habitats. This would largely derive from the increase in organic matter, immobilising soils and nutrients.
- 14.20 Increased tree cover may lower the water table, having a detrimental effect on lowland wetlands and raised bogs.

### Greenhouse gases

- 14.21 Organic matter such as dense vegetation acts as a carbon sink.

### Landscape

- 14.22 Landscape character would change to a more wooded aspect. Access may be enhanced or restricted, with areas becoming less accessible over time due to dense growth.
- 14.23 Key issues in managing the impacts are likely to be the area over which agricultural withdrawal takes place; the habitat(s) to be lost, whether the withdrawal is complete or whether some low-intensity use continues and how, or whether, the transition to the future state is managed.

# Annex I Current incentives, advice and regulation

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For the most part, the regulatory framework is based around limiting proposals for action<sup>23</sup>; it deals less well with situations where the cessation of activity (in this case farming) is the cause of potential changes.

- *Statutory designations*: On Sites of Special Scientific Interest (SSSI), including Special Protection Areas (SPA) and Special Areas of Conservation (SAC), where Natural England considers that management is needed to maintain favourable condition, then changing (stopping) various forms of management, including grazing, could fall within the definition of Operations Likely to Damage, an offence under *Wildlife and Countryside Act (1981)*<sup>24</sup> and the *Countryside and Rights of Way (CRoW) Act (2000)*.<sup>25</sup>
- Changes that were considered damaging to scheduled ancient monuments would be subject to consultation with English Heritage.
- Any detrimental changes to water quality or quantity following from a change of land-use would need to be considered by the Environment Agency. The Catchment Sensitive Farming (CSF) Initiative provides free advice to farmers and land managers on all issues relating to water management and soil protection on land within river catchment areas.
- *Cross Compliance*: Land currently receiving Single Farm Payment must comply with GAEC requirements. 'Eligible land which is not in agricultural production' must be managed to avoid scrub encroachment and weed infestation unless it is being managed as part of a habitat creation programme (GAEC 12).<sup>26</sup>
- *Animal health and welfare*: If free-ranging herbivores are involved, then welfare legislation applies, particularly but not exclusively to domestic stock should these be seen to be suffering. In the event of a major animal disease outbreak, for example foot and mouth, any large herbivores would be subject to emergency control measures. This is currently the situation with wild animals, for example with respect to foxes and rabies.
- *Forestry incentives and regulation*: It is unclear whether, if trees were to spread naturally over an area as a consequence of reduced grazing, this might also require an EIA from a forestry point of view if no grant were involved. A forestry EIA determination would be required<sup>27</sup> (depending on the extent and location of the spread) if grant were sought for the regeneration. Compliance with the UK Forestry Standard and Guidelines (see chapter on 'Woodland Creation') would then also be needed.<sup>28</sup>

# Annex II Impacts on the environment of abandonment or rewilding

**Table 16** Impacts on the environment of abandonment or rewilding

Habitat quality and diversity	<p>Removal of management can have a number of potential effects on existing habitats, depending on previous management, location and habitat type:</p> <ul style="list-style-type: none"> <li>• Depending on grazing levels, there is potential loss of open habitats (grassland, heath, some moor, fen and bog) or changes in their structure and species composition.<sup>29</sup></li> <li>• There may be creation of new habitats/habitat mosaics and shifting patterns of habitats.</li> <li>• There is potential for initial increased uniformity of habitat, particularly on small sites, because of similar successional trajectories; but with greater potential heterogeneity over longer periods and timescales. In the same way, much common and downland scrubbed up after the decline of rabbits in the 1950s.</li> <li>• There is potential for increased fuel load if large areas of bracken or on some sites mature heather develop, leading to more intense wildfires, for example Fylingdales Moor in 2003.<sup>30</sup></li> </ul>
Species abundance and diversity	<ul style="list-style-type: none"> <li>• There may be losses of species from current locations, but opportunities for others to increase abundance or range.</li> <li>• There is potential for spread of invasive species currently checked by agricultural management (such as Himalayan balsam).</li> </ul>
Water level control	<ul style="list-style-type: none"> <li>• Increased retention of rainwater and consequent flood mitigation further downstream.<sup>31</sup></li> <li>• Natural channel development.</li> </ul>
Sediment loads in water	<ul style="list-style-type: none"> <li>• Changed and probably reduced erosion patterns, with increased and more complex vegetation cover along watercourses. Vegetated cover should lead to greater soil stability.<sup>32</sup></li> </ul>

Table continued...

Nutrient loads in water	<ul style="list-style-type: none"> <li>Reduced chemical inputs to catchments leading to less risk of chemical contamination of water bodies, plus increased buffering of runoff and filtration of nutrients.<sup>33</sup></li> </ul>
Pesticide control in water	<ul style="list-style-type: none"> <li>Depending on whether the unmanaged land was arable or grassland, there is the likelihood of lower nutrient inputs.<sup>34</sup></li> </ul>
Other pollutants	<ul style="list-style-type: none"> <li>Potential risk of bacterial contamination of water courses from dead animals if fully 'natural grazing' were adopted. This is unlikely given current welfare legislation. In addition, stocking levels are likely to be lower than under agricultural grazing, with consequently fewer contamination risks.</li> </ul>
Greenhouse gases	<ul style="list-style-type: none"> <li>Gradually increasing carbon sequestration on most sites, but potentially increasing fire risk.</li> </ul>
Soil stability (erosion)	<ul style="list-style-type: none"> <li>Reduced cultivation, drainage and impacts of heavy stocking should lead to reduced erosion risk under normal conditions.</li> </ul>
Soil structure	<ul style="list-style-type: none"> <li>Reduced organic matter degradation and disturbance due to cultivations should allow a build-up of organic matter and nutrients within the soil matrix.<sup>35</sup></li> </ul>
Landscape character	<p>Landscape character is likely to change in positive and negative ways:</p> <ul style="list-style-type: none"> <li>Development of new landscape features, for example natural water channel development (meanders etc), more scrub and native woodland.</li> <li>Landscape heterogeneity is likely to be on a larger scale than is maintained by agricultural activity.</li> <li>Potential loss of traditional landscapes; the new patterns created might take time to become accepted, for example concerns about the spread of 'unsightly' scrub on open grasslands,<sup>36</sup> heathlands and moorlands.<sup>37</sup> This may impact on the short-term value to tourism of some traditional landscapes.</li> <li>Reduction in the 'human' element of the landscape.</li> </ul> <p>The historic environment may be adversely affected:</p> <ul style="list-style-type: none"> <li>Obscuring/deterioration of landscape scale patterns such as fields.</li> <li>Physical disruption of features by tree and shrub growth.<sup>38</sup></li> <li>Potentially reduced access to features if scrubbed over.</li> <li>Loss of historic meaning of the landscape (albeit a new meaning will start to develop).</li> </ul>

<sup>1</sup> Rackham, O., *Ancient woodland*, Rev. edn., (Dalbeattie, Castlepoint Press, 2003)

<sup>2</sup> Peterken, G.F., *Natural reserves in English woodland*, Research Report 384, (Peterborough, English Nature, 2000)

<sup>3</sup> Taylor, P., *Beyond conservation: A wildland strategy* (London, Earthscan and BANC, 2005)

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- <sup>4</sup> Taylor, P. 2009 Re-wilding the grazers: obstacles to the 'wild' in wildlife management. *British Wildlife* 20, (Supplement) (2009) 50-55
- <sup>5</sup> Vera, F.W.M., *Grazing ecology and forest history* (Wallingford, CABI, 2000)
- <sup>6</sup> Hodder, K.H, Bullock, J.M., Buckland, P.C. and Kirby, K.J., *Large herbivores in the wildwood and in modern naturalistic grazing systems*, Research Report 648, (Peterborough, English Nature, 2005)
- <sup>7</sup> Hodder, K H & Bullock, J.M. 2009. Really wild – naturalistic grazing in modern landscapes. *British Wildlife* 20 (Supplement) (2009) 37-43
- <sup>8</sup> Defra (2006), *The Agricultural Change and Environmental Monitoring Programme. OBS 02: CAP Reform: Implications of farm level change for environmental outcomes* (2007). Final Report, URL: [http://statistics.defra.gov.uk/esg/ace/da3\\_data.htm](http://statistics.defra.gov.uk/esg/ace/da3_data.htm). Accessed January 2009
- <sup>9</sup> Defra (2003), *Managed realignment: Land purchase, compensation and payment for alternative beneficial land use*, URL: [www.defra.gov.uk/environ/fcd/guidance/mrcomp/mrcomp.htm](http://www.defra.gov.uk/environ/fcd/guidance/mrcomp/mrcomp.htm). Accessed January 2009
- <sup>10</sup> Worrell, R., Pryor, S.N., Scott, A., Peterken, G.F., Taylor, K., Knightbridge, R. and Brown, K., *New wildwoods in Britain*, Research Report, (Peterborough, JNCC Land Use Policy Group, 2002)
- <sup>11</sup> Vera, *op.cit.*
- <sup>12</sup> Hodder, *op.cit.*
- <sup>13</sup> Baker, M.E., Weller, D.E. and Jordan, T.E., 'Improved methods for quantifying potential nutrient interception by riparian buffers', *Landscape Ecology*, 21 (2006), 8
- <sup>14</sup> British Ecological Society (2007), *Submission to EFRA Committee enquiry into flooding*, URL: [www.britishecologicalsociety.org/articles/publicaffairs/consultations/BES%20Flooding.doc/](http://www.britishecologicalsociety.org/articles/publicaffairs/consultations/BES%20Flooding.doc/). Accessed January 2009
- <sup>15</sup> Jackson, P., Simons, M. and Elder, J., *The Dorset Environmental Data Book 2005: Data and statistics for the county of Dorset* (Dorset County Council, 2005)
- <sup>16</sup> Knepp Castle Estate (2007), *Knepp wildland project*, URL: [www.knepp.co.uk/](http://www.knepp.co.uk/). Accessed January 2009
- <sup>17</sup> Worrell, *op.cit.*
- <sup>18</sup> Kernon Countryside Consultants and Land Use Consultants, *Creating naturalistic grazing in lowland England* (Horsham, Knepp Estate, Unpublished, 2007)
- <sup>19</sup> Ministry of Justice (), UK statute Law database, 'The Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (England) Regulations 2001 (No. 3966)', URL: [www.statutelaw.gov.uk/](http://www.statutelaw.gov.uk/). Accessed January 2009
- <sup>20</sup> Browning, G. & Oakley, R. Wild Ennerdale. *British Wildlife* 20 (Supplement) (2009) 56-58
- <sup>21</sup> Defra (2005), *Yorkshire and Humberside ERDP Regional Chapter*, URL: [www.defra.gov.uk/erdp/docs/yhchapter/yhsection12/yh121.htm](http://www.defra.gov.uk/erdp/docs/yhchapter/yhsection12/yh121.htm). Accessed January 2009
- <sup>22</sup> Bignal, E. & McCracken, D. Herbivores in space: extensive grazing systems in Europe. *British Wildlife* 20 (Supplement) (2009) 44-49
- <sup>23</sup> Kirby, K J. Policy in or for the wilderness? *British Wildlife* 20 (Supplement) (2009) 59-62
- <sup>24</sup> Ministry of Justice (1981), *UK Statute Law database*, 'Wildlife and Countryside Act 1981 (c. 69)', URL: [www.statutelaw.gov.uk/](http://www.statutelaw.gov.uk/). Accessed January 2009
- <sup>25</sup> Ministry of Justice (2000), *UK Statute Law database*, 'Countryside and Rights of Way Act 2000 (C.37)', URL: [www.statutelaw.gov.uk/](http://www.statutelaw.gov.uk/). Accessed January 2009
- <sup>26</sup> Defra and RPA (2007), *Guide to cross compliance in England*, URL: [www.crosscompliance.org.uk/cms/assets/Uploads/PDFs/SMRs-08.pdf](http://www.crosscompliance.org.uk/cms/assets/Uploads/PDFs/SMRs-08.pdf). Accessed January 2009
- <sup>27</sup> Forestry Commission (2007), *Environmental impact assessment of forestry projects*, URL: [www.forestry.gov.uk/pdf/wgseia.pdf/\\$FILE/wgseia.pdf](http://www.forestry.gov.uk/pdf/wgseia.pdf/$FILE/wgseia.pdf). Accessed January 2009
- <sup>28</sup> Forestry Commission (2004), *The UK Forestry Standard*, URL: [www.forestry.gov.uk/pdf/fcfc001.pdf/\\$FILE/fcfc001.pdf](http://www.forestry.gov.uk/pdf/fcfc001.pdf/$FILE/fcfc001.pdf). Accessed January 2009
- <sup>29</sup> Moors for the Future Research (2007), *Looking after moorland habitats*, Note 14, URL: [www.env.leeds.ac.uk/sustainableuplands/14%20-%20Looking%20after%20moorland%20habitats.pdf](http://www.env.leeds.ac.uk/sustainableuplands/14%20-%20Looking%20after%20moorland%20habitats.pdf). Accessed January 2009
- <sup>30</sup> Pickering, R., (pers comm.)
- <sup>31</sup> British Ecological Society, *op.cit.*
- <sup>32</sup> Forestry Commission, *Forests and soil conservation guidelines* (Forestry Commission, 1998)
- <sup>33</sup> Baker, *op.cit.*

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<sup>34</sup> Calder, I.R., Harrison, J., Nisbet, T.R. and Smithers, R.J., *Woodland actions for biodiversity and their role in water management* (Grantham, Woodland Trust, 2008)

<sup>35</sup> Smith, P., Martino, D., Cai, Z., Gwary, D., Janzen, H., Kumar, P., McCarl, B., Ogle, S., O'Mara, F., Rice, C., Scholes, B. and Sirotenko O., 'Agriculture' in *Climate Change 2007: Mitigation*. Working Group III Contribution to the Fourth Assessment Report of the IPCC (Cambridge, Cambridge University Press, 2007)

<sup>36</sup> Jefferson, R.G. and Hurst, A., *Grassland habitats: state of the natural environment*. Report resource document (Natural England, 2008)

<sup>37</sup> Alonso, I., and Perry, S., *Heathland habitats: state of the natural environment*. Report resource document (Natural England, 2008)

<sup>38</sup> Forestry Commission, *Forests and archaeology guidelines* (Forestry Commission, 1995)