



S78 Appeal reference APP/C3105/W/20/3259189

**Land to the east of M40 and south of
A4095, Chesterton, Bicester, Oxon**

SUPPLEMENTARY/REBUTTAL

PROOF OF EVIDENCE

of

DOMINIC WOODFIELD CEcol CEnv MCIEEM

on behalf of

'PARISHES AGAINST WOLF'

BIODIVERSITY AND RELATED POLICY MATTERS



Town and Country Planning Act 1990 (as amended)

Section 78 Appeal

PINS reference APP/C3105/W/20/3259189

(Cherwell District Council References: 19/02550/F & 20/00030/REF)

by

Great Lakes UK Limited

Land to the east of M40 and south of A4095, Chesterton, Bicester, Oxon

SUPPLEMENTARY / REBUTTAL
PROOF OF EVIDENCE

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DOMINIC WOODFIELD

BIODIVERSITY AND RELATED POLICY MATTERS

February 2021

Bioscan UK Limited
The Old Parlour
Little Baldon Farm
Little Baldon
Oxfordshire OX44 9PU
(01865) 341321
www.bioscanuk.com

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1 NEED FOR AND SCOPE OF SUPPLEMENTARY / REBUTTAL EVIDENCE

1.1 Emergence of new biodiversity net gain calculations from appellant

- 1.1.1 In my main proof, I discussed how a lack of transparency in the appellant's approach to calculating biodiversity change prevented or hindered independent review of their claims of net gain. I explained how, in an attempt to cut through the opacity surrounding this claim, PAWs statement of case (27th November 2020) included a request for the appellant to make available the full metric calculations behind it, and how I had made a further direct request to the appellant, via their ecologists, for a full copy of the calculations on 23rd December 2020.
- 1.1.2 As these requests were unsuccessful in eliciting a copy of the appellant's calculations, it was necessary for the purpose of assembling my evidence to try to back-calculate and reassemble the appellant's biodiversity net gain calculations, using their superseded methodology, in order to firstly try and make sense of how they arrived at their claim of net gain, and then, secondly, test the robustness of that claim. The results of this lengthy exercise are discussed in my main proof.
- 1.1.3 For reasons unknown, the appellant's original ecologists WSP are not presenting evidence to this appeal. Instead, Mr Patmore has been procured from the landscape architecture and urban design practice supporting the scheme (Bradley Murphy Design (BDM)) in order to provide the appellant's ecology evidence.
- 1.1.4 On receiving Mr Patmore's proof of evidence on 12 January 2021, I was pleased to note that it contained a wholly new set of calculations using the up-to-date Defra 2.0 metric. This is the first time the appellant has provided this information.
- 1.1.5 I believe this new material assists the inquiry by confirming *de facto* a number of matters that can hopefully now be set aside as no longer in any real dispute, namely:
- i) Firstly, there would now appear to be acceptance by the appellants, via Mr Patmore, that the Defra 2.0 metric is the most appropriate metric system for use in calculating biodiversity net gain or loss in this appeal and that by extension the appellant's previous outputs from use of the 2012 metric (or the in-house toolkit version of it used by WSP) should be given little or no weight. This is welcome vindication of the arguments presented in my main proof¹.

¹ e.g. paras 1.1.4, 4.2.2 and 5.5.1

Earlier provision of these calculations by the appellant would have avoided the now largely abortive work I was required to do to try and understand WSPs approach and results.

- ii) Secondly, I note that Mr Patmore's evidence corroborates the observation made in my main proof that use of the up-to-date Defra 2.0 metric delivers a markedly different and less positive output, even before one applies oneself to the task of scrutinising the accuracy of the input parameters.
- iii) Thirdly there appears to be acceptance by Mr Patmore that the Defra 2.0 delivers a less positive output due in part to more realistic defaults for parameters such as ease of creation of new habitats and 'lead-in time' as compared with the 2012 metric. This again vindicates the arguments I present in my main proof (e.g. at para 1.1.4) about the importance of using the most up-to-date metric and about the importance of providing clear justifications where any decision is taken to override defaults or apply subjective judgments.

1.1.6 I believe the eleventh-hour emergence of these new calculations also puts into fresh perspective the position of Cherwell District Council on this matter. The District Council, and by extension relevant consultees and interested parties, have never previously been given a fully worked and transparent copy of the appellant's net gain calculations in the manner now presented at Mr Patmore's Appendix H. The Council's position on biodiversity net gain or loss, as far as any position is taken at all², must be viewed in this context.

1.2 SOCG process

1.2.1 For the reasons given above, the appellant's adoption of the Defra 2.0 metric and its presentation of a more transparent copy of its calculations ought to narrow the issues in dispute. To this end, I approached Mr Patmore on 14th January 2021 with a suggestion that we might agree an 'ecology' Statement of Common Ground and he replied to say he agreed to take part in that process.

1.2.2 On 20th January 2021, I sent Mr Patmore a number of statements that, based on his evidence, appeared likely to comprise common ground or be matters not otherwise in

² Mr Patmore contends at several points in his main proof (e.g. 2.1.1 and 2.1.2) that the Council is 'satisfied' on ecological matters. In fact, the only expression of satisfaction by CDC I have seen on ecology matters is in relation to the welfare of European Protected Species (e.g. great crested newts) (see quote from Committee Report at 2.1.2 of Mr Patmore's proof). I have not seen any documentation confirming that Charlotte Watkins, the Council's ecology/biodiversity officer, was ultimately satisfied with the net gain calculations (only that she queried aspects of them) nor that the Council is satisfied that the requirements of Policy ESD10 are complied with.



significant dispute. In particular I sought agreement that we could save the inquiry time by avoiding wading through obsolete and superseded versions of the metric and concentrating on Defra 2.0.

- 1.2.3 No reply was received until Mr Patmore was then chased for a response a week later on 27 January 2021, both by myself and latterly the same day via an e-mail exchange between counsel. Mr Patmore responded later the same day with a number of comments that suggested a certain reluctance to agree on the status of the Defra 2.0 metric in this case as well as certain matters of fact. Notwithstanding this, I believe some progress ought still to be able to made on these and other issues and I hope to be able to provide the inquiry with an update in due course.

2 CRITIQUE OF THE APPELLANT'S NEW BIODIVERSITY NET GAIN CALCULATIONS

- 2.1.1 The inquiry is now able to consider and review a set of biodiversity net gain calculations from the appellant that use the appropriate up-to-date metric and which are presented in a manner that allows independent scrutiny. As I have said, this is something that the District Council and relevant consultees and interested parties have hitherto been denied.
- 2.1.2 The appellant's new calculations show a net gain figure of +17.14%. The first thing to note is that this is a significant diminution on the appellant's previous claim of +27%, albeit if it were robust it would still, of course, indicate net gain. Given that key input parameters (e.g. in terms of area, habitat type and habitat distinctiveness) have not changed from WSPs calculations, this reduction is attributable solely to the use of the more up to date metric, including its more realistic lead in times for habitat creation and defaults that are less readily overridden by the user.
- 2.1.3 As Mr Patmore notes at para 3.4.8 of his main proof, the main drivers for achieving this net gain figure remain the same – these are the twin factors of attributing extremely low existing value to the pre-existing grassland habitats and attributing a substantial uplift in that value where it applies to grasslands supposed to be enhanced and newly created on the site post-development. As explained by Mr Patmore at his para 3.4.13, this accounts for a change of +19.16 Biodiversity Units between the pre-development and post-development positions. This sum exceeds the entirety of the difference between net loss and net gain and therefore it is crucial for the veracity of the appellant's claims that these attributions are correct and defensible.
- 2.1.4 To consider the baseline situation first, the appellant's case remains that the majority of the site (12.45ha or c.68%) is comprised of a homogenous expanse of the very lowest possible quality of an intrinsically low value habitat type: amenity grassland.
- 2.1.5 Mr Patmore says that he is satisfied that this classification remains accurate, but at times he appears to contradict himself on the matter. At 2.3.3 of his main proof he offers that "My verification survey has confirmed that there has been little change in the habitat distribution and type previously identified on Site and that the habitat conditions assigned in 2019 were appropriate." He then goes on to say that he agrees with WSPs allocation of some 68% of the site to amenity grassland of "low diversity value" (sic) and "poor condition with regard to habitat criteria relevant to this habitat type"³. However, he later accepts via statements at paras 5.2.2 and 5.2.3 that rough grasslands on the site (specifically those at the edges of and between playing areas)

³ He does not say which criteria.

are of higher value. Addressing this, he claims at para 5.2.3 that such higher value is “captured in the WSP Biodiversity Net Gain Metric with regard to habitat distinctiveness scores”. Plainly it is not, as the entirety of the 12.45ha of greens, roughs, fairways, sparsely vegetated herb-rich areas and longer established neutral grassland occupying the main part of the site has been entered into the calculator as a single category: amenity grassland of the lowest possible distinctiveness and condition and it returns a minimum possible Biodiversity Unit score as a consequence.

- 2.1.6 I do find it very surprising that Mr Patmore has aligned his position totally with the WSP habitat classification and mapping when he has had the opportunity to review it critically, both via document review and via his ‘verification’ survey of the site. It is immediately plain on any visit to the site and indeed is illustrated in the photographs he has taken and presents as part of his verification survey at Appendix B to his proof, that the baseline habitat mapping and classification is grossly simplistic and subject to significant error.
- 2.1.7 To provide examples from Mr Patmore’s own evidence, photograph 3 on page 14 of Mr Patmore’s Appendix B is a view of habitats adjacent to pond feature SW8. Mr Patmore’s caption notes the presence of ‘poor semi-improved grassland’ here. No habitat of this category can be found at this location on WSPs ‘detailed Phase 1 plan’ as appended to Mr Patmore’s verification technical note; it is all mapped as either woodland or amenity grassland. As another example, the extent of the ‘small pond feature’ shown at Photograph 16 is clearly larger than shown on WSPs habitat map as is evident on-site and by reference to any aerial photographs – such as the one at Appendix DW7 of my main proof. Yet this feature is consistently shown on WSPs habitat maps as either absent or occupying around half its true size. This may seem a small error but this is a high value ‘Priority’ habitat feature that will be lost to the development and correcting this in the metric will undoubtedly elevate the site’s baseline value. As a final example, various Photographs in Mr Patmore’s Appendix B show incidences of sparsely vegetated slopes on steeper ditch and pond banks with a higher abundance of herbs visible. These are the types of bank habitat where some of the more interesting axiophyte (indicator) species I noted in December are found. Looking at Photograph 14 for example, the distinction between this vegetation and the bright green grassland on the flatter ground above and to the left of view is clear. Yet both have been lumped under the homogenous expanse of yellow on the WSP habitat map, and fed into the calculator as the lowest possible scoring amenity grassland categorisation.
- 2.1.8 In case any further evidence of these omissions and errors were needed, I have attached at Appendix DWS1 a photographic record of various examples of omission, misclassification or error in the WSP habitat survey – matters that I would have

expected Mr Patmore to have noted and sought to correct in the course of re-running the calculations through the Defra 2.0 metric.

- 2.1.9 As Mr Patmore has not sought to correct these errors, the effect on the calculator outputs of this homogenisation and suppression of the habitat diversity and value over some 68% of the site remains profound. In my main proof, I had to try and extrapolate and/or guess how WSP had populated their metric in order to assemble a 'shadow' calculation to test, but as Mr Patmore's calculations using the Defra 2.0 metric have now been made available, I can use these. Attached at Appendix DWS2 is a copy of Mr Patmore's calculations that I have left wholly unchanged except for the partition of the baseline amenity grassland resource into 4.06ha of poor condition amenity grassland (reflecting the greens, fairways and tees) and 8.39ha of 'moderate' condition amenity grassland resource (reflecting roughs between playing areas, beneath groups of scattered trees and around ponds)⁴.
- 2.1.10 As with the 'shadow' example in my main proof, it can be seen that making even this slight and most conservative of adjustments to allocate 'moderate' condition to the less intensively managed roughs and other peripheral areas has the effect of changing the calculator output to net loss (-5.77%). If I were to survey the site in detail and break this 8.39ha of 'moderate' condition amenity grassland down further to reflect the fact that certain components of it actually fall into higher value grassland categories, as is evident from my Appendix DWS1, this net loss figure would rapidly move towards and over 10% net loss.
- 2.1.11 The rather less positive picture than is claimed by Mr Patmore is compounded when one looks to temper the rather inflated calculator inputs related to the post-development situation. Mr Patmore's Defra 2.0 calculations show that, as discussed in my main proof, habitat creation and enhancement targets have been selected that in some instances will be delivered at the expense of existing habitats of value (albeit this is not reflected in the calculation due to the baseline classification errors), and in others are technically impractical or incongruous with the future uses proposed for these areas and/or their indicated establishment/management prescriptions. For example, wet grassland habitats are proposed for areas that simply do not provide the topographical or hydrological conditions for this habitat and higher quality neutral grassland habitats are claimed to be delivered even in heavily trafficked areas adjoining the main building, below the exterior parts of the waterslide and on shaded ground in front of the main entrance to the new facility (ironically, the types of municipal land uses that one would normally expect to be put to sown amenity lawn-

⁴ This is the same adjustment that I made in my main proof. The breakdown between the two subdivisions of this habitat is derived from CAD measurements from aerials. The comments made in main proof about this being conservative still apply.

type grassland). Indeed, review of the imagery in the Design and Access statement rather suggests that something closer to amenity grassland is the vision of the larger part of the appellants' design team. Setting more realistic habitat creation and enhancement targets would have a further compounding effect on the net loss output from the calculator, likely taking it well beyond 10% net loss.

2.1.12 If further evidence were needed to demonstrate the lack of credibility of the appellant's calculator outputs and net gain claims, I note that it is also the case that the appellant has at no point considered the indirect impacts from the scheme on the remainder of the golf course site, notwithstanding that this land to the south of the appeal site will be subject to displaced and therefore more intensive golf uses as a consequence of the appeal proposals. Indeed, it is further proposed (e.g. as set out in the evidence of Mr Ashworth) that it will be reconfigured to accommodate such uses, likely to require remodelling of tees, greens and fairways with associated loss or change of existing habitats. These are indirect but entirely related impacts. It is also not clear whether the habitat impacts of proposed off-site highways improvements have been factored in at any point. They may be small in magnitude, but they are an inherent part of the scheme and it appears that there has been no assessment of the ecological value of the affected areas.

2.1.13 In short Mr Patmore's evidence has the effect of lending further and clearer support to the case I present in my main proof that the baseline value of the site has been grossly suppressed by simplistic habitat classification and mapping and that the future value of the site has been artificially elevated by claiming highly ambitious or fanciful habitat creation targets that have been adopted without any serious regard to matters of practical delivery, let alone compatibility with proposed future uses. Review of the management and maintenance proposals for these areas does not provide any confidence that the landscaped areas of the site will prove to be any more than, at best, similar representations of what is already on the site merely squeezed into a smaller area. Even from a layman's perspective, this does not look like biodiversity net gain, and robust and reliable application of the Defra 2.0 metric corroborates that – indeed it clearly indicates that the result will be net loss.

Appendix DWS1

APPENDIX DWS1 - PHOTOGRAPH LOCATIONS - OVERVIEW

User Name: UKEDW001 | Date Saved: 15/10/2019 11:32:01

Document Path: \\uk.wspgroup.com\central_data\Projects\10042711 - DP9 Bicester\02 WPI\EC Ecology\02 Drawing\Graphics\MXD\BNG\Baseline Phase 1\Baseline Phase 1 Habitat Map 151019.mxd



N

Key

- Red Line Boundary

Lines

- Running Water
- Intact Hedge - Species-Poor
- Hedge with Trees - Species-Rich
- Hedge with Trees - Species-Poor
- Dry Ditch

Polygons

- Broadleaved Woodland - Plantation
- Mixed Woodland - Plantation
- Dense Scrub
- Broadleaved Parkland/Scattered Trees
- Coniferous Parkland/Scattered Trees
- Mixed Parkland/Scattered Trees
- Neutral Grassland - Semi-Improved
- Species Poor Semi-Improved Grassland
- Standing Water
- Amenity Grassland
- Ephemeral/Short Perennial
- Introduced Shrub
- Bare Ground
- Other Habitat (Sand)

0 0.035 0.07 0.105 0.14 km

Client:	DP9
Project:	Bicester
Title:	Phase 1 Habitat Survey
Drawing No:	Figure 1
Date:	October 2019
Scale:	2,500 @ A3
Drawn:	BW
Checked:	LR
Approved:	VP

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Contains Ordnance Survey data © Crown copyright and database right 2019

APPENDIX DWS1 - AERIAL PHOTOGRAPH
FOR CONTEXT



Appendix DWS1: Examples of errors or omissions in classification or mapping in Appellant's baseline habitat survey - for context see overview copy of WSP habitat map and aerial on preceding pages.

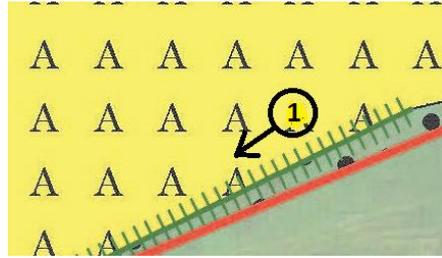


Photo 1: Omitted wet ditch along southern edge of Appeal Site (location and direction of photo shown in inset)

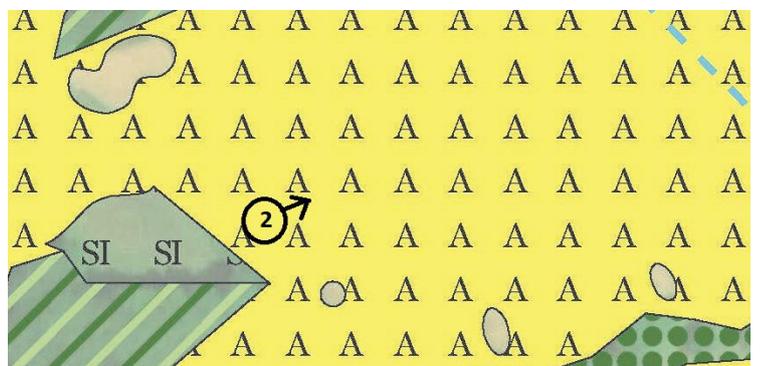


Photo 2: View along omitted tree belt and rough grassland.



Photo 3: view showing omitted semi-improved grassland on steep banks of waterbody SW2



Photo 4: showing area uniformly classified as amenity grassland down to waterline



Photo 5: View showing omitted marginal scrub, grassland and tall herb around waterbody SW7. The area in the foreground is proposed for marshy grassland creation without any remodelling or soil stripping.



Photo 6: extensive area of semi-improved grassland mapped as amenity grassland



Photo 7: Spur of waterbody SW9 extending south-east. This is not mapped (I have added a dotted line to the inset to indicate extent) but will be removed by the development, with consequences for the surviving part of this pond. It is unclear if the effect of this on great crested newts has been acknowledged and assessed.



Photo 8: area of semi-improved grassland mapped as amenity grassland



Photo 9: Long-established species-rich hedge with trees along NE boundary, not shown on Phase 1 map and therefore unclear if factored in to appellant's BNG assessment. Part will be removed for main access and visibility splays.

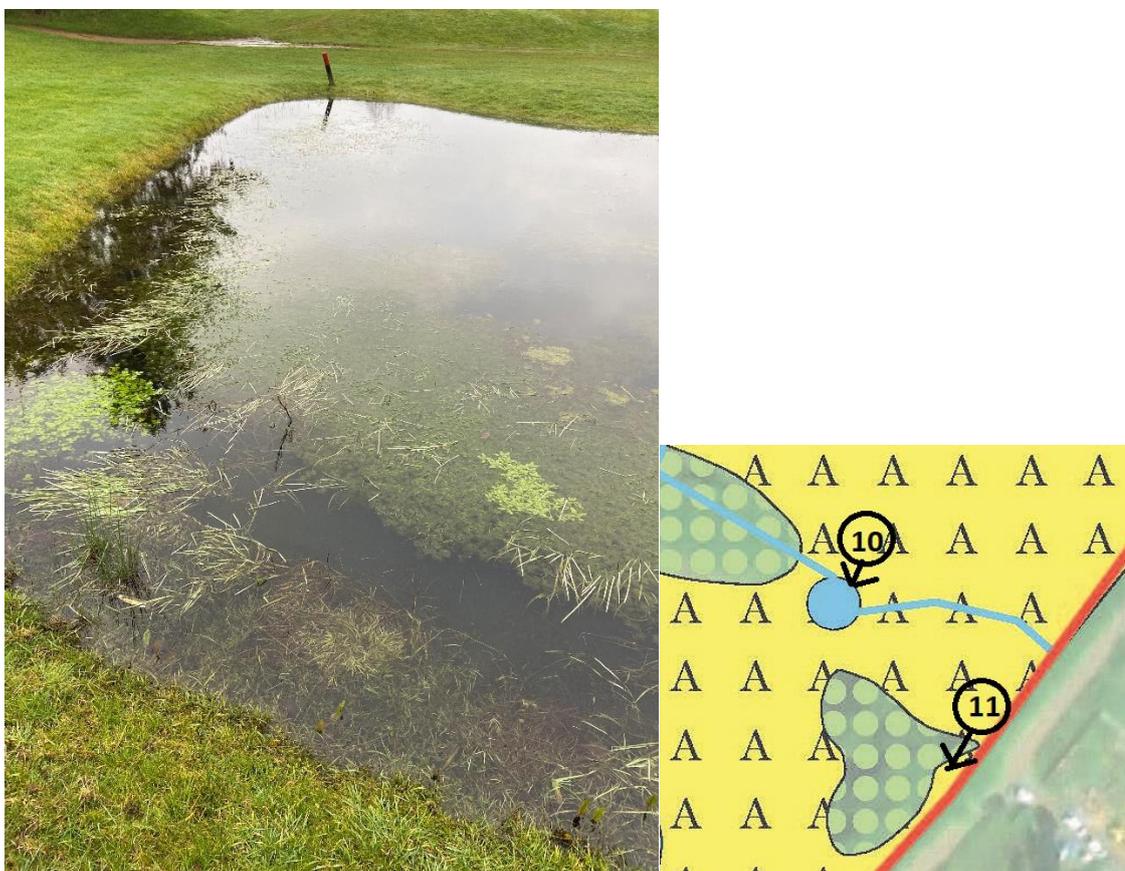


Photo 10: View of waterbody SW12 which is larger than mapped. Amenity grassland does extend down to the waterline around much of this feature, but compare with approach taken to mapping ponds elsewhere (e.g. photos 5, 8, 12, 15 etc)



Photo 11: Unmapped wet ditch and hedge.



Photo 12: View showing unmapped marginal trees and semi-improved grassland alongside waterbody SW11 and pocket of unmapped semi-improved grassland adjoining area mapped as broad-leaved parkland/scattered trees.



Photo 13: Gappy remnant hedgerow (likely to pre-date golf course). This is not mapped - only the ditch.

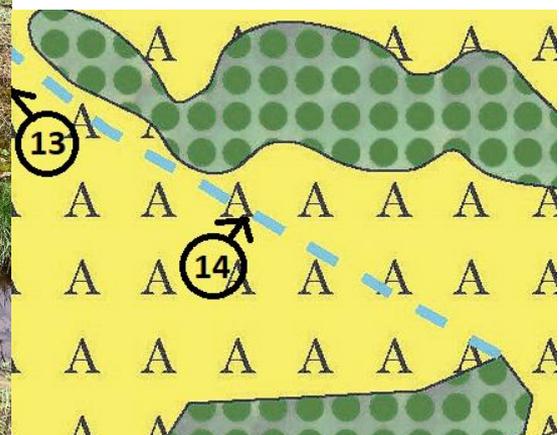
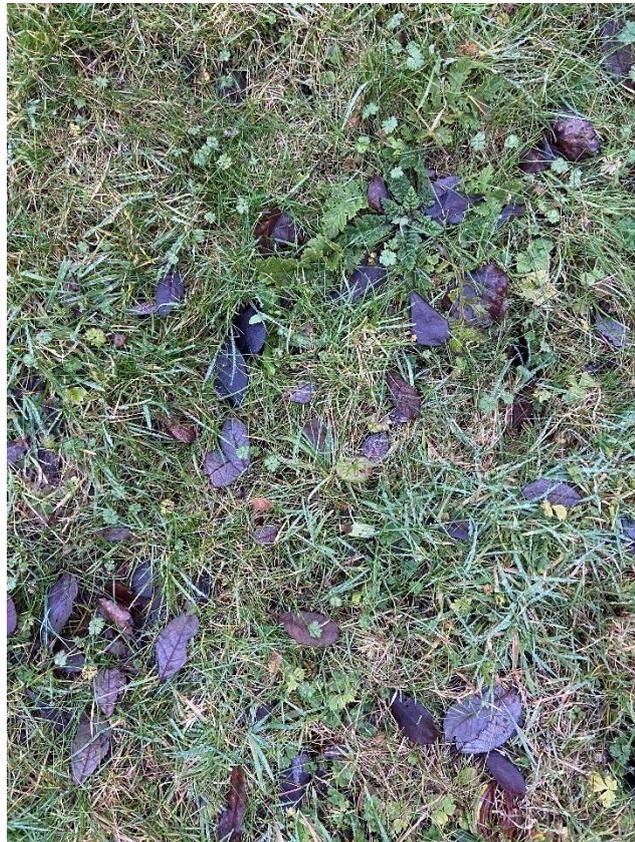


Photo 14: 'dry' ditch across central part of the site showing herb-rich banks (all mapped as amenity grassland)



Photo 15: View of waterbody SW6 showing dense marginal vegetation extending up banks (all mapped as amenity grassland) and also graded scrub edge to left of view rather than harsh interface as mapped.



Photos 16 and 17: typical (winter) view of intensively managed green (left) and less intensively managed rough (right) showing distinction in terms of grass and herb diversity.

Appendix DWS2

BMD.19.010 Great Wolf Resorts, Bicester

Headline Results

[Return to results menu](#)

On-site baseline	<i>Habitat units</i>	80.62
	<i>Hedgerow units</i>	2.22
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	75.97
	<i>Hedgerow units</i>	5.75
	<i>River units</i>	0.00
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	-4.65
	<i>Hedgerow units</i>	3.53
	<i>River units</i>	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	-5.77%
	<i>Hedgerow units</i>	158.68%
	<i>River units</i>	0.00%

Summary Figures

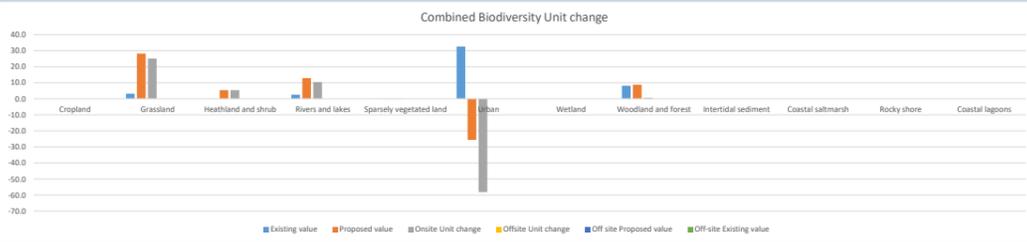
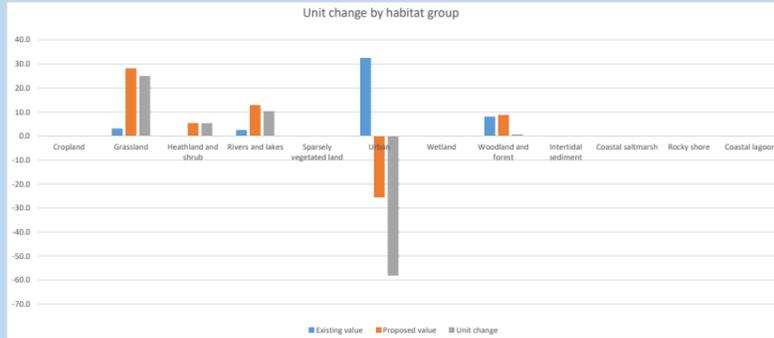
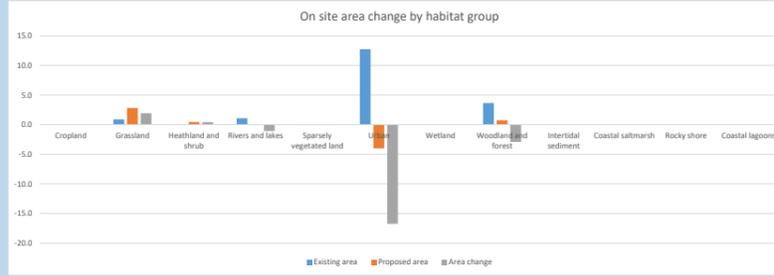
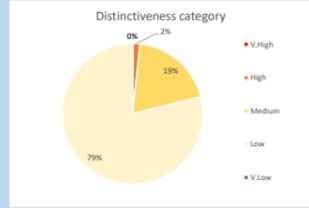
Net project biodiversity units (including all on-site & off-site habitat retention/creation)	Habitat units	-4.65
	Hedgerow units	3.53
	River units	0.00
Total project biodiversity % change (including all On-site & Off-site Habitat Creation + Retained Habitats)	Habitat units	-5.77%
	Hedgerow units	158.68%
	River units	0.00%

On-site habitat retention and enhancement

	Habitats	Hedgerows	Rivers
Total site area / length	18.39	0.18	0.00
Total site units	80.62	2.22	0.00
Area / length retained	4.28	0.12	0.00
Units Retained	24.93	1.80	0.00
Area / length enhanced	2.75	0.00	0.00
Baseline units enhanced	9.32	0.00	0.00
Area / length succession	0.00		
Units succession	0.00		
Area / length lost	11.36	0.06	0.00
Units lost	46.37	0.42	0.00

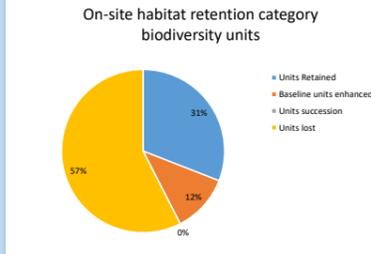
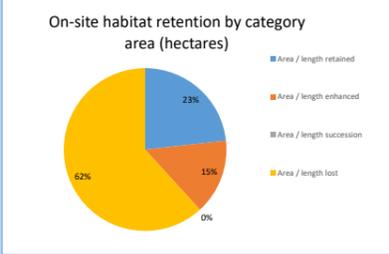
Area lost by distinctiveness

Category	Area lost (hectares)	Area lost (%)
V.High	0	
High	0.19	2
Medium	2.21	19
Low	8.96	79
V.Low	0	



Habitat group	Baseline		Post development on site		Onsite Change	
	Existing area	Existing value	Proposed area	Proposed value	Area change	Onsite Unit change
Cropland	0.0	0.0	0.0	0.0	0.0	0.0
Grassland	0.9	3.2	2.8	28.2	1.9	25.0
Heathland and shrub	0.0	0.0	0.5	5.4	0.4	5.3
Rivers and lakes	1.1	2.5	0.0	12.9	-1.1	10.4
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	12.7	32.5	-4.0	-25.6	-16.7	-58.1
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	3.7	8.1	0.7	8.8	-2.9	0.7
Intertidal sediment	0.0	0.0	0.0	0.0	0.0	0.0
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0

Overall Change	
Area change	Unit change
0.0	0.0
1.9	25.0
0.4	5.3
-1.1	10.4
0.0	0.0
-16.7	-58.1
0.0	0.0
-2.9	0.7
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0



Habitat group	Baseline		Post development Off-site		Off-site Change	
	Existing area	Off-site Existing value	Proposed area	Off site Proposed value	Area change	Offsite Unit change
Cropland	0.0	0.0	0.0	0.0	0.0	0.0
Grassland	0.0	0.0	0.0	0.0	0.0	0.0
Heathland and shrub	0.0	0.0	0.0	0.0	0.0	0.0
Rivers and lakes	0.0	0.0	0.0	0.0	0.0	0.0
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	0.0	0.0	0.0	0.0	0.0	0.0
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	0.0	0.0	0.0	0.0	0.0	0.0
Intertidal sediment	0.0	0.0	0.0	0.0	0.0	0.0
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0

Habitat group	Baseline		Combined Post development		Combined change	
	Existing area	Existing value	Proposed area	Proposed value	Proposed area	Proposed value
Cropland	0.0	0.0	0.0	0.0	0.0	0.0
Grassland	0.9	3.2	2.8	28.2	1.9	25.0
Heathland and shrub	0.0	0.0	0.5	5.4	0.4	5.3
Rivers and lakes	1.1	2.5	0.0	12.9	-1.1	10.4
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	12.7	32.5	-4.0	-25.6	-16.7	-58.1
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	3.7	8.1	0.7	8.8	-2.9	0.7
Intertidal sediment	0.0	0.0	0.0	0.0	0.0	0.0
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0

BMD.19.010 Great Wolf Resorts, Bicester
A-1 Site Habitat Baseline

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Ref	Habitats and areas			Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.85	Medium	Poor	Low	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	3.74
2	Woodland and forest	Woodland and forest - Other woodland; mixed	1.22	Medium	Poor	Medium	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	5.90
3	Heathland and shrub	Heathland and shrub - Mixed scrub	0.03	Medium	Poor	Low	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.13
4	Woodland and forest	Woodland and forest - Other woodland; broadleaved	1.05	Medium	Poor	Medium	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	5.08
5	Grassland	Grassland - Other neutral grassland	0.46	Medium	Poor	Medium	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	2.23
6	Grassland	Grassland - Modified grassland	0.43	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.95
7	Lakes	Lakes - Ponds (Priority Habitat)	1.08	High	Moderate	Low	Location ecologically desirable but not in local strategy	Same habitat required	14.26
8	Urban	Urban - Amenity grassland	4.06	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	8.93
9	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	Poor	N/A	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.02
10	Woodland and forest	Woodland and forest - Other woodland; mixed	0.31	Medium	Poor	Low	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	1.36
11	Woodland and forest	Woodland and forest - Other coniferous woodland	0.22	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.48
12	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.01	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.02
13	Urban	Urban - Introduced shrub	0.15	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.33
14	Urban	Urban - Suburban/ mosaic of developed/ natural surface	0.12	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	0.26
15	Urban	Urban - Amenity grassland	8.39	Low	Moderate	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	36.92
16									
17									
18									
19									
20									
		Total site area ha	18.39					Total Site baseline	80.62

Retention category biodiversity value								Bespoke compensation agreed for unacceptable losses	Comments	
Area retained	Area enhanced	Area succession	Baseline units retained	Baseline units enhanced	Baseline units succession	Area lost	Units lost		Assessor comments	Reviewer comments
0.32	0.01	0	1.41	0.04	0.00	0.52	2.29		Woodland: Broadleaved - plantation (Medium)	
0.78	0.15	0	3.78	0.73	0.00	0.29	1.40		Woodland: Mixed - plantation	
0	0.02	0	0.00	0.09	0.00	0.01	0.04		Scrub: Dense/continuous	
0.39	0.03	0	1.89	0.15	0.00	0.63	3.05		Parkland/scattered trees: Broadleaved (Medium)	
0	0	0	0.00	0.00	0.00	0.46	2.23		Neutral grassland: Semi-improved	
0	0.01	0	0.00	0.02	0.00	0.42	0.92		Poor semi-improved grassland	
0.89	0	0	11.75	0.00	0.00	0.19	2.51		Standing water: Eutrophic (High) but support GCN	
0.87	1.24	0	1.91	2.73	0.00	1.95	4.29		Cultivated/disturbed land: Amenity grassland (greens, tees, fairways)	
0	0	0	0.00	0.00	0.00	0.01	0.02		Bare ground	
0.01	0	0	0.04	0.00	0.00	0.30	1.32		Parkland/scattered trees: Mixed (Medium)	
0.15	0.05	0	0.33	0.11	0.00	0.02	0.04		Parkland/scattered trees: Coniferous (Medium)	
0	0	0	0.00	0.00	0.00	0.01	0.02		Cultivated/disturbed land: Ephemeral/short perennial (Low)	
0	0	0	0.00	0.00	0.00	0.15	0.33		Cultivated/disturbed land: Introduced shrub	
0	0	0	0.00	0.00	0.00	0.12	0.26		Other habitat (Low) - Bunkers	
0.87	1.24		3.83	5.46	0.00	6.28	27.63		Roughs, pond banks, scrub and woodland margins etc	
4.28	2.75	0.00	24.93	9.32	0.00	11.36	46.37			

BMD.19.010 Great Wolf Resorts, Bicester
A-2 Site Habitat Creation

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Post development/ post intervention habitats										
Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal multiplier	Difficulty	Habitat units delivered	Comments	
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category		Assessor comments	Reviewer comments
Woodland and forest - Other woodland; broadleaved	2.18	Medium	Good	Medium	Location ecologically desirable but not in local strategy	32+	Medium	6.78	Woodland: Broadleaved - plantation (Medium)	
Woodland and forest - Other woodland; mixed	0.23	Medium	Good	Medium	Location ecologically desirable but not in local strategy	32+	Medium	0.72	Woodland: Mixed - plantation	
Heathland and shrub - Mixed scrub	0.48	Medium	Good	Medium	Location ecologically desirable but not in local strategy	7	Low	5.43	Scrub: Dense/continuous	
Woodland and forest - Other woodland; broadleaved	0.07	Medium	Good	Medium	Location ecologically desirable but not in local strategy	32+	Medium	0.22	Parkland/scattered trees: Broadleaved (Medium)	
Grassland - Other neutral grassland	0.58	Medium	Good	Medium	Location ecologically desirable but not in local strategy	15	Low	4.94	Neutral grassland: semi-improved	
Grassland - Tall herb communities	0.63	High	Moderate	Medium	Location ecologically desirable but not in local strategy	20	High	1.48	Marshy/marshy grassland (High)	
Lakes - Ponds (Non- Priority Habitat)	0.2	High	Good	Medium	Location ecologically desirable but not in local strategy	5	Low	3.65	Standing water: Eutrophic (High)	
Urban - Amenity grassland	0.43	Low	Poor	Low	Location ecologically desirable but not in local strategy	1	Low	0.91	Cultivated/disturbed land: Amenity grassland	
Urban - Developed land; sealed surface	6.41	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	0	Low	0.00	Built-up areas: Buildings	
Urban - Vacant/derelict land/ bareground	0.15	Low	Poor	N/A	Area/compensation not in local strategy/ no local strategy	1	Low	0.29	Bare ground	
Totals	11.36							24.41		

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B-1 Site Hedge Baseline

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Baseline ref	Hedge number	UK Habitats - existing habitats		Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
		Hedgerow type	length KM	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total hedgerow units
1		Native Hedgerow with trees - Associated with bank or ditch	0.1155	Medium	Good	Medium	Location ecologically desirable but not in local strategy	Like for like or better	1.67706
2		Native Hedgerow	0.058	Low	Good	Medium	Location ecologically desirable but not in local strategy	Same distinctiveness band or better	0.42108
3		Native Species Rich Hedgerow with trees	0.0085	Medium	Good	Medium	Location ecologically desirable but not in local strategy	Like for like or better	0.12342
4									
5									
6									
7									
8									
Total Site length/KM			0.18					Total Site baseline	2.22

Retention category biodiversity value						Comments	
Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
0.1155	0	1.67706	0	0	0	Boundaries: Hedges - Intact - native species-rich	
0	0	0	0	0.058	0.42108	Boundaries: Hedges - Intact - Species-poor	
0.0085	0	0.12342	0	0	0	Boundaries: Hedges - With trees - native species-rich	
0.12	0.00	1.80	0.00	0.06	0.42		

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B-2 Site Hedge Creation

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		Multipliers										
		Proposed habitats			Habitat distinctiveness	Habitat condition	Ecological connectivity	Spatial quality	Temporal multiplier	Hedge units delivered	Comments	
Baseline ref	New hedge number	Habitat type	Length km	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition/years		Assessor comments	Reviewer comments	
1		Native Species Rich Hedgerow	0.5205	Medium	Moderate	Medium	Location ecologically desirable but not in local strategy	5	2.82	Boundaries: Hedges - Intact - native species-rich		
2		Native Hedgerow	0.042	Low	Moderate	Low	Location ecologically desirable but not in local strategy	5	0.15	Boundaries: Hedges - Intact - native species-poor		
3		Native Species Rich Hedgerow with trees	0.1345	Medium	Moderate	Medium	Location ecologically desirable but not in local strategy	10	0.61	Boundaries: Hedges - With trees - native species-rich		
4		Native Hedgerow with trees	0.1155	Low	Moderate	Low	Location ecologically desirable but not in local strategy	10	0.36	Boundaries: Hedges - With trees - native species-poor		
5												
6												
7												
8												
9												
		Creation Length/KM		0.81					3.95			



Bioscan (UK) Ltd
The Old Parlour
Little Baldon Farm
Oxford
OX44 9PU

Tel: +44 (0) 1865 341321
Fax: +44 (0) 1865 343674

bioscan@bioscanuk.com
www.bioscanuk.com