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Consideration of landscape in the framework documentation during the evolution of the Rural Environment Protection Scheme (REPS) in the Republic of Ireland.

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This work was undertaken as part of a Teagasc Walsh Fellowship



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Abstract

This paper looks at the changing concept of *landscape* during the evolution of REPS. It reviews and groups definitions of landscape and identifies their agri-environmental relevance. Descriptions were devised to amplify each grouping with reference to an Irish context and were used as an analytical framework to categorise each landscape reference in REPS documentation. There was an increase in the use of the term landscape with each version of the scheme and expansion in the range of different landscape categories to which this apparently applied. However there has been no coherence in its use. This paper makes recommendations to improve the framework for the treatment of landscape issues in REPS and its future evolution.

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1.0 Introduction: The evolution of agri-environment schemes

Europe is predominantly a farmed landscape that provides or accommodates habitats for wildlife, while living organisms or associations such as crops, hedgerows, or woods constitute important visual landscape features. Growing societal awareness of the rural landscape has resulted in landscape considerations becoming incorporated into environmental decision-making (Mannion et al., 2001). However, there are several different ways in which the term *landscape* is employed in general conversation and many by which the technical concept of landscape is currently defined, although it is broadly agreed that it applies to a combination of our physical and perceived surroundings (Brewster Consulting, 2006).

Agricultural and rural policies are increasingly becoming adjusted to serve society as a whole. Mannion et al (2001) identify a rising willingness by society throughout Europe to support the *public goods and services* provided by agriculture - such as the environment, animal welfare, and high quality landscapes. This idea of the public good addresses the broader economics of farming in addition to agricultural produce, such that financial value attaches to aspects that did not traditionally generate farm income. A corresponding evolution of agri-environment schemes began in the 1980s and various European Union (EU) Member States developed local measures as instruments to support specific farming practices that assist in the protection and maintenance of the rural countryside. From the 1990s onwards agri-environmental measures had been an increasing EU focus in the context of the Common Agricultural Policy (CAP). The 1992 'MacSharry' CAP Reform identified accompanying measures, and Regulation No. 2078/92 required all Member States to implement agri-environmental measures within their own boundaries (EEC 1992; Brouwer and van Berkum 1996; Ingersent et al. 1998; DGVI, 1998). This approach was consolidated under the Agricultural Structures Regulation No. 1275/99 (EC, 1999), although the specific means for implementing agri-environmental measures were still left up to Member States.

In 1999, provisions of Regulation No. 2078/92 were incorporated into the Rural Development Regulation No. 1257/1999 as part of Agenda 2000 CAP reform (EC, 1999; EC, 2005). Agri-environmental measures then became an obligatory part of Rural Development programmes, mandated in order to assist in achieving coherence within the Rural Development Plans. Regulation No. 1257/1999 also increased the co-funding available for this policy instrument.

In recognition of the great regional variation throughout the EU, the measures were to be adapted at a national, regional or local level to suit both specific farming systems and the local environmental situation.

The Republic of Ireland's response was the introduction of the Rural Environmental Protection Scheme (REPS) in 1994. This provided an incentive for farmers to maintain and improve the rural environment, with an early emphasis on biodiversity issues, and the scheme has been described as a successful example of agri-environmental policy - "*as indicated by the large number of Irish farmers who signed up to it*" (Enright et al., 2006, p.4). However, it was not initially possible to assess its environmental impact as there were no benchmarks to measure this. No baseline studies were carried out before its introduction and "*scientific monitoring of the scheme had not been very comprehensive, either geographically or in terms of environmental outputs*" (Hynes et al., 2007, p.5).

Throughout Europe, landscape protection and conservation have become increasingly important elements of policy, especially since the 2000 'Florence Convention' (European Landscape Convention - ELC) came into force on 1 March 2004 (Landscape Europe, 2004). This has led to the introduction of policy instruments, promotion of training, categorisation of landscapes, definition of national quality objectives, and a general increased public awareness of the issues (ELC, 2000). Landscape categorisation allows for the development of value-driven *Landscape Character Assessment (LCA)* systems, which can then be used as planning tools for a range of objectives including the support of amenity and tourism (broadly defined). Almost all Western European countries now have a national *LCA* system (Martin and Farmer, 2006), and 19 local authorities in the Republic of Ireland had completed LCAs to variable standards by 2006 (Martin and Farmer, 2006; Casey, 2007; Murray, 2007).

Most of the agri-environmental schemes introduced across Europe contain objectives for the protection and enhancement of landscape although, like biodiversity, their presumed benefits to landscape have only recently begun to be quantified (O'Leary et al., 2005). The European Commission identified the close links in its own agri-environmental Regulation between provisions for conserving habitats and/or small scale-features (e.g. hedgerows, terraces, isolated trees, ponds) and landscape protection (EC, 2005). Teagasc, the Irish Agriculture and

Food Development Authority, are now also taking landscape consideration seriously and contributed to a report on the landscape impact of REPS commissioned by the Department of Agriculture and Food (O'Leary et al., 2005).

This paper looks at the developing concept of landscape during the evolution of REPS in the Republic of Ireland. The objectives for each version of the scheme promise either to *protect* the landscape (REPS 1-3) or to *improve* the landscape and its features (REPS 4). The paper first reviews various definitions of landscape available from the literature and identifies their agri-environmental relevance, then considers the manner in which the terminology was employed during the four-stage development of REPS.

1.2 Definitions of landscape and their context

The term *landscape* has many dimensions and has been defined in many different ways, and this section looks at landscape definitions that are used and accepted in Europe. Landscape embraces physical aspects such as the geology of an area, the form of the land, its soils and climate, and the biological components flora and fauna. It also encompasses cultural and historical features such as settlements, route-ways, ancient monuments, cultivated fields and woodland. It is therefore "*a kind of backcloth to the whole stage of human activity*" (Appleton, 1975, p.2). Furthermore, there is broad agreement that it covers a combination of our perceived, as well as physical surroundings (Table 1). Etymological studies have identified several different ways in which the term is employed. Coones (1996) listed the three main meanings and their conceptual derivations as:

- 1) a generalised or composite visual scene (stemming from topographical description, exploration and travel);
- 2) an actual scenic view, commanded from a single aspect - a prospect (its currency among painters); and
- 3) a tract of land, owned and inhabited, originally by a prestigious individual and by a group respectively (the Anglo-Saxon usage).

The European Landscape Convention (ELC) was devised to protect, manage and plan for all continental landscapes. ELC (2000) gives a short, but comprehensive definition of landscape as an "*area as perceived by people, whose character is the result of the action and interaction*

of natural and/or human factors". Selman (2006, p.5) suggests that this careful wording embraces a number of ideas, and argues that a landscape is a relatively bounded area or unit whose "recognition depends on human perception, which often is spontaneous and intuitive in its identification with a coherent tract of land and results from a long legacy of actions and interactions". In 2004 Landscape Europe, an interdisciplinary network of research institutions with expertise in landscape, argued that "landscapes can be identified as spatial units where region-specific elements and processes reflect natural and cultural goods". This was adopted from Wascher (2002, p, 237): "landscapes are spatially defined units, whose character and functions are defined by the complex and region-specific interaction of natural processes with human activities that are driven by economic, social and environmental forces and values".

Porteous (1990, p.4) addressed the observer's perspective, noting that when we consider landscape we are *"almost always concerned with a visual construct"*. For Coones (1996, p.16) landscape *"relates to the appearance of an area in some way, conceived in terms of the external visible surface of the earth - conveyed by the expression 'the face of the earth' - the appearance producing visual sensations"*. Similarly, Olwig (1996, p.630) construed this as *"the section of the earth surface and sky that lies in our field vision as seen in perspective from a particular point"*. A comparable definition from Irish sources is that given in the then Department of the Environment, and Local Government's draft guidelines on landscape character assessment (DELG, 2000, p.2): *"landscape embraces all that is visible when one looks across an area of land"*. However, Johnson's (2007, p.4) definition clearly identifies 'seeing' as a paradigm: *"landscape is a way of seeing, a way of thinking about the physical world"*.

Formal Irish definitions tend to postdate the introduction of REPS. The Heritage Council recently defined landscape as *"including areas, sites, vistas and features of significant scenic, archaeological, geological, historical, ecological or other scientific interest"* (Martin and Farmer, 2006, p.18). In their ongoing county Landscape Character Assessments (LCA), some Irish local authorities also took on the task of defining what was meant by landscape. For example, the County Meath LCA (Brewster Consulting, 2006, p.1) argued *"as a key element of individual and social well being and quality of life, landscape plays an important part in human fulfilment and in reinforcement of (European) identity"*. Furthermore, *"it has an*

important public interest role in cultural, ecological, environmental and social fields and constitutes a resource favourable to economic activities, particularly tourism".

In Britain, both the former Countryside Agency in England¹ and Scottish Natural Heritage incorporated references to interactions with the physical or natural environment when defining landscape. The Countryside Agency argued that landscape *"is about the relationship between people and place"* and emphasised that *"the term does not mean just special or designated landscapes and it does not only apply to the countryside"* - it can apply to a small patch of urban wasteland as much as to a mountain range. *"It results from the way that different components of our environment - both natural and cultural - interact together and are perceived by us"* (Swanwick, 2002, p.2). Similarly, Scottish Natural Heritage (SNH, 2003, p.9) defined landscape as encompassing *"all the physical elements of the environment that surrounds us - the natural (landform, water and natural vegetation) and the cultural (the patterns of land use, buildings and other structure - old and new)"*, as well as *"people's perception and experience of the land"*. This is mirrored by recent analysis of Scottish wild landscapes, which states that landscape is a broad and complex term incorporating *"both perceptual elements and the physical fabric of the land itself"* (McMorran et al 2008, p.178).

The *Landscape Appraisal* section of the County Mayo County Development Plan 2003-2009 also refers to the physical dimension: *"the landscape is a general term used to describe the appearance of the physical environment"*. However, it also notes that it is *"composed of a complex mixture of natural and man-made elements that can also be an important part of the identity of an individual or a community"*, and *"combines important economic, social and cultural roles - as the location of agriculture, housing and history"* (CAAS, 2002, p.1). Landscapes are often *"the expression of long-established, sustainable systems of economic land use, provide a rich habitat for nature, possess scenic beauty, have emotive associations for the historic communities who created them"*, as well as providing a major resource for the expanding tourism industry (Aalen, 1996, p.1).

Operationally, landscape is not merely an aesthetic background to life; rather it is a *"setting that both expresses and conditions cultural attitudes and activities, and significant modifications to landscape are not possible without major changes in social attitudes"*

¹ Merged in 2006 with other bodies to form *Natural England*.

(Relph, 1976, p.122). A landscape is a *'cultural image, a pictorial way of representing, structuring or symbolizing surroundings ... landscape is a social and cultural product, a way of seeing projected on to the land and having its own techniques and compositional forms; a restrictive way of seeing that diminishes alternative modes of experiencing our relations with nature'* (Cosgrave, 1984, pp.1 and 269).

Much of the initial emphasis on environmental management focused on physical impacts that were fairly easy to quantify and control. Like formalising a concept of landscape itself, Visual Impact Assessment (VIA)² was a late-developing dimension of overall Environmental Impact Assessment (EIA) procedures. The Landscape Institute, which operates in both Britain and Ireland, developed assessment guidelines in conjunction with the Institute for Environmental (Management and) Assessment (LI and IEA 1994; LI and IEMA 2002, p.9). These recognise considerably more than just collective visual perceptions, embodying history, land use, human culture, wildlife, and seasonal change elements that *"combine to produce distinctive local character and continue to affect the way in which landscape is experienced and valued"*. However, landscape is also dynamic and continually evolves in response to natural or man-induced processes that make landscape conservation and the protection of landscape essential. Landscape conservation is important for *"maintenance of environmental quality, tourism, provision of drinking water, agricultural production, natural heritage and biodiversity"* (DELG, 2001, p.64). Landscape protection refers to *"actions to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity"* (ELC, 2000, p.3).

2.0 Methodology

Definitions of landscape that are used and accepted in Europe were sourced. They were then accumulated and grouped in terms of various landscape categories (Table 1) such as perception and visual. Descriptions were added to distinguish each category. This set of landscape categories (Table 2) were used as a framework to look at the REPS documentation. The landscape references in REPS could be linked to the landscape categories – this is demonstrated throughout the paper. This working list of landscape categories is geared towards an Irish context.

² Now more commonly 'landscape and visual impact assessment'

3.0 The development of the Rural Environment Protection Scheme 1994 - 2007

The introduction of REPS into the Republic of Ireland has been considered a cornerstone in developing positive aspects of the agriculture-environment relationship (Hammell, 2001), even though mechanisms for assessing its effectiveness were late-developing (Feehan et al., 2002; O'Leary et al., 2005; Hynes et al., 2007). Having conducted a brief experiment with localised Environmentally Sensitive Areas (ESA), Ireland obtained a derogation to implement Council Regulation 2078/92 with the introduction in 1994 of a nationwide REPS scheme.

Emerson and Gillmor (1999) describe REPS as a voluntary, horizontal scheme for the application of management options throughout the Republic's farmed area, such that farmers from any part of the country could apply. Its basic principle was that farmers could be compensated for the lost opportunities and additional costs involved in meeting the stricter environmental targets required by the scheme's *Good Farming Practice* guidelines. Table 3 demonstrates the *Compulsory Measures* for each version of the scheme, the thrust of which remained reasonably consistent despite variation in their titles and descriptions. The main differences during the evolution of REPS have been additions or changes to the optional *Supplementary Measures*. These revisions drove its evolution away from a scheme primarily geared towards preventing further environmental deterioration and the phasing out of environmentally damaging practices (REPS 1). The options incorporated by REPS 3 also gave scope for nature enhancement and rehabilitation (Feehan et al., 2002), as well as landscape conservation. Under REPS 4, participants were compelled to select a minimum of two additional biodiversity options. This reflected a shift in opinion about the nature of the countryside, from being viewed as a resource that is favourable to agri-economic activity to one that has multiple values for society. As a result, REPS has increasingly been acknowledged to be about "*payment for public goods in the form of environmental services*" (Hammell, 2001, p.9).

To qualify for REPS a farmer must engage an approved planner to draw up and submit a plan to the Department of Agriculture. The planner must discuss the scheme objectives/requirements with the farmer and remind him/her of their legal responsibilities under cross-compliance. The REPS Plan provides a baseline description and map of the farm

and its associated activities relating to the requirements of the scheme, including identification of features that must be protected, maintained and managed. The plan details the various measures that must be carried out by the farmer without modification over the following 5-year period.

3.1 REPS 1 (1994-1999)

REPS 1, implemented as a direct response to Council Regulation 2078/92, operated from 1994 to 1999 (DAF, 1999). The scheme consisted of a basic package of compulsory measures with optional supplementary measures, such as payments for protection of the new Natural Heritage Areas (NHAs) designed to address the specific needs of environmentally sensitive locations. Other supplementary measures targeted rejuvenation of degraded areas, rearing local breeds in danger of extinction, long-term set-aside, facilitating public access and leisure activities, and supporting organic farming. The eleven compulsory measures included those to protect and maintain watercourses and wells existing on farms, and limitations on the use of herbicides, pesticides and fertilisers. Landscape protection was not specifically mentioned in REPS 1, but measures such as the implementation of a grassland management plan, or the maintenance of stonewalls and hedgerows can be collectively viewed as having addressed the issue to some extent.

3. 2 REPS 2 (2000-2004)

REPS 2 was approved as part of Ireland's Rural Development Plan 2000-2006 (DAFRD, 2000b) and continued the REPS 1 formula, with some additional incentive element. Matthews (2001) identified the main conceptual change as a condition that farmers receiving agri-environmental aid must demonstrate that their REPS plan involved more than usual good farming practice, as defined in the documentation. Specifically, there was the introduction of an additional 10% incentive for holdings of 20 ha or less that included *target areas* such as NHAs, Natura 2000 sites, or commonages. This allowed non-REPS participants who had land in a target area to be paid on the maximum area of their land - as long as they complied with the appropriate specifications for those areas and applied good farming practice on the rest of their holding.

3.3 REPS 3 (2004-2007)

In its specifications for REPS 3, the Department of Agriculture and Food indicated that the objectives were *"to establish farming practices and production methods that reflected the increasing concern for conservation, landscape protection and wider environmental problems, to protect wildlife habitats and endangered species of flora and fauna, and to produce quality food in an extensive and environmentally friendly manner"* (DAF, 2004a, p.5). REPS 3 retained the 11 basic compulsory measures from REPS 2, but additional Supplementary Measures specifically related to:

- corncrake habitats
- traditional Irish orchards
- conservation of animal genetic resources
- riparian zones, and
- LINNET (Land Invested in Nature, Natural Eco-Tillage) habitats

3.4 REPS 4 (2007-)

The consultative process for REPS 4 began in late 2005 with official emphasis on changing EU priorities to protect and enhance natural resources and *landscapes in rural areas*. Apart from some variation in wording or emphasis, the main changes in REPS 4 were additional Supplementary Measures to protect or enhance:

- wild bird habitats
- traditional Irish orchards
- conservation of animal genetic resources
- riparian zones
- minimum-tillage
- low-input cereal production
- incorporation of clover into swards
- traditional sustainable grazing
- mixed grazing
- lake catchments, and
- heritage buildings.

4.0 REPS documentation and reference to landscape

The supporting documentation for each version of REPS basically consists of the *Farmer's Handbook*, the *Agri-Environmental Plan* and the *Planner Specifications* (Table 4). REPS 1 documentation is now difficult to access, however the Planner Specifications were accessed in hardcopy format. REPS 2 had an extra document for planners, which required their evaluation of a farm, and REPS 3 had a document outlining the transition from REPS 2. REPS 4 has 3 additional circulars and a sample plan that is available online (DAFF, 2007b). All available documents were screened for any reference to landscape and the frequency and context of such allusions determined (Table 5). Some reference is made to landscape in the overall objectives for each version of the scheme, but the terminology has variable interpretations covering both *landscape protection* and *landscape and its features*.

4.1 REPS 1 and the landscape

Agri-Environmental/Planner Specifications documents are used by REPS planners to assist in putting together a plan for each farm. Specifications for REPS 1 were revised in May 1996 and January 1999 and both revised versions were reviewed. Landscape protection is referred to in each as part of the overall objective for the scheme: “*to establish farming practices and production methods which reflect the increasing concern for conservation, landscape protection and wider environmental problems*” (Table 2: category 8b) (DAFF, 1996, p.2; DAF, 1999, p. 2). Under 'Measure 5: Maintain Farm and Field Boundaries', stonewalls and hedgerows are referred to as being “*important elements of the landscape*” (Table 2: category 5a). It is suggested that farm gates and their piers should be maintained to be “*compatible with the landscape*” (Table 2: categories 3a, 5a) (DAFF 1996, p.2; DAF, 1999, p. 2). In the second revision, 'Measure 7: Protect Features of Historical and Archaeological Interest' refers to the *ancient landscape* (Table 2: category 3a), and notes that this has been threatened by mechanised farming practices, land reclamation, afforestation and farm development (DAF, 1999, p.39).

4.2 REPS 2 and the landscape

The REPS 2 *Scheme Document* outlines various aspects of the scheme and defines associated terms (DAFRD, 2000b). However, there is no definition of landscape in any REPS 2 documentation (DAFRD, 2000a/b/c/d), and the only reference to landscape was in the *Agri-*

Environmental Specifications: REPS 2000, which outlined the specifications for planners and the procedure for compiling a REPS plan (DAFRD, 2000a). A concise description of each mandatory measure is given, and the following demonstrates ways in which the term *landscape* was used.

In continuity with REPS 1, landscape is referred to as part of the overall objective for REPS 2. Under 'Measure 5: Maintain farm and field boundaries', the specifications now refer to landscape in terms of its character. Features such as stonewalls, hedgerows, and gates/piers are required to be maintained and conserved *against the landscape character* or to be compatible with the landscape of the area surrounding the farm (Table 2: categories 1a, 5a).

The Planner Specifications state that it is “*mature hedgerows that give the Irish landscape its distinctive character*” (Table 2: category 5a) (DAFRD, 2000a, p.35) and it is noted that there are considerable benefits, both from a landscape and a wildlife perspective, if hedgerow maintenance is rotational. 'Measure 7: Protect Features of Historical and Archaeological Interest' notes that the ancient landscape “*contains a significant record of Irish history*” (Table 2: category 3a) (DAFRD, 2000a, p. 40). The specifications dealing with commonage land indicate that each framework plan should include a section on '*landscape features*' (category 5a), to be accompanied with photographs and sketches.

4.3 REPS 3 and the landscape

Once again, there is no definition of *landscape* in any of the REPS 3 documents. In the Planner Specifications document (DAF, 2004a) *landscape protection* (Table 2: category 8b) was identified as one of the overall objectives for REPS 3, the same way as it had been referred to in the planner specifications for REPS 1 and REPS 2. Measure 5: Maintain Farm and Field Boundaries' still referred to *landscape character* but, although this occurs repeatedly in the document, there is no explanation or definition as to what is meant by the term. The planner is now advised that, when maintaining entrances to the farm from public roads, newly constructed piers and gates should preferably be of a “*type traditional to the area*” as well as being compatible with the landscape (Table 2: category 3a, 5a) (DAF, 2004a, p.48).

The retitled Measure 9: Tillage Crop Production reiterates one of the overall objectives of REPS 3, being to: “*encourage tillage farming practices and production methods that reflect the ever increasing concern for conservation, landscape and wider environmental problems*” (Table 2: category 8b) (DAF, 2004a, p. 9). The specifications also outline the new mandatory biodiversity undertakings and the optional activities available within them. Each farmer is given the opportunity to select works most appropriate to the environmental or *landscape features* of the farm in question.

Supplementary Measure 2 deals with traditional Irish orchards. The Planner specifications describe that the re-creation of these traditional orchards will “*increase the biodiversity of the local landscape*” (Table 2: category 6) (DAF, 2004a, p. 10).³ Option c in Measure 4 focuses on nature corridors, describing them as resources that conserve wildlife: “*within the landscape, corridors are used by wildlife for transportation and protection*” (Table 2: category 6) (DAF, 2004a, p.45). Supplementary Measure 5 focuses on LINNET habitats, the specifications stating that the objective is to “*alleviate the trend to landscape homogenisation*” (Table 2: category 6). Option 4b deals with broadleaved tree planting. The specifications refer to widely spaced mature trees and identify such trees as important features in the Irish countryside, having a “*significant visual impact on the landscape*” (Table 2: categories 1a, 5a) (DAF, 2004a, p. 44).

These specifications also include a section on the management of waste materials on the farm. It is recommended that items such as wooden pallets, intended for re-use on the farm, must be stored at a central location in a manner that “*reduces the visual impact of these materials on the landscape*” (Table 2: category 1a) (DAF, 2004a, p.61).

In the Appendix to the specifications, information is given in relation to hedgerows, and a comparison is made between coppicing and laying hedgerows. This looks at effects on landscape, detailing coppicing as having a dramatic impact, while hedge laying has less impact and the advantage of aesthetic qualities. This comparison suggests that *landscape* is being employed here with multiple visual, ecological and psychological interpretations.

³ This possible implication of genetic purity suggests that the concept of biodiversity was similarly ill-defined in REPS documentation.

REPS 3 made a Farmers Handbook (DAF, 2004b) available for participants. It consists of frequently asked questions and details on each measure available. The first mention of landscape in this document is as part of the overall objective of REPS 3, which is the same objective given in the REPS 1 and REPS 2 documentation. Its coverage of Measures 4 (option c), 5, 7 and 9 repeats the concepts or actual terminology used in the Planners Specifications. Coverage of option 4b on broadleaved tree planting reiterates the “*visual impact on the landscape*” of widely spaced mature trees (Table 2: category 1a) (DAF, 2004b, p.18). However, such planting is also referred to in terms of landscaping: “*deciduous trees (rowan, alder, beech, larch etc) are more appropriate*” for landscaping around farmyards “*than most evergreens*” (Table 2: category 7) (DAF, 2004b, p.26).⁴ Like the handbook, the new information leaflet released for REPS 3 gave a brief overview of frequently asked questions and some information on the biodiversity and other supplementary options, but landscape was not referred to in any way. No other document for REPS 3 includes any reference to landscape itself, although the Guidelines do refer to *landscaping*.

The REPS 3 *Terms and Conditions* includes the objectives of the scheme, however “*environmental conservation and protection*” is used and doesn’t refer to landscape (DAF, 2004e, p3).

4.4 REPS 4 and the landscape

The REPS 4 *Terms and Conditions* restate the overall objectives, define various related terms, and outline the application procedure. Landscape is not defined, but is referred to with a broadened meaning in the objectives: “*to promote ways of using agricultural land which are compatible with the protection and improvement of [...] the landscape and its features ...*” (Table 2: categories 5a, 8b) (DAFF, 2007e, p.4). *Improvement* of landscape is an interesting new concept that might imply an agreed goal.

The new Farm Background section of the Agri-Environmental Plan (DAFF, 2007a) requires background information on *landscape and culture* (category 3a). Planners now have to provide additional downloadable information in a structured fashion that details the general

⁴ This ignores the fact that not all these species are native to Ireland.

(i.e. geographical) aspect of the farm, the cultural settings, the *landscape type* (category 5b) and the vernacular features. The example provided in the sample Agri-Environmental Plan from the Department's website (DAFF, 2007b, p.2) uses the description "*foothills rising into commonage*" for the *landscape type* category. As of December 2008, this description constituted all the DAFF advice that was available to participants and their planners on what was meant by *landscape type*. Teagasc compiled a list of words that broadly categorise landscape (such as '*urban*', '*exposed*', '*coastal*') with the intention of making it available to REPS planners within the organisation. Planners are now also expected to identify specific *Conservation Objectives*, including those relating to landscape and culture. The sample plan offers the example of "*small areas of farm woodland will be established to provide shelter on an exposed field and improve the appearance of the area and to aid screening of the farmyard from the public road*" (DAFF, 2007b, p.2).

In line with the Terms and Conditions, the REPS 4 Specifications for Planners now refer to the *protection of landscape and its features* (Table 2: categories 5a, 8b) (DAFF, 2007c, p.5). The description of the compulsory measures remains essentially unaltered, despite a change in the title of Measure 7 to Establish Biodiversity Strips Surrounding Features of Historical and Archaeological Interest. However, there is a new section headed 'Mandatory Biodiversity and Environmental Undertakings' stating that each farmer is given an opportunity to choose those undertakings *most appropriate to the environmental or landscape features* on the farm in question (Table 2: category 5a) (DAFF, 2007c, p.10).

The specifications indicate that these are targeted to deliver on the main themes referred to in the objectives – “biodiversity, climate change, water quality, landscape”, under which biodiversity and landscape are not specifically linked. Those that specifically allude to landscape benefits are: Options 2B (Species Rich Grassland), 2E (Control of Invasive Species), 4B (Broadleaved Tree Planting), 4C (Nature Corridors), 4D (Farm Woodland Establishment), 5A (Hedgerow Coppicing), 5B (Hedgerow Laying), 5C (New Hedgerow Establishment), 5D (Additional Stonewall Maintenance), 7A (Increase in Archaeological and Historical Buffer Margins), 8A (Traditional Irish Orchards), 8B (Install Bird and/or Bat boxes), 9A (Green Cover Establishment), 9B (Environmental Management of Set-aside), 9C (Increased Arable Margins), and 9D (Low Input Spring Cereals). Similarly, the

Supplementary Measures are indicated to have been collectively designed to help resolve specific environmental problems related to the "*priority environmental themes of water quality, biodiversity/landscape and climate change*" (Table 2: category 8b), and that these measures allow farmers to respond to the themes at a local level (DAFF, 2007c, p.98). Four of these are specifically identified as being targeted to deliver on this combined priority theme of *biodiversity and landscape*: Supplementary Measures 1 (Wild Bird Habitat) 6 (Low Input Cereals), 10 (Mixed grazing) – all new to REPS 4 and 2 (Traditional Irish Orchard).

REPS 4's Supplementary Measure 5: LINNET Habitats, arguably strengthens the response to landscape homogenization by seeking to *mitigate* (DAFF, 2007c, p.11) rather than *alleviate* (DAF, 2004a, p.11) in REPS 3. The main objective of Supplementary Measure 12: Heritage Buildings is to ensure the maintenance of traditional farm buildings because they "*can make a significant positive contribution to the Irish landscape*" (Table 2: category 1a), in this context further identified with the *visual landscape* (category 1a) (DAFF, 2007c, p.14). However, landscape is further referred to in terms of its *character* although this has still not yet defined or cross-referenced. In relation to hedgerows, the specifications recommend that priorities be established in order that hedgerows of the greatest ecological value be prioritised for maintenance, along with those that are "*prominent in the landscape*" (Table 2: categories 5a, 6). A new table to REPS 4 included in the Appendix, lists common trees and shrub species found in the Irish landscape and their characteristics.

The section on General Plan Preparation details that the planner must identify for the farmer, areas that require change in current farming practices in order to deliver on the environmental priorities. *Landscape* is referred to as one of these priorities. Where Plans contain commonage areas they must provide a general site description including *landscape features* (Table 2: category 5a), as well as a schedule of the restrictions to be observed on those landscape features. The appendix to the document contains a comparison between coppicing and laying hedgerows.

The Farmers Handbook for REPS 4 (DAFF, 2007d) essentially reiterates the background information and terminology contained in the REPS 3 handbook. However, Measure 4 (Option b) suggests that broadleaved tree planting will "*enhance the landscape*" (Table 2:

category 1a), while Option 4d on the establishment of farm woodland will “*enhance the visual landscape*”. The Handbook follows the claim in the Specifications that: traditional farm buildings “*contribute to the visual landscape*” (Table 2: category 1a) and should be maintained.

5.0 Analysis

This paper has highlighted the several different ways in which the term “landscape” is employed in general conversation and how the concept is defined within the literature. The references found in the literature showed that they could be linked to various landscape categories. The majority of REPS references to landscape used for this paper can be linked to the categories – *landscape features* (44% of REPS references) and the *visual landscape* (27% of REPS references).

The REPS documents screened for any reference to landscape showed that the frequency of use has largely increased from REPS 1 to REPS 4 with a notable difference from REPS 3 to REPS 4 (Table 5). The context of this terminology employed during the four stage development of REPS alludes to *landscape character*, the *visual landscape*, *landscape features*, *cultural landscape*, *ancient/historical landscape*, *landscape protection/conservation* and also some reference to *landscaping*.

Some reference is made to landscape in the overall objectives for each version of the REPS scheme, but the terminology has variable interpretations covering both *landscape protection* and *landscape and its features*. This suggests a change in emphasis in REPS 4 in relation to landscape. The current scheme refers to the *improvement* of landscape in the objectives. This recent change in emphasis might imply that there is a new goal for the scheme in terms of landscape. Unfortunately this is undeclared.

Interpreting the language of REPS underlines an expanded emphasis on landscape with references to *landscape and culture* and *landscape type*. This new landscape terminology is not dominant in the documents. However it does highlight a new emphasis to landscape within the scheme. The new section Mandatory Biodiversity and Environmental Undertakings

does not specifically relate to landscape but it is directed at landscape features on the farm in question.

6.0 Conclusion

This paper has highlighted the intended goals of REPS in relation to landscape, referred to in the objectives of each version of the scheme. As mentioned, there has been an increase in the use of the term landscape throughout each version of the scheme. However despite the use of different landscape categories, there is no coherence to the manner landscape is referred to in the documentation. A set of landscape categories as outlined in this paper could provide a coherent use of references to landscape within the REPS documentation. This could assist planners and farmers to further enhance the protection and improvement of landscape. This paper has shown that the references to landscape within the REPS documentation can be linked to one or more of the landscape categories.

The Mandatory Biodiversity and Environmental Undertakings section in REPS 4 could be further improved with the addition of a Landscape Undertakings aspect to it. Such an addition would ensure that undertakings would specifically relate to landscape reflecting and enhancing the distinctive historic and landscape character of the local area. This could be enhanced by ensuring that the undertakings would not be detrimental to the local area but would strengthen the local landscape character.

The continued emphasis of landscape within the REPS scheme could become more coherent if it was linked with the Landscape Character Assessments (LCAs). This could be used as a baseline for landscape protection within the scheme. Parts of the scheme dealing with biodiversity are now linked to Irelands National Biodiversity Plan. The association of landscape with LCAs in terms of REPS would create a reasonably detailed account of the surrounding landscape of the farm in question. This would also increase the landscape awareness, in particular the importance of landscape protection, within the agri-environmental field.

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Insert table 1 here

Landscape definitions found in the literature linked with landscape categories (devised from accumulation of landscape definitions).

√ : Term included N: Term not include

	Category	Description
1a	Visual landscape	Landscape as the cumulation of all features anyone can observe in a particular vista - some of which may be characteristic of particular land uses. In its purest, uninterpreted form, it would be recorded by a photographic image. In a farming context, visual landscape includes features such as fields, crops, hedgerows, walls, buildings and semi-natural habitat.
1b	Perceived landscape	Landscape as the way we read, understand and provide mental interpretation for the visual landscape. In a farming context, an example of perceived landscape would be distinguishing between arable and pasture, or observing evidence of seasonal farming practices.
1c	Cultural aesthetic landscape	Where the psychological perception of visual landscape has been significantly enhanced by representation in art or literature etc. In a farmed context in these islands this would apply to 'Constable' or 'Wordsworth country' in England.
2	Physical landscape	Landscape as a visual representation of the underlying landform and geomorphological processes such as hills, valleys and alluvial plains, as well as large-scale anthropogenic modification such as quarrying and embankments. A concentration of certain physical landscape features (such as drumlins) can dramatically influence farming practices.
3a	Cultural landscape	An understanding of landscape as a cultural <i>palimpsest</i> prompted by the identification, through a combination of visual and intellectual perception, of features from successive historic phases of physical and cultural modification. However, in some interpretations of the category, <i>cultural landscapes</i> are largely ascribed to the actions, albeit prolonged, of a single cultural group. The Burren provides a good Irish farming example of a cultural landscape in which physical modifications (e.g. stone walls, drove route 'green roads') and seasonal grazing practices contributed to the current visual landscape.
3b	Historic landscape	Landscapes devoid of tangible remains, in which historic or socially important events (including battles, sporting events, social gatherings or masses) are known or thought to have occurred. This broadens understanding of the whole landscape, emphasising the contribution made by past historic processes. In an Irish farm context, this could include the famine context of potato ridges, and the local social importance of mass rocks.
3c	Archaeological landscape	The aspects of cultural landscapes still affected by visible and sub-surface archaeology, as well as the psychological re-creation of a past society that results from interpreting these material remains. The archaeological landscape is often appreciated from a different vantage point than the visual landscape (e.g. from aerial photographs, by observing cropmarks, or the use of specialised sensing techniques). In a farm context, the archaeological landscape includes standing features, occasional discoveries of buried features and artefacts, and the effects on current production of cropmarks.
4a	Social landscape	Landscape as a living space in which humans dwell and interact and current and historic social continuity produces a sense of place. In a farmed context, social landscape encompasses farmhouses, townland and settlement patterns, and local off-farm institutions including markets and social organisations such as Macra na Féirme.
4b	Socio-economic landscape	Landscape as a resource for various forms of gainful employment, some of which (such as tourism) may derive from and possibly ultimately modify those primary forces that shaped the landscape. In a farm context, socio-economic landscape is first and foremost the working farm, but social changes and farm extensification

		have introduced farm hospitality, commercial outlets, and recreation, education and eco-tourism facilities - especially in the more scenic areas.
5a	Landscape features	Identifiable individual features/elements/components (or groupings of these) within a landscape, some of which may be characteristic of particular landscape designations. In a farmed context, an example of a landscape <i>feature</i> includes a tree; an example of a landscape <i>component</i> includes soil.
5b	Landscape units	A term appropriate to the emerging practice of <i>landscape characterisation</i> in which coherent <i>landscape units</i> are recognised and their occurrence quantified as the basis for characterisation and eventual <i>landscape character assessment</i> . In a farming context this would include distinctive field sizes and visible agricultural practices, as well as semi-natural features such as woodland and residual ecosystems.
6	Landscape as habitat	Landscapes are comparatively large units that provide a range of habitat opportunities and ecological corridors for wildlife, either as a direct result of anthropogenic activity or through accommodation with it. In a farming context, this would include residual 'wasteland', streams and field-boundaries that all have wildlife value.
7	Landscaping Activities	Comparatively small-scale and largely ornamental anthropogenic changes that modify visual features within an area. In a farming context, landscaping might range from the creation of an ornamental garden, of visual or acoustic screening, or a pond.
8a	Landscape Conservation	A term encompassing a range of actions that directly or indirectly conserve the significant features/ <u>elements</u> /components or units of a characteristic landscape. In a farmed landscape conservation/protection might include the continuation of traditional upland grazing, or more direct intervention in the maintenance of field boundaries or farm buildings.
8b	Landscape Protection	A term applicable to higher planning levels that have implications for individual land owners and managers; ranging from policy and legal provisions, through development planning and landuse zoning, to landscape characterisation, character assessment and designation status.

Table 2: Landscape categories devised from accepted and used landscape definitions

Insert table 3 here

A comparison of the Compulsory Measures contained in REPS 1 to REPS 4 *highlighting differences in titles and emphasis [significant difference in title(‡), minor difference in title (•), significant difference in content (*), minor difference in content (□)].*

Insert table 4 here

Documentation for REPS 2-4 reviewed for references to *landscape*

Insert table 5 here

Overall frequency and context of the use of the term “landscape” in REPS 1-REPS 4 main documentation
[√: Term included; * now mentioned as 'landscape type ', ** 'local landscape']