

Additional Representation on behalf of

Theberton and Eastbridge Parish Council, Stop Sizewell C and Paul Collins

At the Issue Specific Hearing on Biodiversity ISH 7, representation was made about the biodiversity net gain (BNG) claims of the Applicant of a gain of ~19%.

This was followed up with documentary substantiation of both the Applicant's claims and the lack of a proper overall accounting of the impact on biodiversity that the project will have based on all Main Development Site (MDS) locations as well as all the Associated Development Site (ADS).

This submission will further elaborate on those claims, including pointing out some discrepancies in those claims.

Current BNG Claims

As in my oral summary, the following analysis is based on [REP1-004](#) and the various tables and calculations evidenced by the Applicant. A summary of the main site calculation results can be found in the Summary chapter at an image 8.1.1. It should be noted that I have not included Hedgerow units in any of the calculations below as they are on the whole minor and should not be summed with the main area calculations.

The first comment is that below this table in 8.1.2, the applicant states that the table shows an 18.03% increase in biodiversity. **Try as I may, the only result I can get from this table is an increase of 13.4%.**

As the biodiversity difference claimed by the Applicant is for a 19% increase [REP1-004](#), one can only assume that the overall figure must be less also.

Details for the three ADS can be found at [REP5-090](#) section 4.1.1 (SLR), [REP5-091](#) section 4.1.1 (TVB) and [REP5-092](#) (Yoxford Roundabout) section 4.2.1. No evaluations are made of the two park and ride sites or freight management centre, so these are assumed to be restored to the same state as they were before the development began and thus make no contribution, positive or negative, to BNG. However, they do contribute to overall biodiversity loss for the time they are in operation and prior to restoration.

In the Table 1 below we show the two components of the MDS as well as the other ADS contributions and **the difference between biodiversity of the undeveloped landscape compared to that post development is 14.6% not 19%.**

Table 1 - Simple Biodiversity Net Gain

	Area in hectares	On-site Baseline	On-site post intervention	BNG	Years in construction / construction use	Biodiversity permanent loss
Sizewell Link Road	N/A	240.96	350.88	109.92	2	481.92
Yoxford Roundabout	N/A	5.84	4.76	-1.08	1	5.84
Two Villages Bypass	N/A	160.61	147.32	-13.29	2	321.22
Northern Park & Ride*	27.8	60.47	60.47	0	12	725.58
Southern Park & Ride*	26.1	56.77	56.77	0	12	681.21
Freight Management Facility*	11	23.93	23.93	0	12	287.10
SZB Relocation	N/A	98.86	118.25	19.39	4	395.44
Main site area	N/A	1244.45	918.51	-325.94	12	14933.40
Off Site areas	N/A	429.99	980.27	550.28	-14	-6019.86
Totals	64.9	2321.87	2661.1475	339.28		11811.85
Arable units /ha*	2.175				Payback Years	34.81
* Average Baseline units for Arable : Table 8					Construction Period	12
** Lifetime = Construction Period + 60 years				Simple Begin/End Assessment BNG	EDF BNG (Table 8.1.1)	13.4%
					All-sites Inclusive BNG	14.6%

Whilst the Applicant has provided textual definitions of the four factors that are used in the biodiversity calculations, it would have been helpful to see the actual factors used against each parcel of habitat both pre-development and post development.

Overall Biodiversity Loss

As we indicated in the oral summary from ISH 7 ([REP5-288](#)), assuming a 12 year development process, the cumulative biodiversity loss over the development will need to be paid back through the biodiversity net gain achieved post development.

In Table 2 below, we then look at the BNG holistically over the entire project lifetime of 72 years (122 years construction plus 60 years operation).

For the 12 year development cycle, once all the ADS are taken into account, **the payback period**, i.e. the time to the point when BNG for the project so far is 0%, **is 34.8 years** (46.8 years after project start).

If we spread the 14.6% BNG of the final 25.2 years over the entire project, the maximum BNG is 5.1%.

Table 2 - Overall Biodiversity Net Gain/Loss - 72 Year Project Lifetime

	Area in hectares	On-site Baseline	On-site post intervention	BNG	Years in construction / construction use	Biodiversity permanent loss
Sizewell Link Road	N/A	240.96	350.88	109.92	2	481.92
Yoxford Roundabout	N/A	5.84	4.76	-1.08	1	5.84
Two Villages Bypass	N/A	160.61	147.32	-13.29	2	321.22
Northern Park & Ride*	27.8	60.47	60.47	0	12	725.58
Southern Park & Ride*	26.1	56.77	56.77	0	12	681.21
Freight Management Facility*	11	23.93	23.93	0	12	287.10
SZB Relocation	N/A	98.86	118.25	19.39	4	395.44
Main site area	N/A	1244.45	918.51	-325.94	12	14933.40
Off Site areas	N/A	429.99	980.27	550.28	-14	-6019.86
Totals	64.9	2321.87	2661.1475	339.28		11811.85
Arable units /ha*	2.175				Payback Years	34.81
* Average Baseline units for Arable : Table 8					Construction Period	12
** Lifetime = Construction Period + 60 years				Simple Begin/End Assessment BNG	EDF BNG (Table 8.1.1)	13.4%
					All-sites Inclusive BNG	14.6%
					SZC Lifetime**	72
					EDF Lifetime** BNG	4.7%
					All-Sites Lifetime** BNG	5.1%

Given the poor delivery history for EPR developments in China, Finland, France and lately at Hinkley Point, it would be legitimate to ask what the effect would be of any delay in the construction period. Table 3 examines one scenario for delay.

If a delay of 2 years is experienced in this project, which is not an unreasonable period to consider given experiences so far, we find that **for every year of delay there is an increase in payback period of about 2.8 years**, with the **total payback period becoming 40.5 years** (two thirds of the operational lifetime of Sizewell C) and the **maximum value for BNG reduces to 3.9%**.

Table 3 - Overall Biodiversity Net Gain/Loss - 74 Year Project Lifetime

	Area in hectares	On-site Baseline	On-site post intervention	BNG	Years in construction / construction use	Biodiversity permanent loss
Sizewell Link Road	N/A	240.96	350.88	109.92	2	481.92
Yoxford Roundabout	N/A	5.84	4.76	-1.08	1	5.84
Two Villages Bypass	N/A	160.61	147.32	-13.29	2	321.22
Northern Park & Ride*	27.8	60.47	60.47	0	14	846.51
Southern Park & Ride*	26.1	56.77	56.77	0	14	794.75
Freight Management Facility*	11	23.93	23.93	0	14	334.95
SZB Relocation	N/A	98.86	118.25	19.39	4	395.44
Main site area	N/A	1244.45	918.51	-325.94	14	17422.30
Off Site areas	N/A	429.99	980.27	550.28	-16	-6879.84
Totals	64.9	2321.87	2661.1475	339.28		13723.09
Arable units /ha*	2.175				Payback Years	40.45
* Average Baseline units for Arable : Table 8					Construction Period	14
** Lifetime = Construction Period + 60 years				Simple Begin/End Assessment BNG	EDF BNG (Table 8.1.1)	13.4%
					All-sites Inclusive BNG	14.6%
					SZC Lifetime**	74
					EDF Lifetime** BNG	3.5%
					All-Sites Lifetime** BNG	3.9%

These figures of 5.1% and 3.9% are well below the expectation for BNG for projects of this type.

General Observations

Whilst the BNG calculations try to account for some of the difficulties in establishing the various habitat types, it is likely that the estimates will fall short of accounting for all the issues inherent in the different soil types and water regimes that are present on site.

It is unlikely that the values for use in BNG Metric 2 had such a dry and sandy development environment in mind when these were generated.

Also, there are very few development sites like SZC or HPC where the development extends over 12 years.

The issues that are inherent in this area, with sandy soils and poor water retention apart from the marsh areas, are likely to be poorly reflected in these general factors that are used UK wide. Soil compaction issues at Sizewell are likely to be significant and thus require more post development interventions.

It is also pertinent to remember that the areas lost as part of the SSSI cannot be assessed using this suite of BNG calculations, so losses and the ability to compensate for these losses are not included in the assessment, and these losses will be much harder to establish than planting a wood or establishing acid grassland.

Long Term Impact and Conclusion

It should also not be forgotten that the development site sits within the Suffolk Coast & Heaths Area of Outstanding Natural Beauty and is between two Sites of Special Scientific Interest with other national and international designations.

After the project is complete this Main Site area is subject to a **permanent 26.2% loss of biodiversity** which can only be considered as catastrophic for the long term integrity of this unique habitat as this is effectively the connectivity corridor of the AONB and these interlinked habitats.

Connectivity is widely recognised as being a significant contributor to biodiversity gain and stability, so it is doubly unfortunate that this project destroys the connectivity in these fragile areas and then returns them in a significantly damaged state.

The Applicant's claims of BNG are spurious, arithmetically wrong and wilfully ignore the overall impact on biodiversity. Based on the evaluation of the Applicant's assessments given above, this project is too damaging on an environmental level to be allowed to go ahead.