

7. The future for the beef regime: future scenarios and alternative policy options

7.1 Introduction

7.1.1 It is the task of the final chapter to consider the way in which CAP policies might be amended so as to assist in the fulfilment of the key objectives identified at the end of the previous chapter. Clearly this requires a policy framework which is both local (targeted) and national (strategic). It needs to take account of international commitments such as the Habitats Directive²⁶ and the targets identified under the UK's Action Plan on Biodiversity (Cmnd 2428). The UK's reliance on special sites appears to be in breach of Article 8 (c) of the Rio Convention on Biological Diversity which states that "each contracting party shall, as far as possible and appropriate, regulate or manage biological resources important for the conservation of biological diversity whether within *or outside* protected areas, with a view to ensuring their conservation and sustainable use" (my emphasis). The purpose of this final chapter, therefore, is to explore alternative policy mechanisms in terms of their respective merits vis-à-vis positive nature conservation outcomes.

7.1.2 The chapter does not seek to provide an exhaustive review of future policy scenarios or of the full range of published opinions on how the CAP should be reformed. Rather it identifies three key strategic options and for each seeks to identify how the generation of positive biodiversity outcomes might be incorporated explicitly into policy design. The three options, as identified in the original brief for this project have been modified drawing on Potter (1996), as follows:

- *Scenario 1*: a weak decoupling or adjustment of production support with ancillary and specific agri-environment measures. The emphasis is on reducing price support (to meet GATT obligations) and delivering support through compensation schemes and producer aid.
- *Scenario 2*: a moderate decoupling of production support to direct payments recoupled to environmental and social objectives. The emphasis is on the reduction of prices so that they are closer to world market prices, while *retaining* permanent policy entitlements delivered through area based payments.
- *Scenario 3*: a radical decoupling (dismantling) of all commodity support complemented by targeted specific environmental (and social) measures to address consequential environmental problems. The emphasis on reduction of prices to world levels by the removal of all support payments, offset *transitionally* by decoupled compensatory payments.

7.1.3 Prior to a consideration of these key scenarios in the third section of this chapter, the second part provides a brief examination of the pressures for reform.

7.2 Pressures for reform

7.2.1 It is generally accepted by all commentators that the pressures for further reform of the CAP will mount in the immediate future. According to Professor Alan Swinbank, the following pressures are of particular importance (see also Doyle *et al* 1997, Swinbank and Tanner 1996):

²⁶EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora.

- First, the MacSharry reforms introduced more transparency into the CAP. The public can now more easily monitor the support paid to large, prosperous farmers, in the form of area and headage payments; and less public support for the protection of agriculture is to be expected in future;
- second, budgetary pressures are likely to re-emerge as world cereal prices abate from their 1995/96 highs. The MacSharry payments are inherently more costly to the EU's budget than the support mechanisms of the 'Old' CAP. Furthermore, in the run-up to Economic and Monetary Union, even Germany and France have begun to criticise the budgetary cost of the CAP, as they strive to cut public expenditure in order to meet the Maastricht convergence criteria;
- third, although the existing Agreement on Agriculture, concluded in the Uruguay Round, does little to curb the CAP's excesses, the requirement to engage in a new round of negotiations in 1999, with the expectation that this will lead to further cuts in farm support, means that some time in the next decade additional cut-backs will be forced on the EU; and
- finally, the prospect of a further enlargement of the EU to embrace up to ten states from Central and Eastern Europe has led many to conclude that either the CAP will have to be reformed before enlargement can proceed, or that enlargement must be postponed. In part this stems from the additional budgetary costs that would be incurred if the existing CAP were to be applied in the new entrants, but - more importantly - that the WTO/GATT Agreement on Agriculture constraints would be breached.

(Swinbank 1996)

7.2.2 Hughes *et al* (1995) similarly argue that there will be a period of two to three years in which the 1992 CAP reforms are consolidated and extended followed by a tightening of restrictions on agricultural output and a downward pressure on prices towards the end of the century. In the long term there will be a freer market policy, in which the market is separated from socio-economic and environmental policy objectives. They point out that the BSFS was introduced in 1992 as a short term adjustment measure. As such payments are not fully decoupled from the incentive to produce, they are likely to come under further political pressure and some scaling back in the level of payments could take place. However, writing before the impact of the BSE crisis the authors did not anticipate the additional support measures for the beef sector in the 1996/97 period.

7.2.3 Until the BSE crisis, DGVI of the European Commission consistently took the view that the 1992 reforms would be adequate to meet international obligations (e.g. Streichen 1995). A less sanguine view is taken by independent commentators such as Buckwell (1996 and *et al* 1994), Ockenden & Franklin (1995) and Swinbank (1996). From an average annual volume of subsidised EU exports between 1991 and 1994 of 1.3 million tonnes, the EU is expected, under the terms of the GATT agreement, to reduce this tonnage to 821,700 by 2000. The decline in consumption resulting from the BSE crisis makes this target increasingly hard to meet:

The natural conclusion, therefore, is that structural measures designed to reduce production in the European Union generally are required to bring about a more long term balance between supply and demand. (MLC 1996)

7.2.4 A Commission paper published in April 1997, *CAP 2000: Long-term Forecasts*, stressed the need for reform of the grains, meat and dairy product regimes within two years (Doyle *et al* 1997). The publication by the EC of *Agenda 2000* in July provides the clearest indication yet of the likely pattern of CAP reform into the next millennium. The ideas on agricultural reforms set

out in Chapter II of Agenda 2000 will be widely discussed and taken forward in the Autumn, when the Agriculture Directorate of the EC will be preparing detailed proposals. Agenda 2000 accepts some of the inherent weaknesses and contradictions of the post-1992 framework:

... rural policy in the EU still appears as a juxtaposition of agricultural market policy, structural policy and environmental policy with rather complex instruments and lacking overall coherence. (p.24)

7.2.5 The paper sets out policy objectives for the further reform of CAP which may be summarised as follows:

- improvement of the competitiveness of EU agriculture on both domestic and external markets;
- continuing emphasis on food safety and food quality, including environmental friendliness of production methods;
- ensuring a fair standard of living for the agricultural community and stability of farm incomes;
- the integration of environmental goals into the CAP;
- the creation of complementary or alternative income and employment opportunities for farmers and their families;
- contribution to economic cohesion within the Union.

7.2.6 Some of the key reforms to meet these objectives are indicated as follows:

- a further shift towards direct payments;
- introduction of an individual ceiling covering all direct-income payments (modulation);
- reinforcement and expansion of agri-environmental measures under Regulation 2078/92;
- transformation of support schemes in LFAs into a basic instrument to maintain and promote low-input farming systems.

7.2.7 In the beef sector there are plans to improve the effectiveness of market support through border protection, export measures and the introduction of private storage regimes. It appears that headage payments (gradually increasing) and stocking density rules will be retained but, crucially, it is indicated that more attention will be given to improving the effectiveness of the extensification premium. It is important to note that the Commission expects a cyclical downswing of production until the year 2000 but that after 2001, production could build up against a backcloth of declining consumption. Agenda 2000 asserts that it is not acceptable in the long run to solve over-production problems by slaughtering young calves or purely by supply management (quotas). It is therefore looking to a combination of new export markets (where is not specified) and the promotion of consumption.

7.2.8 As they stand, the reforms proposed are scarcely radical although there is potential for them to be given a more radical edge as they are developed in more detail. In particular there is scope within the suggestions for a revamped LFA policy that may have considerable potential benefits for the uplands. Given this suggestion, it is possible that we will see a more radical decoupling in the LFAs than elsewhere. Similarly, the suggestion that beef extensification payments need to be

further examined offers the prospect of a tougher element of environmental conditionality within the beef regime.

7.3 Decoupling scenarios: Towards a critical assessment

7.3.1 In this section, we examine further the three scenarios for future policy as set out by Clive Potter (1996) in an earlier project for English Nature. Potter identifies three degrees of decoupling of payments from production: weak, moderate and radical²⁷. He clearly identifies moderate decoupling as the one offering the greatest potential for environmental benefits. If his analysis is correct, then the task of drafting the details of Agenda 2000 will be of huge significance. At present, it can be construed as an extension of the weak decoupling heralded by the 1992 reforms. However, there is an opportunity for a stronger decoupling to be introduced as the details of the package are further developed. The thinking behind Potter's approach is indicated in the following discussion of the three scenarios and their possible implications for the countryside with particular reference to the role of beef production and nature conservation. In each case, the likely effects of the scenario are considered against four policy goals for a sustainable agriculture set out by Tilzey (1997b) in Table 7.1.

Table 7.1 Policy Goals for a Sustainable Agriculture

Sustainable Agriculture Policy (SAP) Goal 1.	to enhance the remaining resource of semi-natural habitats (through site buffering, linkage and re-creation ²);
SAP Goal 2.	to address the decline in the other biodiversity components of agro-ecosystems (the 'common' habitats and species in the wider countryside);
SAP Goal 3.	to improve the status of water, soil and air;
SAP Goal 4.	to ensure the viability of farms and communities required to underpin such objectives. To deliver such objectives an integrated holistic view of countryside management is required.

Scenario 1: Weak decoupling

7.3.2 With pressures to limit spending from the agricultural budget, the simple first step under this scenario, which is essentially a continuation of post-1992 policies, is to reduce still further commodity support for mainstream agricultural products with a continuation of compensatory payment schemes, including beef headage payments. However, continuing dependence on headage payments means that support under a weakly decoupled scenario is far from being entirely production neutral either in principle or practice. Indeed, given the huge variety of farming circumstances within a single member state, not to mention across Europe as a whole, there is inevitably a tendency for some producers to find themselves able to expand beef production, sometimes significantly, within the entitlement and stocking rate rules applied across Europe as a whole (Winter and Gaskell 1997; Goss *et al* 1997). Given this, and combined with the continuing concern regarding over-production within the beef sector and the pressures of GATT, it is perhaps surprising that *Agenda 2000* continues with a headage policy. Politically, it is to be expected that more international pressures will be exerted to reform the beef sector in world trade talks in the coming years.

²⁷ According to Alan Swinbank (1997) the word decoupling was introduced into the language as a direct result of GATT negotiations: "It is used to describe a support payment to the farm sector that has no discernible impact upon production, and hence upon trade volumes, and thus which need not be subject to any GATT disciplines": p.104.

7.3.3 The main opportunities and constraints for conservation under weak decoupling, with special reference to the beef sector, are as follows.

SAP Goal 1

7.3.4 The main feature of the weak decoupling scenario is that it implies relatively limited change. Indeed, given the continuation of existing systems of headage payments and quota, there is a strong in-built tendency within weak decoupling towards the maintenance of the status quo. This may be advantageous where the attraction of headage payments combined with the restriction of quotas and ring fencing allows for the continuation of management of existing semi-natural habitats. Three factors might be expected to have a further impact within the weak decoupling scenario: markets, cross-compliance, and participation in agri-environment schemes.

7.3.5 Market conditions may cause problems, either through a lack of demand which might threaten the continuity of favourable management regimes (e.g. the BSE factor), or through increased demand (less likely under present conditions) which might threaten benign management of existing wildlife habitat, through intensification.

7.3.6 Cross-compliance conditions offer an attractive opportunity for ensuring that remaining semi-natural habitats are well managed. It is important, however, to note that the weaker the element of decoupling the less stringent the cross-compliance conditions that may be applied with a wide policy reach. This is because if decoupled payments remain a relatively small proportion of farm income, onerous cross-compliance conditions will act as a disincentive to farmers who may consequently choose not to receive compensatory payments²⁸.

7.3.7 Participation in agri-environmental schemes depends heavily on the extent to which these schemes are sufficiently attractive and targeted, given weakly decoupled support and market pressures.

SAP Policy Goals 2-4

7.3.8 These three policy goals are treated together, so as to avoid repetition. As indicated in our discussion of SAP Policy Goal 1, the main feature of this scenario is a slight modification of existing measures and the continuation of the status quo (subject to the caveats given above) means that SAP policy goals 2, 3 and 4 are unlikely to be particularly well served by weak decoupling. The second goal, addressing decline in the wider countryside, might be modestly helped by limits on expansion and cross-compliance.

7.3.9 Under a new regime of weak decoupling, the best that could be hoped for would be some more imaginative cross-compliance and new agri-environment schemes. This would be preferential to across the board increases in payments offered under agri-environmental measures. However, this should not exclude the possibility of selective increases for particular management practices or capital works within existing schemes. There is a strong argument for special payments to farmers for beef herds which produce nature conservation outcomes rather than beef (a 'cows and conservation' subsidy). Where trusts or charities own land and co-ordinate grazing, a proportion of payment should be made to tenant farmers in recognition of their contribution to conservation. The aim of this would be to alert farmers to the benefits of 'green behaviour' and encourage an attitude shift which could then be applied in the wider countryside (outside a specific designation). Although still based primarily on the agricultural budget, trusts and charities with

²⁸In pressing for ever stricter cross compliance to be attached to payments, some environmentalists may find they are pushing at an open door as some policy makers may see this as an opportunity to limit exchequer payments by discouraging farmers from uptake. It is important therefore that cross-compliance is only applied where genuine environmental gains may be anticipated and where payments are high enough to retain farmer goodwill and participation.

resident herds should be permitted to participate where resident herds have been established in the absence of local graziers. A 'cows and conservation' payment could be a step towards widespread decoupled measures, but may only apply to some farmers in the first instance on priority sites. Further, it could, and should, be set initially at such a level that it competes effectively with (reducing) levels of price support. Evidently, this action would be particularly important on acid grasslands, such as Kings and Bakers Woods and Heaths.

Scenario 2: Moderate Decoupling

7.3.10 Moderate decoupling implies a major shift away from support payments towards payments which are not linked to production levels at all. However, in contrast to the radical scenario, these payments are seen as being provided on a continuing basis, reflecting society's desire to support farmers on both environmental and socio-economic grounds. Moderate decoupling, therefore, has a strong resonance with environmentalists who are cautious about leaving environmental management to the vagaries of the free market, even if supplemented by regulations and voluntary schemes. The main opportunities and constraints for conservation under moderate decoupling have been well set out by Potter, and revolve primarily around a shift from headage to area payments:

... moderate decoupling ... preserves policy reach. In the livestock sector, the conversion of headage to hectare payments has long been discussed (see Egdell, 1994)²⁹, where it is seen as a more environmentally neutral way of supporting marginal grassland farms. Hectare payments reduce the incentive to over graze but also ensure that the land is farmed. Moreover, and this is critical to the conservation case for their deployment, they also provide a platform on which other, more targeted environmental payment schemes can rest. (Potter 1996: p15)

7.3.11 It follows, therefore, that there is considerable potential for moderate decoupling to adequately tackle the policy goals for sustainable agriculture within the beef sector.

SAP Policy Goal 1

7.3.12 A shift to area payments should help to ensure adequate continuing *management* of existing important habitats, although we cannot rule out negative consequences where specific markets decline or collapse. However, it will not necessarily *enhance* the resource through buffering, linkage and re-creation. In these cases, additional inducement measures would be required. However, given the nature of area payments there should not be any strong disincentive for farmers to adopt additional scheme payments, as these can be made financially neutral or positive without great difficulty³⁰.

SAP Policy Goals 2, 3 and 4

7.3.13 There is every prospect that these policy goals would be well served by a shift to area payments under moderate decoupling. Area payments should prompt a general (and genuine) de-intensification at the same time as preserving farms and the continuation of farming operations within the wider countryside.

7.3.14 One of the problems with translating the general principles developed by proponents of moderate decoupling to the specific case of beef is that the policy (as is the case with most CAP reform

²⁹See also: Egdell 1996.

³⁰In marked contrast to the headage payment system where, especially when combined with strong market, it has often not been in farmers' financial interests to adopt agri-environmental schemes: Sofie and Hetherington 1996/7; Winter and Gaskell *et al* 1997.

proposals) is based on the assumption that the policy task will continue to be to suppress production. However, in the case of the beef sector, as has been amply demonstrated in this report, there is an equally significant risk that environmental damage will result from a decline in production in response to market, rather than policy, signals. Thus, area payments on their own, whilst they might well deliver what is required in other commodity sectors are likely to need additional measures to deal with the beef sector. These might take the form of cross-compliance requirements for all area payments covering the retention and management of beef enterprises. Thus it is important to recognise that any adjustment to the beef sector must be accompanied by changes in the sheep support regime so that farmers cannot use this enterprise to side-step the environmental demands of a new beef regime. One suggestion is to retain sheep quota and stocking rate rules covering all sheep on the holding rather than just sheep on which SAPS is claimed and adjusted according to a strong environmental conditionality element. Goss *et al* (1997), by contrast, suggest that if headage payments are replaced by area payments (Forage Area Payments - FAPs - in their terminology) then all limits and quotas should be removed. However they go on to suggest that the FAPs should be introduced with three tiers:

Tier 1 = compensation for headage payments withdrawn; without environmental constraints. At this Tier, payment rates would be directly proportional to the productivity of the forage land ... (eg temporary grass would receive more than permanent grass, which would receive more than rough grazing);

Tier 2 = higher levels of payment for compliance with broad environmental constraints, such as maximum and minimum stocking rates and cattle:sheep ratios;

Tier 3 = environmental management schemes, generally leading on to the various levels of the existing ESA schemes.
(Goss *et al* 1997: p187)

- 7.3.15 They go on to say that agri-environmental zones should be established with different payment levels and conditions applying to the tiers within each zone. Farmers would have the choice of which tier to enter:

The differential between successive tiers should be based on the level of incentive required in order to encourage uptake and not on any principle of compensation or reference to previous levels of support - this is covered by Tier 1. Thus payment rates could be set most economically by establishing target areas of land to enter each tier in each zone, and regularly adjusting the payment rates to maintain this level of uptake. Increasing the target uptake of higher tiers would be a political decision implying the allocation of more resources to environmental objectives, either from additional budgetary expenditure or by reducing Tier 1 payments and so reducing the level of support for "environmentally unfriendly" farmers. (Goss *et al* 1997: p189)

- 7.3.16 Thus in considering our own concern with the beef sector, we can envisage Tier 2 and 3 payments, especially within the agri-environmental zones, being paid directly to farmers simply for keeping beef enterprises which fulfil nature conservation objectives. In the absence of price support, wider applicability of the measure could be introduced than suggested in Scenario 1. This could safeguard conservation interest beyond the tightly defined boundaries of SSSIs, for example. The most important consideration against this policy backdrop is the need to move away from the broad brush livestock unit approach currently associated with agri-environmental schemes and establish sensitivity towards both enterprise type and to animal types within those enterprises. This would go beyond the simple concept of modifications (whether basic or intricate) of stocking density limits, which represented the thrust of the recommendations made in the Entec Report (1996). Specific premium support for 'environmental beef' should be offered through these schemes if 'sensitive areas' are to be retained.

- 7.3.17 There are problems with the FAP proposal as currently stated. Broadly these are threefold and mirror some of the concerns with current policy arrangements. *First*, the dependence on the voluntary principle, whereby farmers decide whether or not to opt in to a higher tier, presents many familiar problems to achieving a sustainable agriculture. The underlying problem is that an individual farmer's decision-making may not necessarily reflect local, regional or national priorities for nature conservation and for sustainable agriculture. This is particularly problematic when considering the countryside holistically, utilising the insights of landscape ecology for example. The risk of a tiered approach is that areas of environmentally unfriendly farming will remain, contradicting efforts to provide for integrated countryside management. The idea that the differential pricing of tiers may be used to counteract this danger, risks having to offer universally high prices in the higher tiers so as to attract the most resistant farmers, leading to an over-compensation of many other farmers. It can be argued that this is an economically inefficient and socially inequitable transfer of resources which might be better deployed in direct environmental payments for environmental enhancement, e.g. through habitat recreation. There are strong grounds for insisting that, even if a tiered approach is adopted that there should be strong elements of environmental cross-compliance even in the lowest tier.
- 7.3.18 *Secondly*, the creation of agri-environmental zones contradicts the 'whole countryside' philosophy inherent to the natural areas and sustainable agriculture approaches. Not only is zoning based on artificial and arbitrary distinctions, but as the definition of environmental issues in agriculture has broadened to include resource issues (soil, water and air) so a zoning approach based only on landscapes or habitats is increasingly seen as inappropriate.
- 7.3.19 *Thirdly*, the explicit dependence on political judgement in establishing the balance between tiers and payment levels runs the risk of institutionalising as a permanent feature a political conflict between environmental and farming interests. While green groups and agencies will seek to maximise environmental benefits, even if this may mean targeting, farmer groups are likely to seek to spread payments widely within the farming constituency irrespective of total environmental gain. Moreover, given the divergent strengths of farming groups within Europe, there is a great risk in this strategy that individual member states will embark on highly differential paths of environmental protection.
- 7.3.20 Finally, in considering moderate decoupling, it should be stressed that there would be a need for a reformed agricultural policy under the moderate decoupling scenario to be far more spatially sensitive than at present so as to achieve nature conservation gains. This tendency can be observed in current agri-environmental accompanying measures, because these have largely been implemented by nations of the EU at their own discretion. The need for geographically sensitive environmental payments (using Natural Areas as a guiding framework) seriously calls into question the notion of a 'common' agricultural policy.

Scenario 3: Radical Decoupling

- 7.3.21 This scenario relates to a deregulated agricultural sector for commodity support in which environmental aid *may* be available to mitigate against environmental problems. The proponents of radical decoupling tend to be located within the agricultural economics profession and rightly point to the economic problems associated with continued support, whether headage or area based and whether heavily cross compliant or not. Thus on arable area payments:

... the rent that landlords will demand of arable land as well as its market price will undoubtedly reflect the market's expectation of a continued flow of area compensation payments. Inflated land prices will mean that alternative crops, and other rural land uses such as forestry or amenity, will be placed at a commercial disadvantage unless they too are subsidised at the same rate as arable crops. ... financial incentives will remain to convert "non-productive"

woodland, wetlands, scrub, and hedgerows into "productive" agricultural use. Thus, the environmental degradation engendered by the CAP will continue. (Swinbank and Tanner 1996: p153)

- 7.3.22 This rather curiously ignores existing and potential environmental cross-compliance, but the economic case is well made. However, the solution is far from convincing in environmental terms. The radical decoupling scenario requires a decoupling mechanism - the bond scheme (associated with Tangermann 1991³¹) whereby all compensatory payments are converted into a bond:

Payments would continue over a ten- or fifteen-year period ... Payments would be made to the owner of the bond and would not be conditional upon a continuation of farming. ... the capital value associated with CAP support would be stripped out of land and other fixed asset prices ... (Swinbank and Tanner 1996: p153).

- 7.3.23 Gone in a stroke would be any hope of applying environmental conditions to agricultural support. Instead all future environmental benefits would depend on a combination of lower intensity of agricultural use, new totally decoupled environmental payments and regulation. There is a real danger that radically decoupled environmental payments would be reduced to a 'fire-fighting' approach, with schemes being reactive to environmental damage rather than proactive in encouraging conservation. There are so many uncertainties about the consequences of such an approach that to consider the outcomes with regard to the SAP goals is not possible at this stage. Nor, under the terms of *Agenda 2000*, is it a likely scenario in the near future.

7.4 Conclusions

- 7.4.1 It is absolutely clear from both the preceding discussion in this chapter and the findings earlier in the report, that the measures required for the beef sector cannot be equated simply with policies to promote extensification linked to decoupled payments. The beef sector exemplifies a farming sector where such broad brush policies are as unlikely to lead to environmental benefit as earlier policies that encouraged intensification of production.
- 7.4.2 Reforms are required which allow the development of policies sensitive to the requirements of particular sites and natural areas. This requires a close inter-meshing of sectoral policies. Crucially, it is impossible to consider agri-environment policy in isolation from commodity policies. By the same token, the beef sector cannot be considered in isolation from the sheep or dairy sectors. There is a clear need to formulate policies with a greater concern for securing sustainable agricultural and environmental management regimes within either a moderate or weak decoupling scenario. In either case, it would be vital to ensure an articulation between, on the one hand, decoupled (Green Box) payments for environmental management and, on the other hand, a dismantling of commodity regimes undertaken in such a way as to achieve a return to mixed farming patterns. At the local level, there would have to be a mechanism to facilitate targeted management objectives, sometimes even at an on-farm scale. The legacy of IACS might provide a useful mechanism for achieving this kind of objective and ensuring adequate monitoring. Alternatively, there is the opportunity to build on the tiered approach of ESAs so that virtually all farmers would be located in an ESA equivalent tier 1, as part of the decoupling process, with many encouraged to opt for higher tiers, especially within target Natural Areas.

³¹See also Harvey 1997, Swinbank and Tanner 1996.

7.4.3 Underlying all such policy adjustment is the need for tough regulation to ensure that sustainable practices are adopted on farms. This would include a further strengthening of pollution controls, covering diffuse pollution, and strengthening and making compulsory Codes of Good Agricultural Practice.

Appendix: Inventory of case study sites

Bedfordshire, Cambridgeshire and Northamptonshire

Kings & Bakers Wood & Heaths (north of Leighton Buzzard) SP 925 295
Ouse Washes (north and west of Ely) TL 393 747 to 571 987
Plumpton Pasture (north of Brackley) SP 594 481
Nene Washes (east of Peterborough) TF 300 000
Snailwell Meadows (Newmarket) TL 678 638
Soham Wet Horse Fen (between Newmarket and Ely) TL 612 727 / 605 723
Wadenhoe Marsh & Achurch Meadow (south west of Oundle) TL 008 828
Wavendon Heath Ponds (Woburn) SP 931 338

Cumbria

Arnside Knott (Arnside, Kent Estuary) SD 447 771
Brotherswater (Hartsop, near Patterdale, Ullswater) NY 403 127
Crosby Gill (Crosby Ravensworth Fell, north of Orton) NY 614 116
Geltsdale & Glendue Fells (North Pennines, north west of Alston) NY 612 545
Upper Solway Flats & Marshes (Solway Coast) NY 160 610

Derbyshire and Peak District

Leck Moors (south west of Buxton) SK 020 650
Mercaston Marsh & Mugginton Bottoms (between Ashbourne and Derby) SK 269 435 / 272 430
Moss Valley (Eckington, south east Sheffield) SK 415 802
Rose End Meadows (west of Cromford, near Matlock) SK 290 567
Topley Pike and Deepdale (west of Bakewell) SK 099 717

North West

Lune Estuary (Morecambe / Fleetwood) SD 395 550
Warton Crag (north of Carnforth) SD 494730
Heysham Moss (Heysham, near Morecambe) SD 423 607
Martin Mere (near Ormskirk) SD 420 146
Robert Hall Moor (between Lancaster and Kirkby Lonsdale) SD 632 688

Three Counties

Ashleworth Ham (north of Gloucester) SO 833 263
Lord's Wood Meadows (Knightwick, Herefordshire) SO 730 552 / 732 551
Minchinhampton Common (Stroud, Gloucestershire) SO 855 010
Rodborough Common (Stroud, Gloucestershire) SO 851 035
Rookery Cottage Meadows (Feckenham, Worcestershire) SO 996 614
Woodchester Park (Nailsworth, Gloucestershire) SO 820 014

Somerset & Avon

Axbridge and Fry's Hill (north west of Cheddar) ST 433 555
Deadman (south of Taunton) ST 234 156
North Exmoor SS 800 430 / 770 360
Southlake Moor (south east of Bridgwater) ST 370 300
St Catherine's Valley (north of Bath) ST 760 725

Essex, Hertfordshire and London

Blackwater Estuary (east of Chelmsford) TL 940 070
Foulness (north east of Southend) TR 030 905
Oddy Hill and Tring Park (Tring) SP 934 109

Dorset

Christchurch Harbour (near Bournemouth) SZ 175 915
Giant Hill (north of Dorchester) ST 668 022
Hartland Moor (Isle of Purbeck) SY 948 855
Mapperton and Poorton Vales (north east of Bridport) SY 510 990
Woolcombe (east of Bridport) SY 557 957 / 553 962

Sussex and Surrey

Castle Hill (south west of Lewes) TQ 370 070
Charleshill (Farnham) SU 895 442
Lewes Brooks (south of Lewes) TQ 410 085 / 430 075
Lewes Downs (east of Lewes) TQ 437 103
Pevensy Levels (east of Eastbourne) TQ 650 070

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³¹Calves cannot be moved until they are 7 days old. Therefore the original scheme only allowed three days in which to enter a calf.

³¹In the light of the findings of this study, to these examples we would add also the need to ensure continuation in the improvement of existing management regimes.