



Darren Millar AM
Chair
Public Accounts Committee
National Assembly for Wales
Cardiff Bay
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31 July 2015

Dear Mr Millar

Thank you for your letter to Gareth Jones dated 30 June 2015. I am responding on his behalf. Set out below is further clarification on the points that you raised.

In relation to Recommendation 1, and the additional value that Glastir Advanced brings in support of the Welsh Government's objectives, the Committee would welcome some further information from the evaluation of a sample of Glastir Advanced, which I understand reported in March 2015, in particular how the Glastir Monitoring and Evaluation Programme has helped you understand the additional value derived from Glastir Advanced.

The remit for the Glastir Advanced Evaluation Panel was to 'evaluate the effectiveness of a selection of Glastir contracts and report back on their conclusions and recommendations.' More specifically, the Panel was asked to:

- assess the extent to which existing contracts have the potential to meet the key objectives for which they were selected.
- assess the extent to which objectives are being delivered at a landscape scale
- identify what improvements could be made to documentation, guidance and maps to support Contract Managers (CMs) to sign more effective contracts.
- identify where additional training needs may be required by CMs.

The Panel found a number of examples of best practice in the design and implementation of the Glastir Advanced scheme and considerable evidence of measures that would deliver significant environmental improvements. The Panel also found some areas where the Welsh

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Government can build upon the solid foundation provided by the scheme and made 10 specific recommendations which the Deputy Minister for Farming and Food will now consider.

The Panel's full report is attached and can also be found at:

<http://gov.wales/topics/environmentcountryside/farmingandcountryside/farmcountrypublicationindex/glastir-advanced-evaluation-panel-report/?lang=en>

The work of the Glastir Monitoring and Evaluation Programme (GMEP) had, at that stage, not progressed to a sufficient stage of reporting detail to be able to support the work of the Glastir Advanced Evaluation Panel. However, as previously noted in the earlier response to Recommendation 8, the Welsh Government will provide a synopsis of findings in the GMEP annual reports to the Committee following the publication of the final year baseline report by autumn 2016.

In relation to Recommendation 2, it would be helpful to understand the intended timescale for implementation of action to tackle poor practices.

Natural Resources Wales (NRW) are currently finalising arrangements to submit the updated River Basin Management Plans (RBMPs) to Welsh Government during this autumn for Ministerial sign-off. The updated plans need to be approved and published by 22 December 2015.

The updated RBMPs set out progress made during the first RBMP planning cycle (2009-15), the current state of our water environment, the significant issues/risks that need to be resolved and a summary programme of measures to deliver a sustainable land-water environment. The summary programme of measures includes actions to address the impacts of poor land management practices and identifies the key delivery partners.

The Water Framework Directive requires the programme of measures to be made operational by 2018 and for progress to be reported to the European Commission.

The Water Strategy for Wales sets out the Welsh Government's high-level timeline for delivery of key objectives and supporting actions. In the near short term, we will be undertaking a review of Nitrate Vulnerable Zones (NVZs) across Wales, with new designations to be in place by January 2017. Farms located within any areas newly identified for designation will be required to comply with the rules and restrictions set out in the Action Programme, to help promote general good practice and improve the water quality in those areas.

In the short term between now and 2020, we will be working with NRW to build on the existing River Basin Management Liaison Panels as a means of broadening community involvement in the development of policy at the catchment level, informing and evolving with our development of the area-based approach to Natural Resource Management.

Within this same timescale the Welsh Government will ask Natural Resources Wales to review the effectiveness of their current provision of pollution prevention advice and enforcement procedures to ensure they are fit for purpose. We will encourage Natural Resources Wales and our own Agricultural Advisory Services to work with landowners to develop a common understanding of diffuse pollution and its prevention through improved land management and we will consult on and implement regulations to reduce oil pollution in Wales.

As an ongoing and long-term action, we will work with all the relevant sectors to address diffuse water pollution through understanding, reviewing and (where appropriate) changing practices and regulatory approaches, in line with 'Working Smarter' principles.

In relation to Recommendation 3, we would welcome any information you may have on Water Framework Directive Failures that can be traced to land managed by Natural Resources Wales.

In Wales, nearly 5% of WFD water body failures to achieve good status are related to forestry activities (Living Waters For Wales, 2013). Natural Resources Wales are committed to reducing that number by dealing with the causes of those failures and improving environmental quality across the Welsh Government Woodland Estate (WGWE).

The dominant reasons for failure in water bodies associated with forestry are acidification and poor fish populations. Other threats include scavenging of acid deposition, sedimentation, pesticides, excessive shading, nutrient enrichment, contamination from fuel oils and barriers to fish migration.

Natural Resources Wales are addressing these issues by complying with the UK Forest and Water Guidelines 5th edition (UKFWG) published in November 2011. Well maintained culverts, effective silt traps, roadside drains separate from any natural watercourses, riparian zones and appropriate water management within the forest are essential for maintaining good ecological status across the WGWE. Pollution safeguards are in place when forest operations are carried out.

Natural Resources Wales have identified 22 such priority water bodies where they will:

- review the forest riparian management and drainage systems and ensure they meet the UKFWG standards by 2021
- prepare forest resource plans and identify potential risks, such as civil engineering, clear-felling and restocking and implement ways to mitigate them, considering Low Impact Silvicultural Systems (LISS) where applicable.
- where unavoidable forest operations, such as felling to comply with a plant health order, could have a significant water quality impact they will take all steps to mitigate them.

During 2015 Natural Resources Wales are updating their WFD evidence base as part of the River Basin Management Plans. This information will inform their priority water body programme.

In relation to Recommendation 6, the committee would be grateful for additional assurance that cross-compliance will work better in the future and that knowledge will be more effectively transferred – in particular the Rural Inspectorate Wales and Natural Resources Wales. We would be interested to understand what progress was made at the Welsh Government's meeting with Natural Resources Wales earlier this month.

Rural Payments Wales(RPW) met with Natural Resources Wales(NRW) on Friday 19th June and discussed options for greater co-ordination between our inspectorates, with a view of reducing the inspection burdens on farmers and maximising administrative efficiencies.

There are elements of Cross Compliance inspections that warrant NRW to accompany RPW in certain cases and these are combined as part of the RPW annual inspection cycle. It has been agreed with NRW that joint training with RPW inspectors in the autumn will allow more RPW inspectors to cover the basic requirements of these elements under Cross Compliance, limiting the number of inspections NRW will need to complete, and improving efficiency for all concerned.

NRW have also agreed to share their annual selection of inspection cases, with a view that their inspections can be combined with RPW wherever possible. If a farmer has been selected for an inspection by both NRW and RPW, but it is not possible to combine the inspection (as they cover specific and separate element), then we will ensure that the inspections of both organisations are timed and arranged in a way that lessens the impact on the farmer.

In relation to Recommendation 7, we would welcome an update on current progress against the current target for uptake of Glastir, prior to the new targets that you undertake to provide by Autumn 2015.

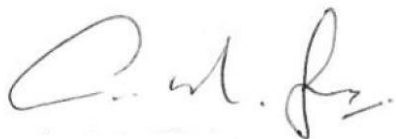
The Welsh Government reports progress for delivering the Rural Development Plan to the Programme Monitoring Committee, including the targets for Glastir to achieve by the end of the RDP period, and the delivery achieved to date. Glastir is of course a demand-led scheme, and, as previously discussed with the Committee, uptake will depend on a range of factors.

	Target	Achieved	% of target
Glastir Entry			
Number of supported holdings	7,000	4620	66%
Total agricultural land supported (ha)	300,000	559,442	186%
Glastir Advanced			
Number of supported holdings	500	1473	294%
Total agricultural land supported (ha)	16,667	253,589**	1521%
Glastir Commons			
Number of supported holdings	200	198	99%
Total agricultural land supported (ha)	30,000	117,000	390%
Glastir Woodland Creation			
Number of supported holdings	450	562	125%
Total agricultural land supported (ha)	1,166	1767	152%
Glastir Woodland management			
Number of supported holdings	200	178	89%

** This is the total area of the Glastir Contract that has Advanced elements within it. This does not include Glastir Advanced on Common land.

I hope that the information included within this letter provides the Committee with the information required. Please do not hesitate to contact me if you need anything further.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A. Slade', written in a cursive style.

Andrew Slade

Director

Agriculture, Food and Marine



Llywodraeth Cymru
Welsh Government

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Glastir Advanced Evaluation Panel Findings and Recommendations

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Glastir Advanced Evaluation Panel Report

1 Background

Glastir Advanced is the Welsh Government's primary delivery mechanism for targeted land management interventions under the 2014 to 2020 Rural Development Plan for Wales. An innovative feature of the scheme is that it uses a GIS-based decision support system to inform both selection of holdings and the choice of actions within the scheme. The decision support system is informed by a series of map layers showing the areas where over 100 different objectives could potentially be delivered across Wales.

In consulting on the proposals for Glastir under the 2014 to 2020 Rural Development Programme for Wales, the Welsh Government (Welsh Government, 2014) reported that during the development of Glastir Advanced, concern had been expressed about the large number of target layers and the direction to Contract Managers that they should ideally be looking to include in the contract at least one activity for all the potential objectives identified. They pointed out that fears had been raised in some quarters (e.g. Everett, 2013; Wildlife and Countryside Link, 2013), that this might lead to a "tick box" approach, whereby only a minimum amount of activity is assigned to each objective to deliver a contract.

The Welsh Government was very clear in the consultation document that this was not the intention of the scheme. They pointed out that Contract Managers are trained to, wherever possible, sign applicants up to the maximum amount of activity to deliver the identified environmental objectives listed when the farm is selected. The Welsh Government also said that there were many examples of contracts where a constructive dialogue had taken place between Contract Managers and environmental partner organisations, which had led to detailed plans to meet objective requirements, or, alternatively, a mutual acknowledgement that objectives should be dropped as inappropriate for that farm. The consultation document made it very clear that this was how scheme implementation was envisaged.

Nevertheless, in response to the concerns expressed, the Welsh Government made the following commitments:

- 1.1 ***To commission and publish a desk evaluation of a sample of contracts for the first 2 years of the scheme, which considers how well the signed contract is likely to deliver against the objectives for which it was selected.***
- 1.2 *To review working guidance for Contract Managers in light of these findings and provide additional training, where necessary, to ensure quality of contracts being signed.*

The Glastir Advanced Evaluation Panel was established at the end of October 2014 in order to provide an independent evaluation of a sample of contracts that would fulfil the first of these two commitments and inform the second.

2 Appointment of the Panel

The remit for the Glastir Evaluation Panel stated that the Panel should consist of an independent Chair and two additional independent members, one from an environmental organisation and one from the farming community. Panel members were, however, appointed for their individual knowledge and experience, not as representatives of wider interest groups.

Geoffrey Radley, who was appointed to chair the Panel, is an independent environmental and ecological consultant who formerly worked for Natural England. Whilst on secondment to Defra from 2002 to 2005 he led a review of the existing English schemes and led the team that designed Environmental Stewardship. He contributed to the agri-environment section of the 2007 to 2013 Rural Development Programme for England, worked with CEH on the evaluation of Higher Level Stewardship and, since leaving Natural England, has worked on projects looking at agri-environment schemes across Europe.

Arfon Williams of RSPB Wales was appointed as the Panel member from an environmental organisation. He has direct experience of agri-environmental schemes, having formerly worked as a project officer on Tir Gofal, and he also comes from a farming background.

Ieuan Joyce, who farms in Ystumtuen, Ceredigion was appointed as the Panel member from a farming background. He was previously a lecturer in farm animal science at the University of Leeds. He was a council member of the Countryside Council for Wales, is a member of ACRE (Advisory Committee on Releases to the Environment, Defra), is Chair of the Elan Valley Trust and was a member of the Wales Upland Forum.

3 Remit and timetable for the evaluation

The remit for the Glastir Advanced Evaluation Panel was to 'evaluate the effectiveness of a selection of Glastir contracts and report back on their conclusions and recommendations.'

More specifically, the panel were asked to:

- Assess the extent to which existing contracts have the potential to meet the key objectives for which they were selected.
- Assess the extent to which objectives are being delivered at a landscape scale
- Identify what improvements could be made to documentation, guidance and maps to support Contract Managers (CMs) to sign more effective contracts.
- Identify where additional training needs may be required by CM's.

The mode of operation was left to the Chair of the Panel's decision, but it was suggested that the evaluation should include:

- An independent selection of existing Glastir Advanced contracts by the Panel to ensure impartiality
- A desk-based assessment of contract maps against a simple appraisal scale e.g. delivers all objectives / delivers most objectives / delivers some objectives, etc.
- Interviews with CMs to discuss any constraints to better achieving the Glastir objectives
- Potential for live contract on-farm visits by the panel to further inform their deliberations

The Evaluation was scheduled to run from late November 2014 to the end of January 2015, with the report produced in time to inform training, supporting documentation, guidance and maps before CMs start to negotiate contracts ahead of the 1st January 2016 start date.

4 Development of a methodology

4.1 Constraints

As explained in the previous section, the Glastir Evaluation Panel was asked to undertake a desk study to be completed between late November 2014 and the end of January 2015, so that the conclusions could inform the development of new contracts during 2015. Given the complexity and diversity of Glastir Advanced contracts, the decision was taken at an early stage to use an appraisal panel, relying on the expert judgement of the panel members, informed by a dossier of relevant information about each holding, its environmental features and the contract. A similar approach was taken by the Centre for Ecology and Hydrology to assess the potential of agreements under the Higher Level Stewardship Scheme in England (Mountfield et al., 2013).

4.2 Review of available information

On appointment, the Panel Chair undertook a review of the scheme information and supporting data that was available to inform an evaluation of Glastir Advanced contracts. The Secretariat supplied copies of a range of generic supporting information, including the following:

- The Glastir Advanced rules booklet
- A matrix showing which management options are eligible for use against which objectives
- A matrix showing which capital items are eligible for use against which objectives

The Secretariat also supplied the following Information specific to a sample contract:

- The Glastir Advanced contract, which, amongst other things, lists the management options and capital item with the parcel numbers in which they are located,
- Glastir Advanced contract maps showing the contract area, the permanent features and the locations of the management options and capital items
- Objective targeting maps, showing relevant target areas for different objectives that overlap with the area of the holding
- The Glastir Water Management Plan for the holding
- A list of the targeted objectives for the contract, showing which ones have been addressed and which ones have not
- A set of notes explaining why some objectives have not been addressed in this contract

The information supplied allowed a clear picture to be obtained of which options and capital items had been applied where, and for which objective. It also allowed an assessment of how these options and capital items related to the target areas for the different objectives, which is a necessary starting point for an evaluation. Working through the information supplied did, however, raise a number of issues:

- The codes used on the maps are parcel-specific. They had to be cross-referenced to the tables in the contract to work out which objectives and capital items are being used in each parcel or on each field boundary. Holdings are also shown on multiple, overlapping maps with the same actions shown on more than one sheet.
- In the table relating the options and capital items used in the contract to the objectives, the options and capital items are not grouped by objective. This made it difficult to get an overview of the management undertaken for each objective.
- The maps showing the target areas for the different objectives vary considerably in their scale of resolution. Most of the maps are not resolved to anything like parcel level, which made it difficult to say whether the location of options within the holding is appropriate or not.
- For a number of objectives where maps showing the target areas did have a finer scale of resolution, including lowland grassland, lowland heathland and woodland primary network, the target areas shown on the maps bore little or no relation to the parcels where suitable options for these habitats had been located in the sample contract. From the scheme information alone, it was not possible to determine whether this reflected poor choices in the location of management options or, more likely, the limitations of the data used to compile the objective targeting maps.

By contrast, the maps, schedules and photographs in the water management plan allowed detailed comparisons to be made with the locations of relevant management options and capital items, providing a good basis for assessing which of the identified priorities had been addressed.

Two things became apparent as a result of this exercise:

1. That obtaining an overview of which options and capital items had been used for which objectives and where these had been placed on the holding was a complex process.
2. With the possible exception of the water quality objectives, additional information would be needed in order to make valid assessments of the extent to which existing contracts had the potential to meet the key objectives for which they were selected and of the extent to which these objectives were being delivered at a landscape scale.

Research by the Panel Chair identified the following potentially suitable sets of additional information:

- Natural Resources Wales Phase 1 habitat maps. These provide comprehensive coverage, though the basic survey is now quite old (1979 – 1997).
- Natural Resources Wales Phase 2 habitat survey includes maps for lowland grasslands, lowland heathlands, and lowland peat. Surveys of these habitats were carried out at various dates, all later than Phase 1.
- Remote sensing images, using near infra-red and visible light, which includes comprehensive, recent cover of Wales.
- A wide range of information generated by the Centre for Ecology and Hydrology (CEH) for the Glastir Monitoring and Evaluation Programme (GMEP) (Emmett et al. 2014) including:
 - A wide range of habitat, species, soil, water, landscape and historic environment data have been collected from 150 samples 1km² squares in 2013 and 2014.
 - CEH remote sensing data on peatlands.
 - CEH impact monitoring studies, which model landscape scale impact

Given the scale of the work being undertaken by CEH and the prospect of a ready-made sampling strategy, the Panel Chair decided to meet them, with the Welsh Government Secretariat, to explore the extent to which the data collected could be useful to the Panel. This meeting took place on 13th November 2013.

At that meeting, CEH staff explained the sampling strategy for GMEP, which was based on 1km² sample areas, stratified by ITE Land Class. Within each land class area the All Wales sample km²s were selected randomly, whilst the Targeted Component samples were weighted proportionately to the total objective score of each km².

CEH confirmed that so far 150 squares had been sampled, of which 75 were from the targeted element. 57% of the 150 samples overlapped to at least some extent with a Glastir contract, but it had proved very difficult to ascertain the full extent of the overlap. Various difficulties of data access and analysis had meant that it had not been possible to provide a detailed estimate of the number of Glastir Advanced contracts that overlap with sample squares. CEH estimated that it might be about a third of the 75 targeted element squares, though there was at the time no estimate of the extent of that overlap and obtaining such an estimate would have required additional analysis.

The limited overlap between GMEP sample squares and Glastir Advanced contracts suggested that overlap with a CEH sample square would not be a particularly useful basis on which to select a sample of Glastir advanced contracts. This in turn limited the usefulness of the field survey data collected by CEH for the purposes of the panel.

The meeting did however result in a very useful discussion about what datasets would be most beneficial in helping the Panel to evaluate Glastir Advanced contracts. As a result of this, it was agreed with the secretariat that the following additional reference information would be supplied for all contracts sampled:

- An Ordnance Survey base map of an appropriate scale
- Recent colour vertical aerial photography, rectified to fit with the base map and scheme information, to allow a visual check on the situation on the ground.
- The phase 1 vegetation survey data from NRW, providing consistent, basic information on the range and location of habitats within and adjacent to the holdings
- The Ecosse 2 and Unified Peat maps to provide a check on the target area maps for the carbon soil objectives.

In addition it was agreed that the secretariat would, where they existed, supply copies of any advisory reports, information and formal written advice received by the CMs in relation to a contract. These included:

- Water Management Plans (for the water quality priority 1 and 2 areas)
- Nutrient Management Plans
- Reports on Scheduled Ancient Monuments from CADW and on other historic features from Archaeological Trusts
- Formal and informal advice from NRW on the management of SSSIs and their buffer zones
- Any other written records of consultations over particular objectives

5 Evaluation method and scoring

The complexity and diversity of Glastir Advanced contracts, the volume of relevant information available and the complex process involved in compiling a contract confirmed the original decision to use an appraisal panel-based evaluation process.

The Panel conducted an exploratory trial run on 26th November 2014 using dossiers prepared for two sample contracts (neither of which were included in the sample for the evaluation proper). Having familiarised themselves with the scheme, contract and reference information supplied, panel members talked through these two contracts with the CM who had helped to set them up. Panel members found these discussions allowed them to get a much clearer understanding of the contracts and helped to clarify issues that could not be resolved from the written documentation alone. The indications from this exercise were that this approach, including a discussion with the responsible CM, would provide Panel members with enough information to allow a meaningful assessment of potential to meet key objectives, and to identify elements of good practice and areas for improvement.

Before the Panel started to consider the sample contracts to be used in the evaluation process they adopted some working practices to structure the assessment process. The Panel chair annotated the contract maps to show which options and capital items had been used in which locations. He then compared these to the phase 1 habitat survey map in order to get some idea what sort of habitats the actions had been applied to. He also prepared a table showing in one place the set of options and capital items assigned to each objective.

Panel members agreed that the main focus of the assessment should be the extent to which existing contracts have the potential to meet the key objectives for which they were selected. For each contract, they were asked to consider three aspects of contract potential before the meeting at which the contract was to be discussed:

Selection of objectives to address / reject

Given all the objective layers relevant to the farm, how good were the decisions on which objectives to address and which not to? Did any of those not addressed represent major lost opportunities? Were any objectives addressed that should not have been? Did the selection make for a manageable contract, or is it over-complex?

Choice of management options and capital items

For the objectives to which a contract is intended to contribute, how good was the choice of management options and capital items? This was a particularly important question where achieving an objective requires a combination of several different management options and/or capital works.

Deployment of management options and capital items

For each management option and capital item, how well were they targeted within the farm? Were there any examples where options or capital items appear to have been put in the wrong place? Was the area/length/number of units too small/short/few to have the required impact, about right or too large/long/many to be cost-effective?

From this assessment, Panel members were each asked to identify good points in the contract and potential weaknesses and to identify issues that needed to be clarified or explored further with the CM at the Panel meeting.

Following the discussion, Panel Members were asked to write down a list of good points about each contract and a list of areas where improvements could have been made. They were also each asked to, without conferring; assign the contract an overall score for its potential to meet the key objectives for which it was selected. After some discussion and iteration, Panel members agreed to use the following five point scoring system for all the sample contracts:

1. **Optimal or near optimal** – The contract has the potential to make an optimal contribution to scheme objectives. No improvements to suggest.
2. **Good** – The contract has the potential to make a useful, cost-effective contribution. Minor improvements may be possible.
3. **Uneven quality** – The contract is likely to make a useful, cost-effective contribution to some objectives, but there is substantial room for improvement in the contribution likely to be made to other objectives.
4. **Poor** – The contract has the potential to make some contribution to scheme objectives though there is substantial room for improvement across all or most of the objectives.
5. **Unacceptable** – The contract is deeply flawed and unlikely to make a cost-effective contribution to scheme objectives.

When the Panel re-convened, individual scores were compared and consensus reached on what score the contract should finally be allocated.

6. Sampling strategy

Based on findings from the preliminary assessment of contracts, it was decided to sample fifteen contracts, assessing five contracts per day at each of three panel meetings. With this sample size, choosing the samples on a purely random basis would have risked very uneven coverage of the scheme and the issues that it faces. Instead, a procedure was developed to ensure that the sample could be broadly representative of the operation of Glastir Advanced across Wales, whilst minimising bias.

Rural Payments Wales administer the scheme through their three regions and it was agreed to sample five contracts from each region in case there were big differences between the way the scheme was administered within each one. Within each region it was also felt desirable to sample a range of farm types in a range of situations and with a range of objectives.

To this end, the secretariat provided the Panel chair with a long list of potentially suitable contracts for each region, with basic information on the type of farm, the broad geographical area within the region, the degree of disadvantage (SDA/DA/non-LFA) and whether there was a significant carbon or high priority water quality objective. The Panel chair made the final selection from the long list on the basis of the information supplied, without knowing the details of the farm or the contract. The mix of samples was also intended to reflect the broad characteristics of the three RPW regions.

The sample of five contracts from the North Wales region was selected to include the following:

- Two contracts from the SDA, two from the DA and one from the non-LFA
- At least one contract for which carbon was a major objective and one for which water quality was a major objective
- Contracts from the three main geographical areas within the region (NE Wales, NW Wales and the Snowdonia National Park)
- Contracts covering a range of types of farming enterprise

Selection of the samples for the South and East region and West region was done at the same time and followed a similar pattern. The sample was chosen to cover all the different sub-regions, to ensure that lowland, DA and SDA areas are sampled, to cover a range of farm types and to cover a good range of objectives, including at least one with a focus on water management. An attempt was also made to include some complex and some simpler-sounding contracts.

After the Panel Chair had made his selection, a check was made with the panel members to ensure that they had no personal connections to any of the sampled farms. In one case this proved to be the case and the most similar farm from the long list was chosen instead.

7. Confidentiality and anonymity

The aim of the evaluation was to suggest ways of improving scheme delivery, not to criticise individual contracts or CMs. The contracts we looked at are all still running and we did not wish to destabilise them. It was also essential that CMs felt they could speak freely to the Panel about their approach to contract development and the issues that they face. For these reasons, the Panel agreed that the locations of the sampled contracts should not be made public. Details of the contracts sampled and notes of the Panel's discussions on the individual contracts have however been retained by the Welsh Government.

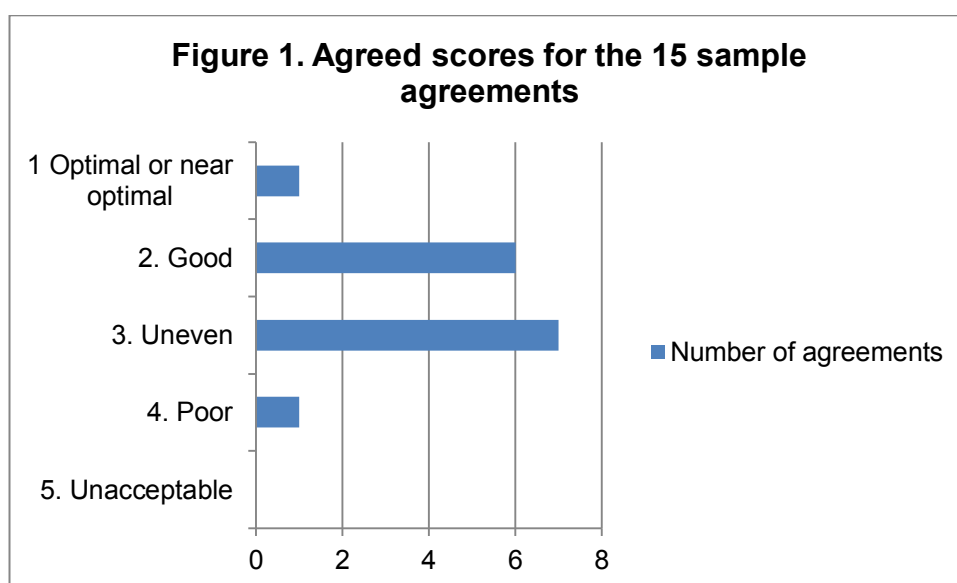
8. Limitations of the assessment

The Panel was asked to focus on delivering improvements to the scheme in the short term. This meant that the panel did not focus on deeper structural issues such as payment rates, the initial selection of objectives at a scheme level or the weighting of objectives at a scheme level. The desk-based nature of the review also meant that it was not possible to evaluate the effectiveness with which actions were implemented on the farm.

9. Results

How well are the signed contracts likely to deliver against the objectives for which they were selected?

This was assessed by assigning each contract an overall score on the one to five scale described in the methodology section. In some cases individual Panel members scored contracts differently, though normally only within a range of plus or minus one score. Through discussion, the Panel managed to understand the reasons for these differences and achieve a consensus score for all of the sample contracts. Figure 1 shows the distribution of the scores for the fifteen sample contracts between the five scores. The sample size is not sufficient for any further breakdown of these scores to be meaningful.



We found no contracts that we judged to be unacceptable and only one that we judged to be poor. We judged that seven out of the fifteen contracts were either good or optimal to near optimal, with a further seven being classified as of uneven quality.

The Panel was struck by the amount of work CMs had put into developing the contracts we sampled. In all cases they appeared to have followed the scheme rules and had worked their way through huge masses of complex data to develop each contract. They had to take on advice and guidance from multiple sources and reconcile what might be an optimal management package with what the farmer is prepared and able to undertake. In some cases they had also had to resolve internal conflicts between the management required for different objectives.

We set the bar for achieving the highest score (optimal or near optimal) high. We marked as 'good' any contract where we felt there was even minor room for improvement. Given the many practical difficulties involved in compiling and negotiating a contract, a 'good' score is the best that we would normally expect a contract to achieve under operational conditions.

For the seven contracts judged as being of uneven quality, we found that some objectives appeared to have been addressed very well, whereas other objectives had been less well addressed. We were careful to judge the contracts against the objectives they are recorded as addressing and, in some cases this led us to mark in a way that may seem harsh. For example, we assessed as being of uneven quality a contract on a more intensively managed farm that included an ambitious programme of habitat creation that we felt would greatly benefit generalist farmland species. We scored it as of uneven quality because we were not convinced that all the individual species objectives that had been accepted for this contract would actually benefit.

10. Elements of good practice identified

As would be expected from the good overall scores, we found many examples of good practice illustrated by the fifteen contracts that we sampled. Some of those that we found most frequently are listed in this section:

10.1 *Consideration is given to a wide range of objectives, guided by the target area maps*

The system of scoring is based on multiple GIS target layers that is used to select Glastir contracts, generally achieves the aim of making CMs consider the full range of objectives to which the holding could potentially contribute.

The evaluation of Tir Gofal identified that its impact on a range of species, selected to represent a range of differing families, ecological requirements, habitat niches and varying potential to respond to AES management prescriptions was negligible (MacDonald et al. 2012). The design of Glastir Advanced was intended to address this. The targeting system does appear to be focusing more attention on the conservation of individual species. In the fifteen contracts we sampled, the species objectives had been considered alongside the habitat and other objectives.

The Welsh Government has placed the emphasis of Glastir Advanced on soil carbon, water quality and water quantity in the early years of the scheme. The sample contracts reflect this intention. Water quality, flood risk management and soil carbon objectives all made major contributions to the scoring of the sample objectives (see Table 1). The sample contracts do attempt to address these objectives alongside the more long established biodiversity, landscape and historic environment objectives.

Table 1. Total scores of sample contracts for addressed objectives

Contract	Carbon Soil objective scores	Water Quality objective scores	Flood risk reduction objective scores	Combined total scores for these objectives	Species objectives	Habitat and protected site objectives	Landscape and historic environment objectives	Combined total score for these objectives
1	9.97	16.25	0	26.22	0.07	10.38	3.05	13.50
2	9.10	10.68	2.43	22.21	13.79	10.66	0	24.45
3	0	16.00	43.34	59.34	1.89	5.68	3.63	11.20
4	1.70	5.52	0.95	8.17	6.67	4.21	4.08	14.96
5	22.59	1.18	14.29	38.06	4.18	3.88	0	8.06
6	0	0	0	0	14.82	4.47	0	18.70
7	11.84	0	0	11.84	7.97	6.35	0	14.32
8	0	2.00	13.33	15.33	4.61	5.04	1.00	10.65
9	8.20	0	26.18	34.38	1.24	1.90	0	2.14
10	0	0.02	18.37	18.39	0	4.14	0	4.14
11	21.03	0	0	21.03	9.08	6.51	0.87	16.46
12	2.99	9.65	3.99	16.63	13.66	3.20	2.00	18.86
13	0	0	1.00	1.00	7.04	3.17	2.24	12.45
14	0	0	0	0	7.68	4.09	3.00	14.77
15	10.62	11.39	5.78	27.79	4.20	2.92	0.78	7.90

10.2 *The management of major areas of semi-natural habitat is generally appropriate and well targeted*

Management of semi-natural habitats was identified as a strength of Tir Gofal (Metcalf et al. 2012) and the design of Glastir Advanced seems likely to build on that strength. Most of the areas of semi-natural habitat in the fifteen sample contracts were under management designed to maintain or restore favourable condition. Reference to the Phase 1 habitat survey maps and aerial photographs appeared to show that this management had been accurately targeted. The combinations of management options and capital items used to address the management requirements of these habitats were generally appropriate.

10.3 *Most of the sample contracts in areas where water quality management is a high priority were supported by good Water Management Plans*

The format of the Water Management Plans is very clear, informative and easy to understand and most seem to make sensible recommendations.

10.4 *CMs have generally made good use of the Water Management Plans and archaeological reports*

CMs seem to have made appropriate use of these plans, being careful to regard them as guidance and adapting their recommendations to match the situation that they found on the ground. In all but one of the six samples we looked at that were covered by a water quality priority 1 or 2 objective, there was a well thought out suite of actions to address the objective. The influence of the Water Management Plan could be clearly identified in these contracts.

10.5 *In some cases CMs are using more precise information on distribution to establish whether management for a species objective with a very broadly defined target area is likely to be beneficial on a particular holding*

We heard that in some cases CMs are using Local Record Centre data (available to them through a Welsh Government contract) to check whether a species has actually been recorded on or within range of a holding where it has come up as an objective. This would seem to be good practice where target areas are not closely defined, as management for a species that is not present on the farm and unlikely to colonise it risks wasting money and undermining the credibility of the scheme.

10.6 *In a few cases there is evidence that a landscape-scale approach is being taken*

We encountered a few examples of actions for localised bird species that were coordinated between different contracts in an attempt to provide for all the requirements of the species within its range. The best example was a contract where the management for Twite had been coordinated with that under other nearby contracts through the Twite delivery plan developed by RSPB Cymru (mentioned in the WAO report on Glastir). CMs also reported other examples of helpful advice on landscape scale management for birds given by the RSPB. This provides further evidence of the value of facilitation, recognised in the Welsh Government's 2014 consultation document.

10.7 *A range of advice, training and guidance is available to CMs and there is a willingness to seek it*

CMs consistently told us that they value and regularly seek advice on management from NRW, CADW and RSPB.

NRW provide a written summary of their recommendations for SSSIs and detailed Water and Nutrient Management Plans for contracts in Priority 1 and 2 areas. There is also a good system for the provision of advice on the historic environment. CADW provide written reports on scheduled ancient monuments and Archaeological Trusts provide written reports on other significant undesignated features. CMs also report frequent, informal contact with RSPB, though here advice is often verbal, or provided through e-mail exchange.

There is a programme of training in the management required for particular objectives, often run by partner organisations, which CMs say they find useful. More senior CMs are also encouraged to mentor their colleagues in areas in which they have acquired particular expertise. CMs also regularly seek advice from colleagues on a less formal basis.

In addition, CMs have access to a range of purpose-made guidance material.

10.8 *The scheme can deliver for more than just its specific objectives*

Amongst the sample contracts that we looked at was one contract that was intended to benefit a small number of specific insects. However it included a good package of measures that we felt was also likely to benefit a wide range of generalist species, including pollinators and the natural enemies of crop pests. This highlighted the potential spin-off benefits of options such as red clover and fallow margins.

11. Areas where there is room for improvement

11.1 The definition of some objective maps

The Welsh Government's 2014 consultation document (Welsh Government 2014) recognised that a potential difficulty faced by CMs in delivering Glastir Advanced scheme is the accuracy and resolution of the objective GIS data layers which support the scheme.

We were not able to conduct a complete review of the data layers, but we did encounter several examples of 'broad brush' objective maps making it difficult for CMs to develop fully cost effective contracts. In the sample contracts we looked at, the most clear cut examples were a small group of species, including lesser butterfly orchid, *Euphrasia anglica*, the brown banded and shrill carder bees and arable plants. CMs had accepted the species objective(s) and included management for one or more of these species in eleven out of the fifteen contracts sampled, with seven of the fifteen having more than one of these objectives (see Table 2). In many of these cases they had relied on the targeting maps, without supporting evidence that the species were present on or within a suitable distance of the farm.

Table 2. Sample contracts with 'broad brush' species as accepted objectives

Contract	Lesser Butterfly Orchid	<i>Euphrasia anglica</i>	Brown Banded Carder Bee	Shrill Carder Bee	Arable plants	Total no. of these objectives per contract
1						0
2						0
3					Y	1
4			Y			1
5						0
6	Y		Y	Y	Y	4
7		Y				1
8		Y			Y	2
9	Y					1
10						0
11	Y	Y	Y			3
12			Y	Y		2
13				Y	Y	2
14		Y	Y			2
15	Y	Y	Y			3
Total no. of contracts with this objective	4	5	6	3	4	

The current mapping of the upland carbon soils objective is also 'broad brush' in some places with occasional inaccuracies identified.

11.2 *Management for some species objectives*

The Welsh Government's 2014 consultation document recognised that concerns had been raised that the direction to CMs was that they should ideally be looking to do at least one activity for all the potential objectives identified, might lead to a "tick box" approach, whereby only a minimum amount of activity is pinned to each objective to deliver a contract.

We found a mixed picture in the sample contracts, as is evidenced by the fact that seven of the fifteen sample contracts were classified as of uneven quality, with some objectives being addressed well and others less well. In this group of contracts, we found a substantial number of instances where species objectives had been less well addressed. These included several examples of objectives that were supported by a single action. The *Euphrasia anglica* objective was supported by a single action in three of the five samples where it had been accepted. The marsh fritillary objective was supported by a single action in three out of its four contracts and the water vole objective by a single action in two out of its three contracts. By contrast, the mean number of actions supporting the lesser horseshoe bat objective in the seven contracts in the sample, where it had been accepted, was eleven.

Some of this variation can be explained by differences in the ecology and management requirements of the different species. Bats are wide ranging species and so need action over a wide area, whereas others may occur in very small areas and have simple management requirements. This would certainly explain the small number of actions supporting the objectives for highly restricted species, such as upland juniper and arctic alpine plants, but it does not appear to explain all the variation we observed.

CMs told us that they feel obliged to record at least one management action for each objective and we came across at least one case where a CM had insisted on including actions for a species objective in a contract despite having doubts about whether it was appropriate for the holding.

We also got the impression from several conversations that some CMs regarded the allocation of one action as sufficient for some of the objectives that they did not see as representing the main thrust of the contract.

Even where more substantive actions had been taken, we were not convinced that these would always be effective, especially for species with complex habitat requirements. The actions often appeared to be incomplete, and occasionally inappropriate.

In some cases this appears to have been caused by unresolved tensions between the need to restore to or maintain in favourable condition habitats within designated areas (driven by NRW) and the need to accommodate the needs of some rare and declining species. In one particular case this had resulted in management being located outside the designated area that was suboptimal, if not unsuitable for the species concerned.

We were also concerned that the sample contracts may not succeed in helping more mobile species and/or those that require complex, landscape scale management packages. Except in a very few cases, there was little evidence that the actions on particular farms were being planned as part of a wider species conservation strategy.

In making these observations we are not being critical of CMs. Assembling a multi-objective contract for a large holding is difficult enough. Adding into it well designed packages of measures for individual species, whilst avoiding conflicts between objectives, makes the task more complex. When there are a substantial number of different species that all need to be catered for it becomes an even more complex task, requiring very wide ecological knowledge.

11.3 *The actions taken for flood management*

Flood management is a major objective of the scheme. Ten of the fifteen contracts sampled included management for a flood risk management objective and in five of those ten contracts these objectives scored more than ten (Table 1.) In most of these contracts, the high score was reflected in a considerable number of actions intended to reduce flood risk.

We found the multiplicity of objective layers for flood risk management difficult to understand, and we were concerned that CMs were not able to explain the differences between the objectives or whether the different objectives required different actions.

We understand that the inclusion of these objective in the scheme were informed by the farmer-led Pontbren Project (Keenleyside, undated), which showed the importance of run-off from sheep grazed grasslands on clay soils and that planting small strips of trees across slopes in carefully positioned locations could help to substantially reduce the rates of run-off (Jackson et al. 2008). This could in turn significantly reduce peak flows, at least at a local scale. We also understand that the mathematical models developed from the Pontbren project were used to help develop the target maps for these objective layers (Welsh Government. pers.comm.) The Polyscape mathematical model can be used to suggest where such interventions are likely to be most effective.

Defra has also financed three more catchment-scale pilot projects in England as part of the Multi-Objective Flood Management Demonstration Scheme. These are in the Upper Derwent Catchment in Derbyshire, around Pickering, North Yorkshire and on the Horner Water and Aller catchments on the Holnicote Estate in Somerset. The interventions tested in these pilots include:

- Moorland restoration in the headwaters
- Extending woodland on the moorland edge
- Development of in-channel woody debris dams
- Implementation of best practice in-bye grassland and associated soil management
- Implementation of best practice arable soil management
- Blocking flow pathways such as drains, trackways and erosion gullies between hillslope runoff generation areas and receiving arterial watercourses
- Creation of flood meadows on the middle floodplain

The Holnicote project (Rose et al. 2010), is showing that, used carefully and in the right places, a range of interventions can help reduce flooding. This project has also developed a mathematical model to predict the impact of particular interventions in particular locations within the catchment and it is claimed this model can be easily adapted to other catchments (Rose pers. comm.).

Table 3 summarises the actions deployed to reduce flood risk in the five sample Glastir Advanced contracts where flood risk reduction made a major contribution to the score for the holding. These include actions to create or maintain a taller less tightly grazed sward, to retain semi-natural habitats, to restore or create new boundary features, to manage streamside corridors and to restore farm woodlands.

Table 3. Actions deployed for the flood risk reduction objective in sample Glastir Advanced contracts where this was a major objective

Action	Sample a	Sample b	Sample c	Sample d	Sample e
Situation	Estuarine flood plain	River valley	Riparian Flood plain	Upland fringe	River valley and upland fringe
15 Grazed pasture no inputs	Y				Y
15b Grazed pasture low inputs				Y	
15d Grazed pasture low inputs mixed stocking			Y		
120 Unimproved acid grassland					Y
133 Marshy grassland				Y	
595 Post & wire fencing with netting	Y	Y		Y	Y
600 Timber field gates, softwood	Y	Y		Y	
589 Hedge planting/coppicing				Y	Y
588 Hedge laying		Y			
585 Dry stone wall restoration		Y			
601 Top wiring		Y			
156 Buffer to prevent erosion		Y			
173 Streamside corridor management	Y				
100 Woodland stock exclusion			Y*	Y	Y
684 Thin broadleaf and extract				Y	
631 Restocking broadleaves – PAWS etc.				Y	
647 Rabbit guards				Y	
613 basic restocking, under 5ha				Y	

**Not formally tagged to a flood defence objective, but the Contract Manager said this was part of the reason for using the action*

Most if not all of these actions have been shown to be helpful in flood risk management, either at Pontbren or other pilot flood risk reduction projects.

The five sample contracts were in a variety of situations, coastal plain, river flood plain, river valley and upland fringe catchments of headwater streams and there was some evidence that the mix of actions reflected the situation. There was woodland management in the upland fringe, a reliance of hedges and other boundary features in the river valleys and grassland management on the flood plain. Our discussions with CMs convinced us that most were doing their best with the tools available to them, but we did not come across any evidence that the interventions on particular holdings were being planned as part of a wider strategy for the catchment. One contract was immediately adjacent to an undeveloped estuary and the Panel was uncertain why flood risk reduction was important in this situation.

A key lesson from the Pontbren Project is that ‘for land management to be effective for flood risk requires coordinated interventions across catchments’ (Pagella et al. undated), so this lack of coordination is likely to adversely affect the effectiveness of the management. Holding back water in the wrong place could even be counterproductive.

11.4 Avoiding excessive habitat homogeneity In two specific instances

It has been recognised for some time that there is an inherent risk with all agri-environmental schemes that standardised management options, applied across a wide area, will promote excessively uniform habitats. This can in turn limit the range of species they can support (Webb et al. 2010). Glastir Advanced, with its emphasis on management for individual species, is probably less prone to this than previous schemes, but there are two specific instances where this does appear to be a risk:

Open hill grassland and moorland

Almost all the contracts in the sample that included this habitat were being managed under option 41a (Grazed Open Country) with Additional Management Payment 411 (Reduce Stocking). Under option 41a grazing levels are calculated on the basis of the mix of habitats present in the land parcel. Under AMP 411 a further reduction is required beyond this level.

Further stock reductions will often be justified in this habitat, both for the conservation of soil carbon and for habitat management reasons, but in some cases the payment for reduced stocking was being made even though heterogeneity in the form of shorter, more heavily grazed areas would have benefitted species such as curlew, chough and ring ouzel, or where there was little evidence based on the condition of the habitat of the need for additional stock reduction. Discussing this with CMs, there appear to be two reasons for this:

- The need to achieve or maintain favourable condition of upland habitats trumped the needs of individual species.
- The fact that most areas of this habitat are covered by multiple objectives, but the choice of management actions is limited. Coupled with an ‘every objective needs an action’ approach to scheme implementation, this creates a structural imperative within the scheme to use both the basic option and the reduced stocking supplement in order to ensure that there was an action booked against each objective.

The first of these reasons concerns management policy for the protection of designated sites rather than the working of Glastir Advanced. The second does seem to be a by-product of scheme design. Both could be at least partly addressed by greater use of the stock management supplement, but CMs told us that it was very difficult to persuade farmers to take up this option because of the way that the area over which it could be paid was determined. Under current scheme rules this supplement can only be paid to achieve the desired outcome on a specific area, an area that has to be protected from excessive grazing or one where intensive grazing has to be encouraged. It cannot be paid over the whole area of land that needs to be shepherded to achieve this.

11.5 Woodland

The other instance where the scheme may unintentionally be promoting excessive uniformity is in woodland management. The scheme rules state that at least 80% of the area of farm woodland on a holding should have stock excluded from it unless there are sound ecological reasons for maintaining the current grazing levels. With one exception, the CMs that we questioned on woodland management did not mention this caveat. It is apparent that the scheme is suffering from a shortage of specialist woodland advice and, taken together with the 80% rule, this seems to have meant that in most woodlands the only management undertaken has been to exclude stock.

We have sought independent expert advice on this (Kirby pers. comm.). This advice is that whilst there has been a widespread problem of overgrazing in Welsh woodlands, there are some types of woodland and associated priority species that benefit from light grazing. The widespread use of stock exclusion does risk replacing one kind of uniformity with another.

Until the introduction of a light grazing option, option 176, in 2014, the scheme did not include an option for reducing rather than preventing grazing in woodlands, which, until now, seems to have been an omission, given that the monitoring of Tir Gofal found that light grazing of woodland under that scheme had 'produced the most positive change' (Metcalf et al. 2012). We did however establish that CMs can request derogations from the 80% rule where they feel it is either inappropriate or impractical.

11.6 Coordination with Glastir Woodland

The Panel reviewed one contract where a woodland adviser had provided input and where the internal management of the woodlands appeared to have been carefully integrated with the management of the rest of the holding. Glastir is designed to encourage such integration, but this feature of the scheme design does not appear to have been fully exploited. We also reviewed several contracts on well-wooded holdings which had not benefitted from specialist woodland adviser input. This appears to be due to a shortage of specialist woodland advisers.

11.7 *Ensuring value for money from capital payments for stone wall restoration, fencing and gates*

We were struck by the variation between contracts in the amount spent on these items. Part of this seems to relate to the extent to which these items were tackled in previous contracts but this does not appear to be the only cause of the variation.

Several CMs explained that it is often necessary to include these items in a contract to make it into an attractive package and so secure more environmentally valuable management. Stone wall restoration, hedge laying, planting or coppicing are popular with farmers, contribute to landscape character and provide habitat for some species, but they are high cost items, even though there are ceilings for the amount that can be included in a contract. Some CMs have said that they try to give priority to walls or hedges that produce multiple benefits, for example by allowing differential grazing of adjacent parcels, or by providing habitat corridors. This would seem to be good practice. Most fencing seems to be commissioned to support another environmental objective, such as conservation grazing or pollution protection, but the linkages are not always clear.

11.8 *The clarity of the contract documentation supplied to farmers*

We found it difficult to get to grips with the information supplied to us on the sample contracts. The contract maps were always printed on several sheets with multiple overlaps, and the codes used to identify the management options and capital items used in each parcel could only be interpreted by laborious cross referencing to tables in the contract document. There was also nothing in the contract that explained to the farmer why the management specified in the contract was being undertaken, though they were provided with separate, generic technical guidance.

One CM explained to us that when negotiating Glastir contracts he prepares his own simplified sets of draft contract documentation in order to discuss the management with the farmer. This includes a contract map on a single sheet of paper and simplified written material.

11.9 *Follow up after a contract has been entered into*

We asked several CMs how they would know whether the management they had specified in their contracts was working. Most made reference to the monitoring and evaluation programme, but some also said that they felt follow up visits to look at the progress of a contract would be valuable. We were struck by the contrast between the intense effort that goes into negotiating and setting up a contract and the absence of systematic follow-up support to contract holders. Follow up advisory visits were provided under the Tir Gofal scheme and it is not clear that there are any differences in scheme design that would render them superfluous under Glastir Advanced.

11.10 *Control of mink*

Mink is a wide ranging species, so effective control is likely to require coordinated, consistent action across a wide area. Glastir is a voluntary, discretionary scheme operating at the holding level, and is therefore not an ideal instrument for achieving this. Even where contracts fall within a target area, this does not guarantee that control measures will be taken. Three of the sample contracts lie within target areas for the 'Mink control in water vole priority areas' objective, but this was rejected in two out of the three contracts, presumably because the land manager was not keen to adopt this action.

12. Conclusions

In commissioning this desk evaluation, the Welsh Government was seeking recommendations on how to ensure that Glastir Advanced is better placed to deliver and to address the concerns already identified in the 2014 consultation on Glastir within the next Rural Development programme and in the recent Wales Audit Office report (Wales Audit Office 2014).

In the course of developing these recommendations, the Panel was asked to assess how well the signed contracts are likely to deliver against the objectives for which they were selected. On the basis of our study, we have concluded that, taken as a whole, there is a good prospect that most Glastir Advanced contracts will deliver against most of their objectives, though we have found generic weaknesses in the management for individual species and in that for flood risk reduction.

The Glastir Advanced design, with its multi-layer GIS-based targeting system and the linking of actions to objectives, is innovative and provides a sound foundation for a successful, multi-objective scheme. However, our review has confirmed some of the concerns about the way in which the scheme is currently delivered, which does not always make the best use of this foundation.

We present below a series of recommendations that we believe will help Glastir Advanced realise its full potential. A number of these recommendations may add to running costs. The issue of running costs was highlighted by the Wales Audit Office report on Glastir (Wales Audit Office 2014), which expressed concern that the running costs of the scheme are not routinely monitored. There is a risk that measuring running costs will lead to a focus just on the costs, rather than taking into account the effectiveness of scheme administration in achieving the scheme's objectives. The Wales Audit Office itself recognises the value of additional expenditure (e.g. to facilitate landscape-scale working) it would seem sensible for the Welsh Government, as well as monitoring running costs, to seek a broader measure of the cost-effectiveness of scheme administration, enabling cases to be made for additional, necessary investments.

13. Recommendations

R1. Some of the target area maps need to be further refined

The Panel's findings have confirmed that some target areas appear to be too broad to be fully effective in targeting management. There is a risk that some of these very broad target areas are leading to management being undertaken that does not benefit the objective and which distorts the environmental priorities of the scheme. Most of the examples we came across are species objectives and we recommend that the Welsh Government works with the responsible NGOs to refine the target maps for the following objectives as soon as possible:

- Lesser Butterfly Orchid
- *Euphrasia anglica*
- Brown Banded Carder Bee
- Shril Carder Bee
- Arable plants.

The target map for the upland carbon soils objective would also benefit from refining using the Unified Peatland dataset, which appears to be generally more accurate.

Within the limitation of our desk-based assessment, we were not able to undertake a comprehensive review of the other broadly defined target area maps, but this is desirable, as the Welsh Government has already identified.

R2. Additional procedures are needed to ensure that the objectives addressed are appropriate and the management for those objectives is appropriate and sufficient

The Welsh Government's 2014 consultation document recognised that concerns had been raised that the direction to CMs, that they should ideally be looking to do at least one activity for all the potential objectives identified, might lead to a "tick box" approach, whereby only a minimum amount of activity is pinned to each objective to deliver a contract.

The original purpose of the direction, to ensure that CMs do consider all the objectives that a holding has the potential to deliver for, remains sound. However, the Panel found cases where objectives that we felt should have been rejected had been accepted.

We also found cases where the activity recorded against some objectives that had been accepted was minimal, as well as cases where we felt that the management was inappropriate.

To avoid these problems in future, CMs should be encouraged to include two extra steps in the process of assembling contracts:

- A relevance test, particularly for objectives with very broad target areas. The purpose of this is to determine whether action on this particular holding will really benefit the objective. For species objectives this might include looking at distribution data, such as that available under an existing contract with Local Record Centres, to see if the species is on, or within range of the holding. Also looking at habitat preferences to see if there are areas of suitable habitat, or areas with the potential to become suitable. Contract Managers should be encouraged to reject objectives that fail this relevance test.
- A sufficiency and appropriateness test, checking the package of options and capital items being deployed for each objective to check that they can, together, provide the management needed to achieve the objective, either on the holding or as part of a wider landscape-scale approach. It is particularly important to conduct this test for species objectives, since many species may have quite complex habitat requirements that cannot be secured by a single option or capital item. If there are genuine reasons why it is not possible to assemble a sufficient package of actions, the objective should be rejected.

R3. Contract Managers need more high quality guidance, support and training

To be able to successfully carry out tests of relevance and sufficiency, CMs need high quality guidance on the management conditions and, for species objectives, the habitat requirements that need to be provided to ensure that an objective can be achieved. Good guidance already exists for some objectives. It needs to be commissioned where it does not. Given the wide range of environmental issues they are expected to know about, CMs are likely to need training and site-specific advice as well as written guidance.

CMs would benefit from a further strengthening of the system of mentoring, with all individual CMs, not just HEOs, being encouraged to develop expertise in management for one or more objectives and then to use this expertise to advise their colleagues.

CMs value the formal advice they receive from NRW, CADW etc. and the informal advice that they get from RSPB. They would benefit from more advice on management, particularly for the species objectives. It is recommended that Welsh Government and the Welsh environmental NGOs review the scope to extend this advice, both on generic management principles and their site specific implementation.

CMs would benefit from additional guidance on the extent to which they can use payments for stone wall restoration, hedge restoration and planting, fencing and farm gates to persuade a farmer to take up an otherwise unattractive package of management. This could stress the desirability of trying to get added value from these capital items, by giving preference to items in locations that support other objectives, for example by facilitating differential grazing.

CMs need additional explanation of the differences between the various flood risk reduction and water quality objectives and how these relate to management requirements.

R4. Some specific actions are needed to avoid the risk that the scheme will promote excessive uniformity of management in woodland and upland habitats

As the area of woodland covered by Glastir Advanced increases, there is a risk that, in tackling the widespread problem of overgrazing in woodlands, the guidance that stock should be excluded from 80% of the woodland area will impose a new uniformity on woodland management. This guidance does provide CMs with a strong negotiating position with farmers, but we recommend that CMs should be given additional training and encouragement to consider woodlands, and the species they support, on an individual basis, looking at whether the woodlands are actually suffering excessive grazing, whether excluding grazing would risk damage, and, if so, whether light grazing might be more appropriate. Tools are available for assessing the degree of grazing in woodland (e.g. Thompson et al. 2004).

A Light Grazing option was introduced to Glastir Advanced in 2014 (Option 176 which allows grazing of between 0.1 and 0.4 livestock units between 1 October – 31 December). We recommend that CMs are given specific training on when and where this should be used.

Because the number of objective layers in these areas is often large, but the choice of actions is limited, CMs should be allowed to depart from the minimum one action per objective rule in open hill country where management would be artificially constrained if the rule were adhered to. It may also be worth exploring whether CMs could be encouraged to use a greater range of management actions, such as re-wetting, (in these areas where they will help achieve the desired outcomes).

The payment for and/or rules governing the application of the stock management AMP should be reviewed to make it more attractive to farmers. At the moment it can only be paid to achieve the desired outcome on a specific area, an area that has to be protected from excessive grazing or one where intensive grazing has to be encouraged. It needs to be paid over the whole area that has to be shepherded to achieve this aim in order to accurately reflect the costs and time involved.

If this AMP were paid in this way that should enable it to be more widely used to adjust grazing levels within large blocks of open country and so maintain a diversity of habitats.

R5. Actions for flood risk reduction need to be planned on a catchment scale

We recommend that the delivery of the flood risk reduction objectives should be subject to an urgent, expert review to improve its effectiveness. Using land management actions to reduce flood risk is a comparatively new area of work, where the evidence base is rapidly developing. The current approach within Glastir Advanced needs to be updated to take this into account.

The key improvement that is needed is for land management actions to be delivered in a co-ordinated way at a catchment scale, taking into account the insights from pilot projects and mathematical models about the cumulative effect of interventions on flooding and about which interventions are most effective in which locations. CMs need guidance on how to choose and locate the actions on an individual holding so that they make an optimal contribution to a wider flood risk management strategy. Expert guidance at the site level may be helpful as a first step, but catchment-specific advice, based on mathematical models of individual catchments, is highly desirable. The modelling work being undertaken as part of the Glastir Modelling and Evaluation Programme may be helpful in this.

We recommend that steps are taken as quickly as possible to allow the actions for flood risk management within Glastir Advanced contracts to be delivered within a coordinated, catchment-scale framework. We also recommend delaying the implementation of flood risk management actions until such a framework is in place, otherwise there is a high risk that implemented actions will be ineffective. With the complexity of hydrological processes within catchments there is potential in some cases for them to even be counter-productive.

Because holdings in flood risk reduction target areas often score highly, these target areas may also need to be reviewed to ensure that they focus on the areas where land management actions really will result in reductions in flood risk.

R6. More needs to be done to encourage and help fund facilitation and partnership working in order to establish landscape scale working where it is needed

The limited time available, and the fact that the coverage of Glastir Advanced contracts is still relatively limited, has meant that the Panel has not been able to fully evaluate landscape scale working within the scheme.

We have found existing elements of good practice that are helping to achieve coordinated landscape-scale delivery for some objectives in some areas. We have also found examples, particularly in the conservation of mobile species and in flood risk management, where the lack of such coordinated delivery is an obstacle to effective delivery. The elements of good practice that we found need to be more widely applied in situations where landscape-scale of delivery is required to achieve success. Doing this will require additional resources.

The key to success seems to be first a decision to invest in a particular objective in a particular area and then to encourage cooperative action by investing in facilitation through partnership working, as was recognised in the Welsh Government's 2014 consultation paper.

Others with specialist skills and local knowledge are needed to help CMs establish what actions are needed in which locations, to raise awareness of and support for the objective in the farming community and to persuade farmers with key holdings to enter the scheme. We recommend that scheme resources are made available to pay for this facilitation, either within Glastir Advanced, or through the proposed part-farm Habitat Network scheme, or both.

R7. Glastir Advanced is not the ideal mechanism to use for the control of mobile pest species

As a voluntary, discretionary scheme, Glastir Advanced is not the most obvious mechanism for the delivery of control measures for highly mobile species, such as mink. Ideally, an alternative mechanism should be found that is capable of delivering coordinated action on all holdings across a wide area. If this is not possible, then these objectives should be amongst those where cooperative action is prioritised and mechanisms sought that could involve farmers who are not participating in the scheme.

R8. Coordination with other schemes needs to be maintained and improved

The approach to delivery of a number of objectives, including water quality, flood risk reduction, species conservation and landscape character could be improved if farm woodland management funded under Glastir Woodlands was considered in the wider, landscape context and was more fully integrated with the management of the farmland and woodland boundaries under Glastir Advanced. This would require more woodland advice to be provided as a matter of some urgency, since current capacity is very limited.

As Glastir Efficiency Grants are replaced by the new Sustainable Production Grants, it is vital to ensure that water quality issues are still tackled in a coordinated way. Glastir Efficiency has funded mainly in-yard investments, whereas Glastir Advanced funds mainly off-yard investments, but there is both overlap and considerable interaction between the two sets of investments, meaning that they need to be planned together.

Glastir Advanced CMs should also be encouraged to look critically at any management already in place under Glastir Entry. In cases where a basic option such as 'Grazed Pasture With Reduced Inputs' is not sufficient or appropriate to deliver the objectives from a parcel of land, CMs should be encouraged to insist that management is upgraded to appropriate Glastir Advanced options.

R9. The wider value of some management needs to be recognised

Amongst the sample contracts that we looked at was one contract where a package of measures were put in place to benefit a particular insect, was also likely to benefit a range of generalist species including pollinators and the natural enemies of crop pests. We recommend that the Welsh Government asks the Glastir Monitoring and Evaluation Programme to document some of these likely spin-off benefits so that they can be accounted for in the scheme evaluation and so that CMs can be advised how to make the most of them, without losing the primary focus on the objectives for which the contract has been selected.

R10. Contracts need more follow up visits and advice

All Glastir Advanced contracts should be visited at least once during their lifetime in order to check that the contract holder has understood and is correctly implementing the management specified in the contract and to deal with any problems that have arisen. This visit should be advisory and distinct from any inspections of the holding. The ideal time to visit would probably be at about the end of the first year of the contract, when the farmer should have implemented the management and when there is still time to correct mistakes. This work could be contracted out, which would have the advantage of clearly separating the visits from the inspection process. Using CMs to do the work would have many advantages, both for contract holders and for CMs future work, but would impact on other aspects of delivery unless the number of CMs could be increased.

The issue of the documentation supplied to contract holders lies outside the remit of this evaluation. However, the Panel do feel that the current format of contract documentation needs some improvement to remove barriers to understanding by contract holders. We would suggest that:

- Contract maps should, wherever possible, consist of a single sheet. Where this is not possible, multiple overlaps should be avoided and the maps presented as a series of 'tiles'.
- Management options and capital items should be directly identifiable on the contract maps, without the need to cross-reference to the contract document parcel-by-parcel.

The contract should include a short summary of the purpose of the management options and capital items that the contract is designed to deliver.

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