



**ECOLOGY PARTNERS**

## **Biodiversity Net Gain Report**



**Site:** The Point, airstrip,

**Client:** Jeremy Davies

**Date:** January 2022

**ECOLOGY PARTNERS**

Trewetha  
Port Isaac  
Cornwall

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## Document Control

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<b>Assessor</b>	John Sproull, MSc, MCIEEM	<b>Author</b>	John Sproull MSc, MCIEEM	<b>Issue date</b>	13.01.22

## Disclosure

The information and advice presented within this report is based on the professional and true opinions of Ecology Partners and is written in accordance with the CIEEM Code of Professional Conduct.

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## Summary

Survey date: PEA – 2<sup>nd</sup> November 2021 (+7<sup>th</sup> January 2022 – off site area).  
Location: The Point airstrip  
Grid Reference: SW9469377455  
Assessor: John Sproull, MSc, MCIEEM

- Ecology Partners were commissioned to calculate changes in biodiversity values of land at The Point golf course and health club. The survey is to support an application to construct 17 eco holiday lodges on the site with associated landscaping and infrastructure as shown on plans supplied by the client (295 2008 Masterplan Rev B (1)).
- In line with the requirements of Cornwall County Council's planning process and the National Planning Policy Framework (2021), the proposed development is required to secure gains for biodiversity at the site. Demonstrating this gain involves an initial assessment of the value of existing habitats (the 'baseline value') and a corresponding prediction of the value once the development is complete (the 'post-intervention value'). The Council requires a demonstrable 10% net gain for biodiversity at the site.
- Where sufficient gains cannot be secured on site, Cornwall Council's recommended mitigation hierarchy allows for gains to be secured through enhancements of off-site habitats. As part of evaluating these gains, an initial assessment of the value of the existing habitats is undertaken (the 'off-site baseline value') and a corresponding prediction of value once enhancements have been completed (the 'off-site post intervention value').
- An initial assessment of the development site was undertaken and based on currently available plans, the development was predicted to result in a shortfall in biodiversity net gain. Available on-site gains has been maximised as far as possible through the inclusion of new habitats. The metric shows that without off site intervention there will be a post development net biodiversity loss of 6.46% however, the creation of 0.5 ha of 'moderate' quality mixed native scrub within available off site areas is predicted to result in a biodiversity net gain of 10.06%. Meeting the 10% BNG threshold required by Cornwall Council.
- In addition the on site, the creation of 430m of new 'good' quality species-rich native Cornish hedgerow will result in a net gain of 2.75 Hedgerow Units. This equates to an increase of 49.98% over the baseline Hedgerow Units, meeting and exceeding the 10% requirement.
- The table below provides a summary of the calculation results, with maps available in Appendix 1 and full calculations available in the accompanying spreadsheet *Biodiversity Metric 3.0 The Point airstrip* included digitally with this report. An account of species and habitats present at the site, a list of floral species and photographs of the site are available in the accompanying document Preliminary Ecological Appraisal (PEA) (Ecology Partners, 2021).

**Table 1:**Headline Biodiversity Net Gain calculation results

On-site baseline	<i>Habitat units</i>	14.24
	<i>Hedgerow units</i>	0.48
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	13.32
	<i>Hedgerow units</i>	3.36
	<i>River units</i>	0.00
On-site net % change (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	-6.46%
	<i>Hedgerow units</i>	599.73%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	1.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	3.35
	<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 & enhancement)	<i>Habitat units</i>	1.43
	<i>Hedgerow units</i>	2.88
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	10.03%
	<i>Hedgerow units</i>	599.73%
	<i>River units</i>	0.00%
Trading rules Satisfied?	<b>Yes</b>	

## 1. Introduction

Ecology Partners were commissioned to undertake a Biodiversity Net Gain (BNG) assessment of land at the Point golf course and health club between St. Minver and Polzeath, PL27 6QT. The assessment is to construct 17 eco holiday lodges on the site with associated landscaping and infrastructure as shown on plans supplied by the client (295 2008 Masterplan Rev B (1)).

A separate Preliminary Ecological Appraisal of the site was undertaken by Ecology Partners following a site visit in November 2021 and the results of the site visit and report have been used to inform the calculations and recommendations of this BNG report. The results of the PEA survey are available in the accompanying document *Preliminary Ecological Appraisal (PEA)* (Ecology Partners, 2021).]

The BNG assessment was undertaken by John Sproull MSc, MCIEEM who is an experienced field ecologist and consultant and Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

### 1.1. Development site description

The development site encompasses an area of c.3.6ha situated along the southern edge of The Point golf course c.300m to the south of the club-house. Improved grassland dominates an area previously used as an airstrip and more recently as a 'glamping' site; less managed semi-improved grassland is found peripheral to this area to the north and west. A mixture of scrub and tall ruderal habitat fringes the site to the north and south and there is a hedge along the southern boundary and an access road along the eastern boundary.

The golf course surrounds the site to the north; there is farmland immediately to the south; Trewiston Farm Caravan Park lies c.230m to the south west; the village of Pityme is c.800m to the south east. The wider surrounding area is predominantly agricultural (dairy pasture with some arable) sub-divided by a rich network of hedges. The Camel Estuary lies c.2km to the west and Polzeath is c.2km to the north.

The existing site is shown on Map 1, Appendix 1.

### 1.2. Proposed development

It is proposed to construct 17 eco holiday lodges on the site with associated landscaping and infrastructure as shown on plans supplied by the client (295 2008 Masterplan Rev B (1)). The layout and construction plan has been developed so as to allow for the retention of as much of the existing habitats as possible (including an existed hedge along the southern boundary and the majority of a ditch / swale running roughly through the centre of the site). The lodges will be installed on screw pile foundations, vehicular access and on-site parking will be kept to a minimum and the site will be sub-divided by new sections of Cornish hedge and tree / shrub planting.

The proposed development is shown on Map 2, Appendix 1.

## 2. Methodology

An assessment of the baseline and predicted biodiversity values of the site was conducted using DEFRA's Biodiversity Metric 3.0 (Natural England, 2021). This metric is widely used as a means to demonstrate measurable gains or losses in biodiversity value and is the system specified by Cornwall County Council (Cornwall Council, 2020).

Habitats at the development site and the proposed off-site area are mapped and the values of these habitats, referred to as Habitat Units, are calculated twice. The first calculation is based on existing habitats as mapped during the PEA and provides a 'baseline value' of these habitats. The proposed development and proposed off-site enhancements are then mapped based upon plans supplied by the client and the values of the habitats are recalculated, taking into account any proposed additions or changes to the existing habitat. This second calculation provides a 'post-intervention value'. Gains or losses for biodiversity are determined by the difference in these calculations.

Linear features such as hedgerows and watercourses are mapped and calculated separately to habitat areas. This is to allow for other ecological functions, such as connectivity, that cannot be accounted for purely by area cover. As such, gains and losses for these linear features are treated separately to habitat areas.

For all mapping, measurements and processing of geological data were conducted using QGIS v3.16 'Hanover' GIS software.

## 3. Results

### 3.1. Baseline values

Habitats within the development site were measured from survey data collected during a Preliminary Ecological Appraisal survey undertaken 2<sup>nd</sup> November 2021, with habitats in the off-site location recorded during a subsequent visit on 7<sup>th</sup> January 2022. The baseline value of the site is summarised in table 2 below.

Table 2: On-site Baseline Value

Habitat	Area (ha)	Biodiversity Units (BUs)	Comments
Grassland – Modified grassland	1.16	2.32	Mown improved grassland dominated by perennial rye-grass with abundant Yorkshire-fog and common bent-grass (0.17ha to be retained)
Grassland – Modified grassland	1.07	4.28	Rough, lightly managed semi-improved grassland with abundant cock's-foot, Yorkshire-fog, common bent with a more varied suite of associated wild-flowers (0.59ha to be retained)
Scrub	0.8	6.40	Blackthorn dominated scrub with occasional / locally frequent grey willow and hawthorn and locally abundant bramble around the periphery of the golf course and along southern boundary hedge (0.68ha to be retained)
Recently cleared scrub	0.23	0.46	Disturbed sparsely vegetated areas with some bramble, rough grasses, ruderals and annuals
Ditch	0.08	0.32	Drainage ditch / swale supporting rough grassland and various wild-flowers / wetland species (0.06ha to be retained)
Tall ruderal	0.23	0.46	Spoil mounds colonised by species such as common nettle, hemlock and black mustard
Totals	3.57	14.24	5.86 habitat units to be lost (8.38 retained)

The client has identified two off site areas as available for habitat creation (see Map 1b, Appendix 1). These areas were not assessed during the PEA site visit therefore an additional site visit was carried out by the author during January 2022 to establish their existing value and they are briefly described here.

Area 1 (see photo 1) comprises a strip c.300m x 10m of species-poor, semi-improved grassland alongside a post and rail fence-line boundary within the filed adjacent (to the east) of the development site. Rough grasses such as cock's-foot and Yorkshire fog dominate with locally frequent ruderal species such as black mustard and broad-leaved dock and occasionally other associates such as creeping buttercup, ribwort plantain and daisy. Area 2 (see photo 2) is a recently disturbed and relatively bare area around two recently re-profiled

water attenuation ponds situated c.375 to the north east of the development site. Recently seeded perennial rye-grass is locally frequent but there is no existing developed grassland sward. Other species such as annual meadow grass, Yorkshire fog, chickweed and daisy are occasional. Scrub planting has recently commenced over a small area where widely spaced European gorse whips have been planted. It is intended to continue and supplement this planting with densely planted mixed native scrub species.

The two off-site areas are considered to be on no particular conservation value.



**Photo 1:** offsite area 1



**Photo 2:** offsite area 2.

The baseline value of the off-site areas is summarised in table 3 below

**Table 3:** Offsite –Baseline Value

Habitat	Length (km)	Biodiversity Units (BUs)	Comments
Modified grassland	0.3	0.6	(Area 1) Species poor semi-improved grassland with abundant cock's-foot and Yorkshire-fog along fence-line field boundary adjacent to development site
Sparsely vegetated land (ruderal/ephemeral)	0.2	0.4	(Area 2) Area of recently disturbed ground surrounding re-stored water attenuation ponds (scrub planting already commenced over 0.06ha)
Totals	0.152	1	3.65 hedgerow units will be subject to loss, enhancement and restoration.

The baseline value of hedges within the site is summarised in table 4 below

**Table 4:** Hedgerows – On-site Baseline Value

Habitat	Length (km)	Biodiversity Units (BUs)	Comments
Native Species Rich Hedgerow with Trees – Associated with bank or ditch	0.24	5.76	Species rich Cornish hedge with trees (to be retained and buffered)
Totals	0.24	5.76	5.76 units retained

### 3.2. Post-intervention values

Post-intervention / development values have been calculated based on the site layout provided by the client (295 2010 Masterplan Landscape Areas). The proposed development includes the creation of areas of new areas of improved (mown) grassland, semi-improved (rough) grassland, tree / shrub planting and the creation of sections of new Cornish hedge.

The proposed layout is illustrated on Map 2, Appendix 1 and summarised in tables 5-7 below.

Table 5: On-site Post-development Value

Habitat	Area (ha)	Biodiversity Units (BUs)	Comments
Grassland – Modified grassland	0.58	0.79new 0.34 retained <b>1.13 total</b>	Mown improved grassland dominated by perennial ryegrass with abundant Yorkshire-fog and common bent-grass (0.41ha to be created)
Grassland – Modified grassland	1.48	3.09new 2.36 retained <b>5.45 total</b>	Rough, lightly managed semi-improved grassland with abundant cock's-foot, Yorkshire-fog, common bent with a more varied suite of associated wild-flowers (0.89ha to be created)
Scrub	0.68	5.44retained	Blackthorn dominated scrub with occasional / locally frequent grey willow and hawthorn and locally abundant bramble around the periphery of the golf course and along southern boundary hedge (0.68ha to be retained)
Trees	0.32	0.98new	Assumes 70no. medium and 70no. small trees planted into areas of grassland and scrub (hence total area post-development exceeds existing)
Ditch	0.07	0.24new 0.03retained <b>0.27total</b>	Drainage ditch / swale supporting rough grassland and various wild-flowers / wetland species (0.01ha to be created)
Garden planting	0.03	0.06new	Herbaceous planting
Built footprint	0.71	0	Buildings, tarmac and paths
Totals	3.87	13.33	0.91 units lost (equating to 6.46% net loss)

From the above it can be seen that off-site mitigation will be necessary to achieve the required 10% BNG. It is proposed to plant the two off-site areas as mixed native scrub. The predicted post-development value of off-site areas is shown in in table 6 below

**Table 6:** Off-site Post-development Value

Habitat	Area (ha)	Biodiversity Units (BUs)	Comments
Heathland and shrub – Bramble scrub	0.5	3.35	Native scrub (includes fence-line and area around ponds)
Totals	0.5	3.35	There will be an increase of 2.35 units leading to an overall (site + off site) increase of 1.44 units equating to a <b>10.03% net gain</b>

**Table 7:** Hedgerows – On-site Post-development Value

Habitat Type	Length (km)	Biodiversity Units (BUs)	Comments
Native Species Rich Hedgerow with Trees – Associated with bank or ditch	0.67	2.88new 5.76retained <b>8.64total</b>	Existing species rich Cornish hedge on northeast boundary (H1)
Totals	0.0	8.64	Proposed changes to linear features will generate an increase 2.88 units equating to a <b>49.98% net gain.</b>

### 3.3 Predicted changes in Biodiversity Value

Overall, the metric shows that the subject to successful delivery of mitigation the proposed development will result in a net gain in biodiversity at the site. Biodiversity Habitat Units and Hedgerow Units are predicted to increase by 10.03% and 49.98% respectively. These results exceed the 10% net gain required by Cornwall Council.

## 4. Recommendations

As a 10% net gain for biodiversity is required by Cornwall Council for developments of this scale, the current proposals meet and exceed these requirements. Provided the landscape proposals are implemented as described, no further work is required regarding Biodiversity Net Gain.

Recommendations for further survey work (including provision for protected species such as bats and reptiles), mitigation and enhancement are provided in the PEA report (Ecology

Partners, 2021). This present report should be read in conjunction with the PEA report and the recommendations to achieve BNG should be carried out alongside and complementary too the recommendations in the PEA report.

Successful retention of existing habitats during construction will require careful planning. Habitat creation takes time and the degree of success can be affected by a number of factors. In view of this it is recommended that a Landscape and Environmental Management Plan (LEMP) is prepared and implemented.

The LEMP should include the following information to assist in the successful creation and longer-term management of habitats and ecological features on and off site (see also recommendations in PEA report):

- Specification and demarcation of habitats to be retained, created and managed: Hedges should be built in an appropriate local style from local materials and planted with locally appropriate native species to maximise diversity (such as oak, hazel, hawthorn, grey willow, holly and blackthorn). Where new grassland is created it should be sown with an appropriate seed-mix composed of locally native species. Non-native species should be avoided: Tree and shrub planting should favour locally native species and species of known wildlife value. (Ecology Partners can provide further input on this upon request).
- Appropriate management options for achieving the creation of habitats to the stated quality
- Details of the designs and construction methods required to create the desired habitats
- Details of the roles and ecological responsibilities of those undertaking the work, including details of those responsible for implementing the LEMP
- Details of initial and on-going, long-term management of habitats
- Details of monitoring and any remedial measures that may be required to ensure successful establishment and on-going maintenance.

## 5. References

Ecology Partners (2021). *Preliminary Ecological Appraisal (PEA)*. The Point airstrip, report to Jeremy Davies.

HM Government (2021), *The Environment Act*, HMSO, London

Natural England (2021). *The Biodiversity Metric 3.0 - Calculation Tool (Beta Test July 2021) Update*. Peterborough: Natural England.

MHC&LG (2021). *National Planning Policy Framework*. London: Her Majesty's Stationery Office.

Cornwall Council, 2018. *Cornwall Planning for Biodiversity Guide*. [Online] Available at: <https://www.cornwall.gov.uk/media/38341273/biodiversity-guide.pdf> [Accessed 3<sup>rd</sup> September 2021].

Cornwall Council, 2020. *DRAFT – Biodiversity Net Gain – Chief Planning Officer Note*. [Online]

Available at: <https://www.cornwall.gov.uk/media/gkxls2ba/draft-chief-planning-officer-note-biodiversity-net-gain.pdf> [Accessed 3<sup>rd</sup> September 2021].

Appendix 1:

Map 1a Existing on site

Map 1b Existing off site

Map 2a Proposed on site

Map 2b Proposed off site





PROJECT: The Point airstrip BNG  
CLIENT: Jeremy Davies  
MAP 1b: Existing off-site  
DATE: January 2022 DRAWN BY: JS





PROJECT: The Point airstrip BNG  
 CLIENT: Jeremy Davies  
 MAP 2a: Proposed on-site  
 DATE: January 2022 DRAWN BY: JS



**Existing habitats post-development**

- Site - total red line area 3.58ha
- 295 2010 Masterplan Landscape Areas Rev A
  - Improved grassland 0.17ha retained [2]
  - Semi-improved grassland 0.59ha retained
  - Scrub 0.68ha
  - Ditch 0.06ha retained
  - Hedge 240m retained

**New habitats post development**

- Rough (semi-improved grassland) 0.89ha
- Mown (improved grassland) 0.41ha
- Building footprints 0.26ha
- Tarmac 0.38ha
- Gravel and paths 0.07ha
- Trees 0.32ha (assumes 70no. medium trees - and 70 small trees planted into areas of scrub and grassland)
- Ornamental planting 0.03ha
- Bioswale (re-modelled sections of ditch) 0.01ha
- Hedge 430m

**TOTAL SITE AREA** (within red line boundary) = 35,883 sq metres

**BUILDING FOOTPRINTS** (approx):  
 17no. cabins (2-bedroom versions) + 1no. bin store + 1no. electricity sub-station = 2,663 sq metres

**PROPOSED HARD LANDSCAPE AREAS** (approx):  
 Tarmac surface to new access road and parking areas = 3,845 sq metres

**PROPOSED SOFT / PERMEABLE LANDSCAPE AREAS** (approx):  
 Gravel areas and paths (permeable) = 682 sq metres  
 Mown grass = 5,826 sq metres: *of which approx 30% is existing / retained*  
 Rough / long grass = 14,750 sq metres: *of which approx 40% is existing / retained*  
 Ornamental grasses / herbaceous planting = 348 sq metres  
 Swale / ditch (existing feature retained) = 815 sq metres  
 Scrub = 6,798 sq metres: *100% of which is existing / retained*

**OTHER LANDSCAPE FEATURES:**  
 Existing Cornish hedge, approx 240m long, with associated vegetation / fringe of scrub to be retained and protected (included in area of scrub listed above).  
 New dry stone walls (double-sided) topped with hedging (mix of Crataegus monogyna and Crataegus laevigata) = approx 430 linear metres

**SHRUB AND TREE PLANTING:**  
 Preliminary planting arrangement shown here = 234no. shrubs and trees to be a mix of Pinus sylvestris, Pinus radiata, Pinus mugo, Crataegus monogyna, Crataegus laevigata, Quercus ilex and Hippophae rhamnoides.

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 Title: Masterplan: Landscape Areas  
 Drawing No: 295 - 2010  
 Revisions: A  
 Date: 11.01.2022  
 Scale: 1:500 @ ISO A3

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PROJECT: The Point airstrip BNG  
CLIENT: Jeremy Davies  
MAP 2b: Proposed off site  
DATE: January 2022 DRAWN BY: JS

