The Sizewell C Project

9.120 Comments on Earlier Deadlines, Subsequent Written Submissions to ISH11-14 and Comments on Responses to Change Request 19 - Appendices - Part 1 of 4

Revision:	1.0
Applicable Regulation:	Regulation 5(2)(q)
PINS Reference Number:	EN010012

October 2021

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

SizewellC
Doing the power of good for Britain
EDF CGN

APPENDICES

Part 1 of 4

Part 2 of 4

Part 3 of 4

Part 4 of 4

APPENDIX A: RESPONSE TO THE ENVIRONMENT AGENCY'S COMMENTS ON THE FISH IMPINGEMENT AND ENTRAINMENT MONITORING PLAN [REP8-160]

CONTENTS

1 RESPONSE TO ENVIRONMENT AGENCY'S COMMENTS ON THE FISH IMPINGEMENT AND ENTRAINMENT MONITORING PLAN

1.1 Introduction

1.1.1 At Deadline 8, the Environment Agency provided written feedback [REP8-160] on the Fish Impingement and Entrainment Monitoring Plan (FIEMP). SZC Co has updated the FIEMP where appropriate for submission at Deadline 10 (Doc. Ref 10.7).

1.1.2 SZC Co. responses to those comments are provided in this section.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
1 Introduction	Condition 50 of the draft Development Consent Order states that the plan will set out 'the monitoring arrangements for assessing the efficacy of the intake head…'	The intake head is a novel design and there is disagreement between the Applicant and consultees as to how it will work to reduce impingement, and whether the intake structures will be attractive to fish by acting as reefs.	Options for conducting direct observations of fish behaviour around the intake head need to be examined (for example sonar, acoustic telemetry, acoustic cameras)	SZC Co does not agree that the SZC LVSE intake heads will act as artificial reefs and thereby attract fish (see REP5-112 and Doc. Ref. 9.120 Appendix B). Even if it did, there is no further mitigation that could be added to the LVSE. SZC Co has therefore not included direct monitoring of fish behaviour at the intake to the plan. However, SZC Co will examine the possibility of providing anecdotal information from maintenance activities when the intake heads are inspected.
2.2.2	"Monitoring experience at SZB has demonstrated that 28 samples per annum, with 7 samples per quarter provides robust data."	No reference for this statement is provided so we cannot evaluate it. A clear justification for going against the BEEMS SAR006 recommendation is needed.	Please provide a reference to the analysis that supports this statement.	The point raised regarding the level of sampling intensity has been considered further in the draft Fish Impingement and Entrainment Monitoring Plan (FIEMP). The recommended level of sampling intensity is based on operational experience at SZB. It is noted in Section 2.3 that the appropriate level of sampling intensity is based on a number of factors and will be optimised in consultation with the MTF. The following sections have been added to the FIEMP: *A sampling intensity equivalent to 40 x 24-hour periods per annum has previously been suggested for impingement sampling, with the effort distributed in quarterly blocks of 10 dates, randomly selected within each quarter (BEEMS Scientific Advisory Report SAR006). This consistent level of sampling intensity over multiple years has proven to be*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
				logistically impractical and operationally challenging. Experience at SZB has shown that outages can last for several months, during which impingement monitoring is not permitted. Due to the seasonality of species abundance, re-scheduling sampling throughout the year cannot replicate the outage period. *To accommodate outages, the sampling intensity employed at SZB between 2010 and 2017 consisted of a target of 28 samples per annum, randomly distributed with 7 samples per quarter. The sampling intensity of 40 visits per annum suggested in SAR006 is based on studies from US power stations, published by Murarka and Bodeau (1977), but. SAR006 recommends using existing UK power station impingement data to assess the adequacy of this sampling intensity against specific project objectives. Impingement data analysis in BEEMS Technical Report TR122 based on 1 year of impingement data identified that an impingement monitoring programme consisting of 24 samples of 24-hour duration taken in a stratified random manner per year will, on average, detect 86% of the species present at Sizewell. Increasing the intensity to 32 samples had only a small increase in the number of species detected (90%). A detailed statistical analysis of the full available dataset from SZB will be undertaken to determine the appropriate sampling frequency over the 3-year monitoring period that is logistically achievable relative to impingement objectives without compromising the ability to detect scarce species unlikely to be detected by the sampling programme.*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
				This may be an issue if any of these species are of conservation interest. *2.3.7 Impingement sampling reduces the number of fish and other organisms being returned to sea by the FRR system. Guidance on the Operation of the Animals (Scientific Procedures) Act 1986 states that wherever a programme of work involving the use of protected animals is carried out, the number of protected animals used must be reduced to a minimum without compromising the objectives of the programme. Sampling intensity should reflect this guidance and aim to optimise the appropriate sampling intensity whilst allowing sufficiently robust scientific data.* *Notwithstanding the description at 2.3.5, the recommended sample intensity is to target 28 samples per annum at each site with sampling effort randomly distributed within quarterly blocks.*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.2.2	There is no clear valid reason why the level of monitoring cannot be at the recommended minimum provided in SAR 005 and SAR 006. Logistically impractical and operationally challenging are the reasons given, with outages that last for 'weeks to months' provided as a particular case	Information the applicant has provided for SZC states: Typically, outages will last about 2 weeks and are expected to occur every 18 to 22 months...It is assumed that that both EPRs will not be offline simultaneously. No explanation is given as to why a say 4 week outage period in 1.5 years would not enable continued sampling in some form with the operational EPR as a minimum.	Reconsider the potential for data collection at a greater frequency (see also comment 1 above).	As explained to the Environment Agency in regular meetings, the constraint on outages relates to Sizewell B. It is not possible to sample more frequently at SZB, which is an integral part of the FIEMP for comparison with SZC. It is extremely challenging from a logistics and onsite security perspective to perform this sampling at a station during outage, regardless of the fact that one unit is still operating, not least because it would require all of the sampling equipment, tanks and welfare facilities to be moved to the opposite forebay. See also 2.2.1 for why the sampling frequency as proposed is considered sufficient.
2.2.2	A sampling intensity equivalent to 40 x 24-hour periods per annum has previously been suggested for impingement sampling, with the effort distributed in quarterly blocks of 10 dates, randomly selected	In addition to randomly selected sampling, consideration needs to be given to specific monitoring of migratory periods for species of conservation concern.	Include specific monitoring of migratory periods for species of conservation concern.	The inclusion of specific monitoring of migratory periods for species of conservation concern has been considered in the FIEMP. The sampling frequency recommended is based on operational experience at SZB, specific migratory periods should be picked up in the random sampling strategy recommended in SAR006, provided site access is not prohibited due to an outage.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	within each quarter (BEEMS Scientific Advisory Report SAR006).			The challenges associated with targeted sampling of a particular period is ensuring the data is treated appropriately so as to be representative of the wider period when scaled up. If the targeted sampling is not representative of the wider period when scaled, the estimates for the wider period would be biased. For example, intensive monitoring during a peak migration run may overestimate abundance when that peak catch rate is applied to represent the full quarter estimate. Such considerations can be accounted for and must be factored in at the sample design stage. SAR006 states 'depending upon the area and species composition and survey objectives, some periods will require better resolution and hence shorter intervals between samples. Conversely, less-active periods such as winter months could be efficiently and effectively covered with fewer samples. However, at SZB fish impingement has been shown to be high in winter for many of the most abundant species e.g. sprat, herring and bass to name a few. Therefore, we would not want to reduce sampling intensity during this period. It is noted in Section 2.3 that the sampling frequency and duration would be agreed in consultation with the MTF:. The random sampling strategy recommended in the SAR006 should cover seasonal migratory periods, provided site access

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
				is not prohibited due to an outage, in which case targeted sampling would also be prohibited.
2.2.3	The plan is to adopt a similar approach to the SZB CIMP data. While mention is made of the problem of overflowing bulk samples. The only resolution mentioned is to undertake overnight sampling "if feasible" at both SZC and SZB power stations. The text goes on to mention overflowing samples during the summer due to high impingement of ctenophores but does not acknowledge that	No other solution to the overflowing samples is suggested if the power station operators decide that it is not feasible to allow overnight sampling.	Consideration needs to be provided on how the problem of overflowing bulk samples will be addressed if overnight sampling is not allowed. Overflowing bulk samples is not only a summer problem but is also a problem during the winter when sprat and herring impingement is highest.	The point raised is in relation to how the problem of overflowing bulk samples will be addressed. This has been clarified in the FIEMP (Section 2.3). The following text has been added to the FIEMP: *For SZC measures will be implemented to allow overnight sampling.* In relation to SZB, measures to reduce the instances of bulk sample overflow at SZB are being considered, these factors are subject to evaluation and approval by SZB, but may include the following. • More regular monitoring of the net overnight. Station staff could divert the flow before an overflow occurs and record the time, so that the data can be scaled up accordingly. However, the overnight sample is started

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	overflowing samples happened in winter as well when they were not caused by ctenophores.			at 15:00 and the sample duration during the hours of darkness will be compromised if sampling is stopped early, particularly in summer when the hours of darkness are at their lowest. • A full night time sample could be ensured during the hours of darkness if the station staff start the overnight sample at, for example 11pm and switch it off at 4 am, thereby taking a shorter sample, but one that is entirely collected during the hours of darkness. However, the data would need to be raised to account for the missing hours. • Greater capacity trash baskets. However, currently the net is lifted using a forklift, which is limited by the distance the arm can be stretched over the trash pit. A bigger basket would also potentially need a bigger crane to safely lift the sample.
2.2.4	Each sample will be sorted into fish, invertebrates and weed to the lowest taxonomic level possible.	Identification to lowest taxonomic level possible will not necessarily distinguish populations of species being impacted	Where doubt exists over populations being impacted, and populations are distinguishable, sampling should seek to identify the proportion of impinged fish originating from each population	Provisions for determination of specific sample objectives for species of conservation interest has been included in section 2.3 of the FIEMP. *Samples, or sub-samples, of species of conservation interest may be taken for further analyses if required to address specific objectives.*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
			(e.g. spring-spawning herring from discrete local stocks should be distinguished from autumn spawning herring)	In the case of herring, it would not be feasible to apportion impingement catches to different stocks at the monitoring stage. However, it may be feasible to collect subsamples for more detailed biological analyses to confirm predictions. Through continuing monitoring at SZB, measures will be implemented to estimate the proportion of spring and autumn spawning herring in impingement sampling. However, there are no routine ways to determine stock identity. Morphometrics for example, are only suitable for approximately apportioning herring to autumn or spring spawning categories and cannot determine whether individual fish are, for example, spring spawners from different stocks. Alternative analyses such as the developing field of otolith processing may provide further insights in the future into the composition of herring impinged at SZB and the proportion of which come from the Blackwater Estuary.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.2.6	Section 2.2.6 Reporting and data availability mentions annual reporting of impingement estimates to the MTF. But does not actual specify the availability of the impingement data for members of the MTF.	Impingement data and estimates are complicated and to truly understand the estimates and any potential changes over time and between SZB and SZC, it would be easier if the data was available for examination.	We request that impingement data, raw data and scaled up estimates, are made available as excel spreadsheets that are publicly available.	This has not been in specifically written into the plan, but it may be possible to release the data publicly after agreement of entrapment estimates with the MTF, if appropriate.
2.3	Results are to be reviewed, and discussed with the MTF with action or additional monitoring considered necessary to be agreed with the MTF. However, the governing principles of the MTF are not specified in the monitoring plan.	It is unclear the extent to which the Applicant will be obliged to act upon the advice of delegates to the MTF. For example, if EDF do not agree with a course of action recommended by the MTF, how will the difference of opinion be resolved?	Terms of reference for the MTF should be included with the monitoring plan, including how/whether decisions are made by the group and the role of the various organisations attending (which typically include statutory bodies, the applicant, and the applicant's consultants)	Terms of Reference for the MTF are to be reviewed and agreed prior to works commencing. This is secured in the Deed of Obligation (DoO) (Doc Ref. 8.17(H). There is no reason to repeat them within the monitoring plan.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.3	Once monitoring has been shown to satisfactorily demonstrate impingement predictions in the ES were appropriate, impingement monitoring will cease.	It may be appropriate to stop monitoring at SZB after 3 years if no significant difference has been observed from predicted and actual entrapment losses. For SZC monitoring may be required for a longer period than 3 years in order to determine the impact to some species. The decision to extend monitoring or not at SZB and SZC should be reached in agreement with the MTF at the end of a given review period.	Monitoring at SZC should continue for longer than 3 years. A decision to extend monitoring or not at SZB and SZC should be reached in agreement with the MTF at the end of a given review period.	Consideration to extended impingement monitoring at SZC has been provided in section 2.3 of the FIEMP: *Should any uncertainty remain extended monitoring would be considered, for example on a longer-term basis at a reduced or targeted capacity, similar to the monthly routine impingement monitoring program (RIMP) completed at Hinkley Point (HPB).*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.3	If monitoring demonstrates that impingement predictions are statistically significantly higher than predicted in the ES, when compared with the reciprocal impingement numbers at SZB, annual entrapment estimates (as equivalent adults) will be compared with a population comparator such as spawning stock biomass (SSB) once the relevant data for a given year are available	Agreement must be reached on what EAV method is deemed as appropriate for this assessment. Full details of methodology need to be shared as part of this process including whether the intention is to compare to SSB in the year of entrapment, to use some other reference year, or to calculate an average SSB.	Agree appropriate EAV method with MTF.	SZC Co strongly disagrees. The purpose of the FIEMP is to confirm the assessment of impacts provided in the ES [APP-317] and ES Addendum [AS-238] to repeat or replace those assessments. That is, the plan is intended to confirm the impingement and entrainment *predications* presented in the ES [APP-317] and ES Addendum [AS-238] with real data collected from the operation Sizewell C, together with data collected at Sizewell B simultaneously for comparison.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.3	If monitoring shows that impingement is statistically significantly higher than predicted (when compared with SZB) leading to an increase in total entrapment above the precautionary 1% stock threshold, an explanation must be submitted to the MTF for discussion. Any action or additional monitoring considered necessary in response to the results will be agreed with the MTF	Agreement must be reached on what the appropriate stock comparator is for each species.	Agree appropriate stock comparator for each species with MTF	SZC Co strongly disagrees. The purpose of the FIEMP is to confirm the assessment of impacts provided in the ES [APP-317] and ES Addendum [AS-238] to repeat or replace those assessments. That is, the plan is intended to confirm the impingement and entrainment *predications* presented in the ES [APP-317] and ES Addendum [AS-238] with real data collected from the operation Sizewell C, together with data collected at Sizewell B simultaneously for comparison.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
2.3	If monitoring shows that impingement is statistically significantly higher than predicted (when compared with SZB) leading to an increase in total entrapment above the precautionary 1% stock threshold, an explanation must be submitted to the MTF for discussion. Any action or additional monitoring considered necessary in response to the results will be agreed with the MTF	The reliability of entrapment predictions underpins assessments of the potential impact of entrapment on the environment. It is therefore crucial that statistically significant deviations from predictions are investigated and explained. This is the case whether predictions are underestimates, or overestimates, or whether the 1% stock threshold is reached. The 1% stock threshold itself is open to question, as assessment of environmental impacts needs to take into account the status of the population - 1% of a small, geographically-restricted, declining population of fish that	Change to 'If monitoring shows that impingement is statistically significantly higher or lower than predicted (when compared with SZB) leading to an increase or decrease in total entrapment, an explanation must be submitted to the MTF for discussion. Any action or additional monitoring considered necessary in response to the results will be agreed with the MTF'	Additional text has been inserted in the summary of section 2.3. of the FIEMP: *If monitoring shows that impingement is statistically significantly higher or lower than predicted in the ES, when compared with the reciprocal impingement numbers at SZB, leading to an increase or decrease in total entrapment predictions, an explanation must be submitted to the MTF for discussion. Any action or additional monitoring considered necessary in response to the results will be agreed with the MTF.*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
		only spawn once in their lifetime may have a different significance than 1% loss to a widespread, numerous, repeat spawning fish with an increasing population size.		
3.1.2	"If monitoring objectives requires sampling over a period of 2 or more years, it is recommended that the sampling intensity is reduced accordingly." (this is from the BEEMS SAR005 recommended 40 samples per year.	BEEMS SAR005 does not recommend the target sampling of 40 samples per annum if the monitoring is only completed for 1 year. This section is misleading and seems to suggest that the recommended reduced sampling if monitoring is undertaken over more than 1 year is due to a	We recommend following SAR005 more completely when designing the surveys. Section 2 provides a set of key questions that can be used to help design the entrainment monitoring requirements. Section B.3.1 recommends that sampling on 40 dates	Consideration of the sampling intensity of entrainment monitoring has been provided in the FIEMP. A more seasonally targeted entrainment sampling programme is feasible within the programme, as recommended in SAR005. However, as for the impingement sampling programme, the challenge would be to make sure that targeted sampling of a particular period is representative of the wider period when the data is scaled up. The following passages have been added to section 3.2 of the FIEMP: *Entrainment sampling may be targeted at determining entrainment rates during specific periods of seasonal*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
		recommendation in SAR005. It is not and needs to be clarified.	per year is retained as a minimum It also recommends using existing UK power station entrainment data to assess the adequacy of this sampling intensity against specific project objectives. The sampling design should take into account the area, species composition, and survey objectives. Some periods will require better resolution and shorter intervals between samples. Conversely, less active periods such as winter months could be efficiently and effectively covered with fewer samples.	*abundance of ichthyoplankton or invertebrate larvae, or be designed to determine seasonal and interannual variability.* *Entrainment sampling will not be a long-term monitoring programme. It is envisaged that depending on the specific objectives, the monitoring programme will be a minimum of 1 year and no more than 3 years. Entrainment sampling would occur at SZC only.* *If monitoring is completed for 1 year, a target sample intensity of 40 samples per annum is recommended, although sampling may be unevenly distributed with a greater proportion of samples in months of higher biological activity (BEEMS Scientific Advisory Report SAR005).* *If monitoring objectives require sampling over a period of 2 or more years, it is recommended that the sampling intensity is reduced accordingly. Seasonally targeted sampling may capture biologically relevant periods of the year which may be repeated for 2 or more years allowing interannual variability to be established. Current CEMP data and results from ichthyoplankton surveys would be applied to inform relevant periods. Statistical techniques may be employed to determine the required sampling intensity to meet the specific monitoring objectives.*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
3.1.2	Entrainment sampling will either be targeted at determining entrainment rates during specific periods of seasonal abundance of ichthyoplankton or invertebrate larvae or be designed to determine seasonal and interannual variability.	Both seasonal and interannual variability need to be considered further, both have the potential to affect the predicted entrainment numbers significantly.	Include both seasonal and interannual variability.	The point raised regarding inclusion of both seasonal and interannual variability in the entrainment monitoring programme has been considered in the FIEMP (see comment above). It is feasible to achieve both seasonally targeted sampling and capture interannual variability. Seasonal variability is well captured in entertainment monitoring and there is little value in conducting intensive plankton sampling in the winter months. The aim of the CEMP is to conduct compliance monitoring with respect to the ES, it is not to collect additional assessment data. We would suggest that 3 full years of monitoring at an intensity of 40 samples per year is disproportionate to address this objective. Consideration must also be given to the limited number of personnel allowed access to a nuclear facility; accordingly logistical considerations of staffing various monitoring protocols simultaneously must be taken into account.
3.1.5	See comments on 2.2.6 above.	See comments on 2.2.6 above.	See comments on 2.2.6 above. As for the impingement monitoring data, we think that the entrainment monitoring data should be made publically available.	See response at 2.2.6

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
3.2	Comments on 2.3 above regarding the role of the MTF and responsibilities of its attendees are also relevant to Section 3.2, as is the comment on 2.3 above regarding the need for statistically significant differences from predictions to be explained, regardless of whether they represent increases, decreases, or whether they represent >1% of the population comparator.	Comments on 2.3 above regarding the role of the MTF and responsibilities of its attendees are also relevant to Section 3.2, as is the comment on 2.3 above regarding the need for statistically significant differences from predictions to be explained, regardless of whether they represent increases, decreases, or whether they represent >1% of the population comparator. Differences from predicted levels of entrapment may also affect water quality via the FRR discharge - a factor not connected to the proportion of the population being impinged.	Comments on 2.3 above regarding the role of the MTF and responsibilities of its attendees are also relevant to Section 3.2, as is the comment on 2.3 above regarding the need for statistically significant differences from predictions to be explained, regardless of whether they represent increases, decreases, or whether they represent >1% of the population comparator.	Terms of Reference for the MTF are to be reviewed and agreed prior to works commencing. This is secured in the Deed of Obligation (DoO) (Doc Ref. 8.17(H). There is no reason to repeat them within the monitoring plan.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
3.2	The summary is confusing. It refers to impingement but is about entrainment. Seems like an editorial error as the monitoring frequency reflects that of impingement.	We believe the sections in 3.1 prior to be correct and the summary is wrong	Correct the summary to reflect the text in the wider section 3.1	This section did contain editorial errors and refers to impingement instead of entrainment. We thank the EA for pointing out this error and have updated Section 3.2 accordingly.
Section 3 and 4	Several References through document to a 3 year programme, and within the summary, a review after 3 years against predictions. There is the suggestion in the summary that the monitoring could continue, but this is not explicit, not is it reflected in the wider text. We agree a 3 year review of the data is appropriate, but that a longer period of monitoring may be required and this should	3 years may not be enough to account for variability due to differences in survey timings between SZC and SZB, large annual recruitment differences or other occasional biota inundations that could effect mortality predictions for SZC. Such variables could confound any comparison between data from the 2 sites.	The plan must include the option to continue the monitoring particularly if other variables may have confounded the data comparison between the 2 sites.	Three years of concurrent sampling data at both SZB and SZC should be sufficient for an intercomparison between the two sites and to validate the predictions in the ES. The aim is to conduct compliance monitoring, not to collect additional assessment data. Further consideration has been given to this in Section 2.3 of the FIEMP which states that after three years, the results will be reviewed in consultation with the MTF, and that impingement monitoring will cease once it has been shown to satisfactorily demonstrate impingement predictions in the ES were appropriate: *It is expected that this monitoring will show no significant difference from the data submitted with the DCO Application. In that event, the monitoring at SZB will cease. Any action or additional monitoring considered necessary at SZC in response to the results will be agreed with the MTF. Should the*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	be more clearly provided as an option in the plan			*results indicate that extended monitoring would be beneficial this may be achieved on a longer-term basis, at a reduced or targeted capacity, similar to the monthly routine impingement monitoring program (RIMP) completed at Hinkley Point (HPB).*
Section 4	As the FRR system output of moribund biomass is being considered for potential WQ impacts within the permit, additional WQ monitoring will be needed near the FRR system outfall to verify the conclusions and ensure that the moribund biomass is not having an impact on WQ in Sizewell Bay.	The monitoring plan will need to consider WQ monitoring for potential impacts from the FRR system discharge.	Please either amend this report to consider the potential WQ impacts from the FRR system discharge of moribund biomass or highlight where this monitoring requirement will be considered.	SZC Co disagrees. This plan is for monitoring impingement and entrainment. SZC Co notes that monitoring of water quality arising from discharges of moribund material from the FRR tunnels will be required on the Water Discharge Activity permit for that waste stream and duplication here is not appropriate.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
4.1	A proportion of fish that were live on collection would be transferred straight to experimental tanks and maintained for a period of 24 hours.	How was the period of 24 hours decided upon as the length of time for monitoring delayed mortality? Why not 48 hours, 72 hours, or longer?	The plan needs to justify the choice of 24 hours as a time period over which to study delayed mortality, or alter this to a longer time period if found necessary.	The timeframe over which survival studies are conducted will affect the estimated survival rate, this timeframe is dependent on the subject organism, the stressor, and the practicalities of the study. Section 4.2 of the FIEMP states that a proportion of fish that are live on collection will be transferred straight to experimental tanks and maintained for a period of <u>at least</u> 24 hours. Whist we acknowledge that a 24-h timeframe for FRR studies may not identify fish which may have reduced fitness or succumb to injury after several days, the fish will be examined after the study, any evidence of damage such as outlined in section 4.2 will be recorded and can be used to infer additional mortality. A complication to FRR survival studies is that there are no viable options in which to conduct procedural controls, to which survival estimates can be compared. Removing fish from their natural environment and holding them in stock tanks will likely incur its own levels of mortality, external damage and stress as a result. This must be taken into account when interpreting these results.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
4.3	Adaptive measure to the FRR are mentioned. But the applicant does not include wider measures to limit biota intake during periods of coelenterate (jellyfish etc) inundation. These are mentioned as a risk with possible mitigation option in BEEMS Technical Report, Jellyfish and ctenophores in relation to Sizewell (TR325, Rev.2)	Inundations due to jellies are mentioned as a risk with possible mitigation option in TR325, Rev.2. The implications of these for overwhelming the buckets on the screens and increasing the mortality in the buckets is possible. Adaptive measure are not limited to the FRR alone.	The options for reducing jellyfish intake should be considered within the adaptive measures.	TR325 reviews literature on jellyfish populations in the waters around Sizewell, including trends, bloom formation/problems, and potential management solutions, such as bloom prediction and mitigation. The report did not explore specific Sizewell station structures and operation practicalities of potential mitigation measures. As stated in TR406 section 4.7.3 there have not been any shutdowns due to gelatinous species at Sizewell B, which uses a 10mm mesh filtration, also proposed at SZC. As to whether inundations of gelatinous zooplankton are likely to reduce fish survivability in the SZC FRR system, the weight of fish impinged during summer ctenophore blooms is extremely small. Fish weight in the FRR systems typically peaks during winter and spring whilst ctenophore biomass peaks in summer. Much smaller peaks in ctenophore abundance occur at other times of the year but the additional ctenophore biomass is much smaller than the peak fish biomass that the FRR system can handle with negligible risk to fish survival. This data show that when jellyfish and ctenophores dominate impingement, the proportion of fish and

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
				other animals in the catch is minimal. Therefore, a potential increase in FRR mortality will have minimal impact on overall losses.
5.1	States: "when compared with impingement and entrainment numbers at SZB at the same time". But there is no mention in the text of section 2 that SZC impingement monitoring at SZC is planned to occur concurrently with that at SZB.	Monitoring concurrently for entrainment is envisaged, but the same statement is not made for impingement. This would be highly desirable.	Include a sentence to state this is planned within section 2.0	In response to the request to clarify concurrent monitoring for impingement and entrainment the FIEMP has been updated. It is the intention to monitor impingement concurrently at SZB and SZC. However, there are no plans to monitor entrainment at SZB. Entrainment at SZC will be compared to the predictions in the ES. Section 2.4 states that: *a minimum of 3 years of impingement data will be collected simultaneously (where possible) at SZB and SZC.* Section 3.2 states that: *entrainment sampling would occur at SZC only.*
5.1	States: Should impacts from SZC be above the 1% of stock precautionary trigger threshold, a report will be provided to the MTF with an analysis and explanation of the results. Reporting needs to be	It is indicated that a report is only to be provided if there appears to be an issue. This should not be the case.	Amend to remove reference to 1% threshold and to state simply that "a report will be provided to the MTF with an analysis and explanation of the results.".	The EA's points raised regarding the production of impingement and entrainment reports has been clarified in the FIEMP. Section 2.3 (impingement) and section 3.2 (entrainment) indicates that impingement and entrainment estimates will be reported to the MTF annually: *Annual estimates will be presented in terms of absolute numbers for each of the species. Estimates for preceding years will also be presented*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	provided irrespective of the results.			*in terms of effects relative to the relevant population comparator (e.g., spawning stock biomass) once such information is available.* Entrainment estimates for preceding years will only be presented providing entrainment monitoring is multi annual. Section 2.4.1 states "*If monitoring shows that impingement is statistically significantly higher or lower than predicted in the* ***ES*** *[APP-317], when compared with the reciprocal impingement numbers at SZB, leading to an increase or decrease in total entrapment predictions, an explanation must be submitted to the MTF for discussion. Any action or additional monitoring considered necessary in response to the results will be agreed with the MTF*". Note also comments at 2.3 in relation o purpose of the FIEMP

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
5.1	As explained in this draft plan, in the case that monitoring demonstrated that impingement and/or entrainment is statistically significantly greater than predicted in the ES, when compared with impingement and entrainment numbers at SZB at the same time, comparisons would be made with the baseline to determine whether the losses caused by Sizewell C were having a significant effect on fish populations. This assessment would be made by converting the impinged and entrained organism into Equivalent Adults and comparing them with the relevant baseline comparator (e.g.	Agreement would be needed on the appropriate stock comparator for each species, and on the EAV method to be used.	Agree appropriate stock comparator for each species and appropriate EAV method with MTF	SZC Co strongly disagrees. The purpose of the FIEMP is to confirm the assessment of impacts provided in the ES [APP-317] and ES Addendum [AS-238] to repeat or replace those assessments. That is, the plan is intended to confirm the impingement and entrainment and overall entrapment *predications* presented in the ES [APP-317] and ES Addendum [AS-238] with real data collected from the operation Sizewell C, together with data collected at Sizewell B simultaneously for comparison.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	Spawning Stock Biomass) for the relevant year.			
5.1	For species such as sea bass: habitat creation or a managed realignment scheme (such as Steart Marshes at the mouth of the River Parrett). Saltmarsh and other shallow sub-tidal/intertidal habitats are used as nursery grounds by a number of fish species. • For other marine species (e.g. cod), however, there are no identified means to offset	Greater emphasis should be placed on the potential for habitat creation or enhancement to benefit fish species, including marine species such as cod. For example, eelgrass Zostera marina meadows may be of significant importance to cod.	Include a wider consideration of the benefits to fish species of a variety of habitat restoration enhancement schemes, such as eelgrass meadow restoration, or the restoration of oyster beds.	In response to this request, consideration has been given to eelgrass meadows and oyster bed restoration in Section 5.1 of the FIEMP. The following section has been added to the FIEMP: *For species such as cod, herring and sea bass, eelgrass (Zostera marina) and salt marshes provide nursery habitats for juveniles. Contingency funds, secured in Schedule 11 of the Deed of Obligation (Doc Ref. 10.4), would allow the provision of restoration projects for eelgrass, saltmarsh or oyster bed habitats. For example, habitat creation or a managed realignment scheme (such as Steart Marshes at the mouth of the River Parrett in Somerset) might be an appropriate*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	any significant adverse effects demonstrated by the impingement and entrainment monitoring.			*measure. As detailed in Schedule 11 of the Deed of Obligation (Doc Ref. 10.4) agreement of measures and release of funds would be at the discretion of the MTF*.
5.1	As explained in this draft plan, in the case that monitoring demonstrated that impingement and/or entrainment is statistically significantly greater than predicted in the ES, when compared with impingement and entrainment numbers at SZB at the same time, comparisons would be made with the baseline to determine whether the losses caused by Sizewell C were having a significant effect on fish populations. This assessment would be made by converting the impinged and entrained organism into Equivalent Adults and comparing them with the relevant	In addition to this assessment, should a deterioration under The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (WFD Regulations) Transitional Fish Classification Index (TFCI), be observed in in the Ore & Alde transitional waterbody, which can be attributed to impacts as a result of the operation of SZC, then compensation funds would be released for fish habitat improvement or fish habitat creation schemes.	Include deterioration to the fish element under the WFD in the Ore & Alde transitional waterbody as a trigger for the release of the habitat creation fund.	An fund of up to £250,000 has been provided in the Deed of Obligation (Doc. Ref 8.17(H)) for further river improvements in the River Alde and/or Blyth should monitoring of smelt indicate impacts from Sizewell C (noting that £500,000 has also been contributed to Environment Agency schemes in those rivers for eels that will benefit all migratory fish). This will be covered in the Smelt Monitoring and Mitigation Plan (SMMP) secured under Condition 51 of the DML (Schedule 20; Doc Ref. 3.1(J)).

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	baseline comparator (e.g. Spawning Stock Biomass) for the relevant year. Should impacts from SZC be above the 1% of stock precautionary trigger threshold, a report will be provided to the MTF with an analysis and explanation of the results. Any further monitoring and action in response to the report will be discussed with the MTF. The appropriate response to the report will depend on the results and explanation of the monitoring but may include:			
5.2	Similar sampling methods have been used at the River Blyth. That sampling indicated that the lack of suitable spawning habitat, a barrier to upstream migration and the lack of evidence of spawning fish	We request monitoring for smelt is also undertaken in the Blyth. Too limited an amount of sampling has been conducted to draw conclusions on whether a breeding population is present in this	Include smelt monitoring on the River Blyth.	SZC Co. acknowledges and agrees with the request to monitor the beneficial gains from the installation of fish passes on the Rivers Alde and Blyth and this has been incorporated into Section 5.2 of the FIEMP. In relation to smelt in the Blyth, the presence of smelt in the Blyth is acknowledged in BEEMS Technical Report TR406.v7 [AS-238], however, the targeted spawning surveys in April and

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
	or eggs indicates the River Blyth does not support a spawning population (BEEMS Technical Report TR382). In agreement with the Environment Agency, smelt monitoring in the River Alde will act as a surrogate for the River Blyth also.	waterbody. The Environment Agency caught smelt in the Blyth in 2016 and has provided this information to the applicant, but this has not been acknowledged. Please note our comment on TR406 (SZC-SZ0200-XX-000-REP-1000XX, Revision 01), dated 19 July 2019: 'The River Blyth has had a very small amount of fish sampling undertaken on it to come to the conclusion that a smelt population does not exist. The Environment Agency undertook 2 x 1.5m beam trawls, 200m in length on the Blyth estuary in May 2016 and recorded smelt. The details of this were provided to CEFAS along with photographic evidence. It would		May 2016 concluded that it is unlikely that a breeding population exists, due to a lack of suitable spawning habitat and barriers to upstream migration and no eggs nor any smelt in spawning condition were found at the time that other Anglian rivers contained spawning aggregations. This is consistent with the case in the River Alde. Whilst spawning may occur in the upper estuary the tide gates at Snape Maltings are *"considered to be impassable for smelt and therefore likely to be hindering the reproductive capacity of the population due to restricted access to spawning habitat. Fish and eel pass feasibility assessments completed by the Environment Agency confirm that the structure is considered impassable for all fish species (Wood, Environment Agency 2016 pers. comm.)"* (extract from Natural England, 2018). The text relating to the Blyth has been removed from the FIEMP and Section 5.2 now states: *The SMMP will be additional to ongoing WFD monitoring and is intended to provide further information on the presence of spawning in the Blyth and River Alde and River Blyth prior to the implementation of the fish passes aimed to enhance upstream migration. If it is determined that spawning is not occurring prior to the installation of fish passes, subsequent monitoring would be undertaken to determine the establishment of a spawning in these waterbodies after improvements to fish passages have been implemented so that beneficial gains from the installation*

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
		appear this has been incorrectly recorded in BEEMS Technical Report TR382 and this should be amended'. Smelt monitoring in the Blyth is required for 2 reasons (1.) To provide further information on the presence of a breeding population in this waterbody prior to the removal of the barrier to fish movement at Blythford Bridge. (2.) To provide information on the establishment of a smelt population from a wider stock, once fish passage has been improved (If it is established from sampling prior to the removal, that a breeding population is not already present).		*of fish passes can be determined. Monitoring measures may include:* • *Determining the presence of gravid (egg-bearing) fish above the tidal limit during the main spawning season (February – April) in the River Alde and River Blyth.* • *Identifying the presence of suitable spawning substrate in the River Alde and River Blyth.* • *Monitor the presence of eggs/newly hatched larvae in the River Alde and River Blyth.* *Smelt monitoring objectives, and further mitigation, where deemed necessary, will be determined in consultation with the MTF following submission of the SMMP to the MMO for approval in writing.* Natural England. 2018. Marine Conservation Zones Natural England's advice to Defra on Marine Conservation Zones to be considered for consultation in 2017. Annex 2: Advice on Tranche 3 MCZs with the species feature of conservation importance smelt (*Osmerus eperlanus*). Natural England Joint Publication JP026. June 2018.

Paragraph number	Issue	Environment Agency Comment	Environment Agency Suggested solution	SZC Co Response
5.2	Sampling will occur prior to implementation of the proposed fish passage enhancement schemes so that beneficial gains from the installation of fish passes can be determined.	How long will monitoring continue after the fish passage schemes have been delivered?	Provide information on how long monitoring will be conducted for.	Section 5.2 of the FIEMP considers the intended approach to smelt monitoring in the Alde and Blyth and has been updated to reflect EA comments: Any additional smelt monitoring or mitigation measures in the Alde and Blyth will be detailed within the SMMP (Smelt Monitoring and Mitigation Plan). The status of smelt in the Alde and Blyth must also consider other factors causing pressure to fish in these waterbodies beyond the scope of the proposed development.

APPENDIX B: RESPONSE TO THE ENVIRONMENT AGENCY'S ISH10 WRITTEN SUMMARIES OF ORAL SUBMISSIONS

CONTENTS

1 RESPONSE TO ENVIRONMENT AGENCY'S ISH10 WRITTEN SUMMARIES OF ORAL SUBMISSIONS

1.1 Introduction

1.1.1 At Deadline 7, the Environment Agency [REP7-131] provided their summary of oral case for ISH10: Biodiversity and Ecology. SZC Co. responses to those comments are provided in this section.

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
a. *Sabellaria spinulosa*, in general and progress with a Sabellaria mitigation and monitoring plan which is awaited from the Applicant - see also Natural England's position set out in their post-ISH7 submission [REP5-160] what DML conditions are proposed for mitigation and comments on likelihood of presence and need for compensation (see also MMO's REP6-039] paras 1.3.6.6 and 1.3.7.6).	**No EA comments**	SZC Co. submitted the Draft *Sabellaria* Reef Management and Monitoring Plan - Revision 1.0 at Deadline 7 [REP7-078].
b. To understand which issues considered at the Hinkley Point C water discharge permit acoustic fish deterrent appeal and in dispute are common to the Sizewell DCO application	**Hinkley Point C – Water Discharge Activity Permit Appeal** The Environment Agency note that within the hearing NNBGenCo (SzC) Ltd highlighted that, when available, they would submit the decision for the Hinkley Point C Water Discharge Activity Permit Appeal. We consider that the appropriateness of direct cooling water system will vary depending on the site and the receiving environment. This is a developing field and thus new methods/	**EAV** The biological data that informs the parameterisation of the EAV (or EAV-SPF extension) calculations will differ between sites. This is because, generally, HPC or SZC affect different populations of the same species. In these cases, site specific data needs to be applied when calculating EAV as different populations of fish will have differences in growth rates, maturity, and mortality. To our best endeavours, Cefas has applied the most up to date, site-specific biological data for the affected populations. However, using relevant biological data in the EAV

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	designs are being developed and will need to be incorporated in assessments. We consider the potential issues that may be considered in common could be the method of the Equivalent Adult Values (EAV's) and the appropriate scale of assessment to determine impacts to fish populations. **EAVs -** We do not think that the permit appeal at HPC would set a precedent as to what is the most appropriate EAV method in all circumstances. Several methods of calculating EAVs are currently in use. Methods differ in the biological data they make use of, and the way in which they define an adult fish. The underlying parameters used in the calculation would change (ages of entrapped fish, growth rates, mortality rates) even if the same method is used, as this would be specific to individual power stations. It is therefore important to ensure that the EAV method selected for an individual assessment, and the corresponding definition of adult fish, are appropriate for the task and site. As highlighted in agenda item 5.g.ii for Deadline 7 we have provided a response to the applicant's note on EAVs - [REP6-024] 9.63 Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 - Appendices - Revision 1.0. (pg 90) Appendix F: Technical Note on EAV and stock size. In summary, this note does not satisfy our concerns. **Scale of assessment-** The permit appeal at HPC may decide if the use of ICES stock scale assessments is accepted for some	calculation is not contested – it is a given. The issue at hand is the appropriateness of the 'Cefas EAV' method as opposed to the EAV-SPF extension. There is no reason that the overarching approach to the application of EAVs should be different between the sites (with the application of the relevant site-specific input data), since it is a method of risk assessment based on biological principles that apply to all fish populations. SZC Co. position on the validity of the EAV approach for assessing risks to impacted populations was made clear in Deadline 6 Submission – (Appendix F of [REP6-024]). In response to Environment Agency comments Deadline 7 [REP7-128], SZC Co. has responded and highlighted the key points to bring to the attention of the ExA [REP8-119]. **Scale of Assessment** The SZC Co. position on the definition of what is the appropriate stock areas, and the need to account for the full life history of the species of concern was set-out in Deadline 6 Submission –(Appendix F of [REP6-024]). The EA suggest the application of more precautionary stock units but provide no viable or recognised alternative. Rather they point to the Swansea Bay Tidal Lagoon (SBTL) as an example. This project, which incidentally was commented on but not led by Cefas, applied a very

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	species for the HPC site. It may also decide that the use of smaller sub populations is more appropriate for determining ecological impacts at that site. Depending on the species and the stock area identified this could influence a decision on what is an appropriate stock comparator for some species at SZC. We do not think this will determine the appropriateness of stock sizes for most species at SZC as this is a different site with a different fish assemblage. Within ISH10 we noted the applicant could use more precautionary stock assessments. We draw your attention to the Swansea Bay Tidal Lagoon (SBTL) proposed power plant. In the fish impact assessment produced for this project CEFAS used much smaller population sizes than that of the ICES stock unit (Tidal Lagoon Swansea Bay, Alternative Fish Impact Assessment – Addendum 1, Monte-Carlo Analysis of Alternative Draw Zone Models, Rev 2, 2017 - currently available as CD 9.118 within HPC appeal documentation at DEFRA file sharing service **Effectiveness of LVSE heads** – We noted with ISH10 that a LVSE of 1 might not be accurate. While we have agreed to use a factor of 1.0 for the LVSE intake heads at both HPC and SZC, we do not agree that this is a precautionary figure. We believe this is a minimum value and that without a behavioural cue to tell fish otherwise, any fish in the volume of water being drawn into the intake heads, will be entrapped. Additionally, we believe that the LVSE intake heads may increase the volume ratio of impingement to greater than 1.0 because they have the potential to act as an artificial reef	different methodology using an area-based assessment approach without defining absolute population sizes. It is not clear if the Environment Agency are suggesting such approaches are relevant at SZC and, if so, how they would be delineated and what the evidence base would be to delineate the boundaries. SZC Co. is confident in the population units particularly those of commercial species where ICES stock units are applied. The ICES approach is a multistage international process with internal and external peer review that brings together experts in fish biology to define stock units. ICES stock units therefore represent international consensus on the best interpretation of current evidence. **Effectiveness of LVSE heads:** The SZC Co. position on the headworks acting as a reef was provided in Section 1.6 of Written Submissions Responding to Actions Arising from Issue Specific Hearing 10: Biodiversity, Ecology and HRA (27 August 2021) [REP7-073]. Here we comment on the literature cited by the Environment Agency and consider the potential for the LVSE heads to attract shoaling species. As pointed out by the Environment Agency, artificial structures have the potential to act as reefs causing aggregations of fish. Such effects have been postulated for power station intakes (e.g. Turnpenny, 1988; Turnpenny & Taylor, 2000), however, few studies have been able to test this. The potential for intake heads to act as artificial reefs influencing impingement of different fish and invertebrate species was studied at Redondo Beach Power Plant. This site has provided abundant literature such as that cited by the EA (e.g., Helvey, Dorn, 1981,1987; Helvey,

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	and an attractant to fish. As we have no way to quantify this potential risk, we are using an LVSE factor of 1.0. Additionally, we noted that there is the possibility that the intake heads may act as a reef and an attractant for fish. The very large LVSE intake superstructures that are to be employed at SZC are a novel design that has not yet been operated. So uncertainty surrounds the impact on fish impingement, in that they may create a potentially favourable artificial habitat, and therefore, provide an increased risk of entrapment. We know that: a. It is well referenced in literature that undersea structure form an artificial reef-like structure that can inadvertently create an artificial reef, increasing the risk of attracting fish into the intake (Scarborough Bull & Love, 2019; Turnpenny, 1988; Turnpenny & Taylor, 2000). Authors have reported increased fish diversity and abundance around artificial structures (Helvey & Dorn, 1981, 1987), b. The size of the structure at SZC is much larger than the smaller simple capped intake structure at SZB. So making the assumption that the LVSE will have the same impact as SZC intake structure is not sound. c. While there is literature showing the natural attraction fish have to artificial structures underwater; there is a lack of knowledge as to how a large complex LVSE structure may behave in comparison to the different SZB design. Not all fish species may show increased mortalities as a result of being drawn to the LVSE head, but there could be some risk to shoaling fish species if they are attracted to the LVSE (Helvey,	1985). The offshore intake structures are described as *"high relief conduits surrounded by structurally complex rock rip-rap"* (Helvey, Smith, 1985). The intakes are 3m high, and the velocity cap above is supported by concrete pillars of 1.2m. The length and width of the structure does not exceed 7-8m as judged from Figure 1 in Helvey & Dorn, 1981 (exact measurements are not available). The rock "rip-rap" is about 15m across. Helvey and Smith (1985) describe the visual landmark and hard structures supporting algal and invertebrate growth as important factors for attracting water column species and structural complexity is important for attracting benthic species. Most fish impingement is of "*water-column oriented, schooling fishes that **are not** associated with reef structures, but whose relation to the reef .. is incidental*" (Helvey, 1985; Helvey, Dorn, 1987). This is also the case at Sizewell, where most impingement is represented by herring and sprat that are unlikely to become associated with an artificial reef as they are pelagic shoaling species. The SZB intake heads are octagonal and ~11.5m across. The structure has intake apertures from approximately 1.5 m to 4.5m above the seabed, and scour protection is by means of layered fine-medium boulders (on the Wentworth scale). Equally, the SZC LVSE heads, whilst larger, would not have the structural complexity associated with the rock rip-rap at the Redondo Beach Power Plant to provide cover for benthic species. From a biofouling perspective, the LVSE intake head has been deliberately designed with its internal surface area reduced to restrict biofouling. The vertical bars on the entrance, which act to prevent objects and marine mammals entering the intake will be copper plated to prevent biofouling [REP7-073]. Whilst the LVSE structures are

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	1985). This may be an increased risk in the summer and early autumn, when number are lower, but this is when the large SZC LVSE could become more visible due to reductions in turbidity.	larger than the SZB intakes they are hydrodynamically designed and tidally oriented to prevent the formation of eddies and slack water areas. Furthermore, the intake structures lack superstructure that can act as a refugia for some fish species. These features have would limit the capacity of the SZC LVSE to act as a reef compared with the current SZB design. Outage inspections of the SZB intakes have not identified any artificial reef. Even if it did, on the same premise that the EA suggests the LVSE would, this would be represented in the SZB impingement record and therefore be accounted for in the SZC impingement predictions. References: Helvey, M. (1985). Behavioral factors influencing fish entrapment at offshore cooling-water intake structures in southern California. Marine Fisheries Review, 47, 18-26. Helvey, M., Smith, R.W. (1985). Influence of habitat structure on the fish assemblages associated with two cooling-water intake structures in southern California. Bulletin of Marine Science. 37; 189-199. Helvey, M., Dorn, P. 1981. The fish population associated with an offshore water intake structure. Bulletin of the Southern California Academy of Sciences, 80, 23-31. Helvey, M., Dorn, P. 1981. Selective removal of reef fish associated with an offshore cooling-water intake. Journal of Applied Ecology 24: 1-

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
		12. Turnpenny, A. W. H. 1988. The behavioural basis of fish exclusion from coastal power station cooling water intakes. Central Electricity Generating power station cooling water intakes. Central Electricity Generating Board, Research Report No. TPRD/L/3270/R88, 28pp. + Figs. + Tables. Turnpenny, A. W. H., Taylor, C.J.E. 2000. An assessment of the effect of the Sizewell power station on fish populations. Hydroécologie Appliquée 12: 87-134.
c. Eels Regulations; to understand the positions of the Environment Agency and Applicant in relation to compliance and entrainment monitoring – see the responses and exchanges on ExQ.Ma.1.0 and the Environment Agency's position generally on this	**Eels (England and Wales) Regulations 2009 Compliance - EA position** For nuclear safety reasons, NNB GenCo (SzC) are not able to use screens small enough to prevent the entrainment of glass eels. Regulation 17(4) of the Eels Regulations 2009 provides that eel screens must be used on structures of this kind which divert in excess of a certain volume of water. Under Regulation 17(4) the provision of such screens is a requirement and failing to comply with this provision is a criminal offence. However, under Regulation 17(5)(a) the Environment Agency can exempt operators from the requirement to provide screens if it considers it appropriate to do so. The Environment Agency accepts NNB GenCo (SzC)'s case that screens are not feasible in this case. The Environment Agency has outstanding concerns over what the total entrapment losses of eel will be from the operation of SZC and what impact this could have on the Anglian River	SZC Co. is of the view that when the totality of the evidence is considered including sampling effort, entrainment mortality studies, and evidence of eel migration and behaviour relative to the location of the SZC infrastructure, the potential for entrainment losses of glass eels leading to significant impacts on the Anglian River Basin District (RBD) eel stock is very low. Further details are provided in Section 6.6.2 pdf p.g. 137 of BEEMS Technical Report TR406.v7 [AS-238]. Whilst it is the position of SZC Co. that the risk of the station to glass eel remains very low, the offshore sampling effort required to provide the Environment Agency with the level of certainty required would be highly demanding. Through ongoing consultation, positive steps have been made to address the Environment Agency concerns about glass eels by: • Proposed entrainment monitoring at SZC as outlined in the draft Fish Monitoring Plan (Doc. Ref. 10.7). Monitoring is intended to quantify entrainment impacts of SZC on glass eels.

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	Basin District (RBD) eel stock. Our concerns are predominantly in relation to the uncertainty that exists of what entrainment losses will be to glass eels and the effectiveness of some of the mitigation that is proposed to reduce impacts to impinged eels. Through our review of predicted glass eel entrainment survival we have seen a reduction in predicted survival from 100% in BEEMS TR318 v3 to 82.8% in BEEMS TR273. The latest assessment does not account for mortality at the band screens. Mean survival of entrainment through the drum and band screens is expected to be 75.35%, L95 survival is 68.42%. Numerous other variables could influence this result further and this is not considered a precautionary assessment. We consider that the glass eel specific sampling undertaken at the location of the SZC intakes is too limited to predict glass eel entrainment figures from. Sampling also missed the peak migration The applicant produced a 'worst case' glass eel entrainment paper (BEEMS SPP104) which used speculative calculations built from assumptions. It was not possible to conclude what the level of entrainment would be from this report and we requested that the applicant should monitor glass eel entrainment once SZC becomes operational to determine impacts from. The applicant indicated at the ISH10 hearing that it would be possible to monitor glass eel entrainment at SZC. This is a positive step as without entrainment monitoring conducted at a sufficient intensity it will not be possible to confirm the actual impacts to eels and the Anglian RBD eel stock once the station becomes operational.	• Contributing to the funding of two fish pass systems to be constructed by the Environment Agency: one at Snape Maltings (River Alde) and one at Blythford Bridge (River Blyth). These measures will enhance upstream eel passage and are secured by Schedule 11, paragraph 9.1 of the DoO (Doc. Ref 8.17(H)). **Additional points of clarity on entrainment mortality:** Here, and in point 11.11 of [REP2-135] the Environment Agency question the entrainment survival predictions for glass eels which are based on the results of Entrainment Mimic Unit (EMU) studies. The entrainment survival for glass eels is based on the combined exposure to pressure, temperature and chlorination is 84.3% (L95 percentile 77.2%, U95 percentile 89.6%) or 82.8% (L95 percentile 75.8%, U95 percentile 87.0%) accounting for additional pumping mortality. The Environment Agency make the point that 9% of the cooling water flow passes through the band screens (this water services the essential and auxiliary water cooling requirements as well as some operational cooling). Following passage through the band screens any entrained glass eels would be exposed to seasonal chlorination and increases in temperature. However, the cooling requirements of the essential and auxiliary cooling water systems are much reduced in comparison to the main condensers. Therefore, the basis for the Environment Agency assumption of 100% mortality is not clear. The reduced thermal loading during passage of glass eels entrained in the essential and auxiliary cooling water, prior to mixing in the discharge pit, may lead to reduced

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	The applicant has committed to provide additional mitigation to help offset impacts to eels from the operation of SZC. This could be achieved by improving fish passage in the waterbodies adjacent to SZC (Ore & Alde and Blyth) for migratory species. The EA have not received any proposals from applicant on additional mitigation to offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals. We are concerned that [if a requirement for monitoring is not legally secured] entrainment monitoring will not be undertaken at SZC once the station becomes operational. As previously stated entrainment monitoring is required as this is the only accurate way to assess the level of impact to this species at this life stage. We await proposal from the applicant for robust entrainment monitoring. **Additional matters arising from ISH10** The ExA asked if the EA can submit text of relevant regulation for eels exemption EXTRACT FROM EELS (ENGLAND AND WALES) REGULATIONS 2009 Eel screens 17.—(1) This regulation applies to— (a)any diversion structure capable of abstracting at least 20 cubic metres of water through any one point in any 24-hour period; and	mortality. In both BEEMS Technical Report TR318 Rev 6 [APP-324] [1], and in the worst-case glass eel assessment (BEEMS Scientific Position Paper SPP104 [AS-238]), SZC Co. has assumed a mortality term of 80%. This level of entrainment mortality is considered appropriate. However, given the low anticipated densities of glass eels at the location of the SZC intakes and the relative high survival of eels even applying the Environment Agency estimates, significant effects on the Anglian RDB eel population viability due to SZC are not predicted.

[1] The Environment Agency have directed the ExA attention to BEEMS Technical Report TR318.v3 which was not submitted as part of the DCO application because it was superseded by BEEMS Technical Report TR318 Rev 6 [APP-324].

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	(b)any diversion structure returning water to a channel, bed or sea. (2) Before 1st January 2015, the Agency may, by service of a notice, require a responsible person to place an eel screen in a diversion structure. (3) The notice may specify the dimensions and type of screen and where it is to be placed in the diversion structure. (4) On or after 1st January 2015, a responsible person must ensure an eel screen is placed in a diversion structure. (5) The Agency may, by service of a notice— (a)exempt the responsible person from the requirement in paragraph (4); or (b)require the responsible person, at their own cost, to alter the dimensions (including mesh size) and the placement of any screen placed under paragraph (4) to those specified in the notice. (6) It is an offence to fail to comply with— (a)a notice served under paragraph (2) or (5)(b); or (b)paragraph (4).	
d. Smelt – the Environment Agency's position in their Written Representation [REP2-135], summarised at Annex B, epage 74	**Impacts to smelt populations of relevance to Sizewell.** The Environment Agency has a statutory duty to maintain, improve and develop smelt fisheries and conserve their aquatic environment under the Environment Act 1995. Smelt are listed as a biodiversity action plan (BAP) species and are a key indicator species under The Water Environment (Water Framework Directive) Regulations 2017 (WFD). Smelt have been described as vulnerable, rare and very	SZC Co. contests the view that there is sufficient uncertainty to prevent determining that the proposed development presents no significant risk to smelt in the Alde & Ore. Further evidence to address the specific concerns raised by the Environment Agency is provided below. However, proposals have been secured through the Deed of Obligation, Schedule 11, paragraphs 9.1 - 9.5 (DOC. Ref 8.17(H)) to provide mitigation for smelt in local waterbodies should monitoring demonstrate that Sizewell C is impacting significantly on those populations.

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	sensitive to anthropogenic environmental changes. Status of Rare Fish. A Literature Review of Freshwater Fish in the UK, Winfield et al (1994). Smelt populations have historically been impacted to a point causing the collapse and loss of discrete populations of the species from some water bodies on the east coast, from which their recovery has taken a long time. Some water bodies have not recovered from this historical collapse. The closest known breeding population of smelt to the Sizewell area is located in the Ore and Alde waterbody to the south of the development. The applicant has hypothesised that smelt impinged in the Sizewell Bay are from a wider Southern North Sea stock, the applicant has applied large stock assessment units which include large smelt populations from estuaries in Germany and Belgium. They have also compared impacts against a UK stock that spans the east coast of England. The methods used to derive the European population figures in BEEMS SPP100 are not acceptable. Genetic studies have demonstrated a level of homogeneity in a wider stock that spans the coast from the Thames to the Broads. This would indicate that the population in the Ore & Alde experience some immigration from this wider stock. The geographical extent and level of immigration effecting the Ore & Alde population is not known. The EA's monitoring programme undertaken for the WFD does not support the hypotheses that large numbers of smelt are migrating into the Sizewell area from a wider stock. If we compare the Orwell, Stour and Ore/Alde waterbodies, all located along the Suffolk coast, we can see a significant	As described at Agenda Item 3 (c) above, SZC Co is making contributions to Environment Agency schemes to install fish passes in the Alde and Blyth for eels. These need to be installed before Sizewell C becomes operational and would provide significant benefit not just to eels, but also to smelt (and other migratory fish). Condition 51 on the DML requires Sizewell C to develop and implement a smelt monitoring and mitigation plan (SMMP). Should monitoring from the SMMP demonstrate that Sizewell C is impacting significantly on local smelt populations he Marine Technical Forum can authorise release of an additional fund to contribute to/or fund other river improvements further upstream. These measures are intended to enhance smelt numbers in the local waterbodies and mitigate any impacts from the proposed development. For further comment on the WFD waterbodies please see Agenda Item 3.e., below. In relation to the impacts of the station, SZC Co. has responded to the Environment Agency concerns regarding the relevant smelt population comparator. No existing population estimate for smelt is available. Predicted losses are compared to an estimated population biomass by applying landings data from the Environment Agency. As stated, the Environment Agency has a "statutory duty to maintain, improve and develop smelt fisheries". The Environment Agency manages a restrictive licensing of smelt fisheries. For the years with catch data, the mean landings in the east coast Anglian Region between 2009-2017 were 8.63t. Taking the precautionary assumption that this restrictive licensing of fishing by the Environment Agency, represents the

<table>
<tr><th>Agenda Item</th><th>EA Position</th><th>SZC Co. Response</th></tr>
<tr><td colspan="3">3. Marine Ecology</td></tr>
<tr><td></td><td>difference in smelt abundance between 3 waterbodies. All 3 waterbodies are sampled consistently for the WFD. Catch Per Unit Effort (CPUE) is a measurement of how many individuals of a given species are recorded per sampling occasion in a given waterbody.

<table>
<tr><th>Waterbody</th><th>No of smelt caught</th><th>Size range mm</th><th>Years of sampling</th><th>CPUE (TraC only)</th></tr>
<tr><td>Ore & Alde</td><td>278 (406 incl freshwater)</td><td>49-247</td><td>10</td><td>1.66</td></tr>
<tr><td>Stour</td><td>11</td><td>28-216</td><td>12</td><td>0.03</td></tr>
<tr><td>Orwell</td><td>9</td><td>62-222</td><td>15</td><td>0.03</td></tr>
</table>
Table 2. Smelt abundance in the Stour, Orwell and Ore & Alde waterbodies (EA data).
Due to the uncertainty over the level of immigration into this area it is not possible to confirm that immigration from a wider stock would exceed the predicted exploitation from SZC and SZB. This predicted exploitation could lead to the sustainability of the Ore & Alde population being compromised.
The applicant has committed to provide additional mitigation to help offset impacts to smelt from the operation of SZC. This could be achieved by improving fish passage in the waterbodies adjacent to SZC (Ore & Alde and Blyth) for migratory species.

EA have not received any proposals from applicant on additional mitigation to offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals</td><td>maximum sustainable harvesting rate for the species, of approximately 16%, a calculated SSB of 53.9t can be estimated (Section 6.6.1 of BEEMS Technical Report TR406.v7 [AS-238]).

This precautionary population biomass has been used as the comparator for impingement losses in the uncertainty analysis (BEEMS Scientific Position Paper SPP116 [REP6-028]). Losses of the proposed SZC station are predicted to be ca. 0.29t per annum representing 0.60% of the SSB as a mean and 0.92% at a 95th percentile. Such losses against a precautionary SSB are not considered to pose a significant threat to the population viability.

The Environment Agency concern seems to stem from the uncertainty about immigration rates into the Alde & Ore. That is, the potential for SZC to remove fish at a rate that exceeds the reproductive capacity of the fish in the Alde & Ore and the rate of immigration from other river systems. The point the Environment Agency make about the level of immigration between the Suffolk waterbodies based on relative CPUE from transitional fish classification index (TFCI) data is tenuous. This is because the TFCI does not sample these waterbodies during the main spawning migration season for smelt (February-April), different survey gears are applied some of which are semi-quantitative and have different catch efficiencies, and relative CPUE. Therefore, even if it were a proxy for density, it is not an indicator for migration between waterbodies. It is also not clear why the Environment Agency have chosen not to include the WFD TFCI data from the Bure & Waveney & Yare & Lothing waterbody complex where, between 2007-2010, 58</td></tr>
</table>

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
		smelt were recorded. SZC Co. has not attempted to recreate a CPUE accounting for the different sampling methods used between the waterbodies. The Bure & Waveney & Yare & Lothing complex is between approximately 30-40km north of SZC and tagging studies have demonstrated spawning migrations within these rivers (Moore *et al.,* 2015). The Alde & Ore is 25km south of SZC with the estuaries of the Orwell and Stour approximately 40km south. The Environment Agency are correct that large scale intermingling is not necessary for genetic homogeneity, but the fact there is limited genetic structure from samples from the Thames to the Ouse, whilst smelt from the Tamar are genetically distinct, shows the mixing occurs from at least the Thames to the Ouse. Therefore, immigration of smelt is likely to occur from such wider sources and impingement losses are equally unlikely to be from a single spawning river. Greatest impingement of smelt occurs during summer feeding and is likely to be fish from a number of spawning rivers (see BEEMS Scientific Position Paper SPP103.v5, Section 3.6.2.1 and Figure 10 [REP6-016]). Factors other than entrapment at SZC are likely to have the overriding influence on the status of smelt in the Alde & Ore. These include barriers to upstream migration to the spawning grounds (see responses in Agenda Item 3.e.). The tide gates at Snape Maltings are *"considered to be impassable for smelt and therefore likely to be hindering the reproductive capacity of the population due to restricted access to spawning habitat. Fish and eel pass feasibility assessments completed by the Environment Agency confirm that the structure is considered impassable for all fish species (Wood, Environment Agency 2016 pers. comm.)"* (extract from Natural England, 2018). Whilst smelt may spawn

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
		the in the upper reaches of the estuary, fish passes would increase access to spawning habitat. The proposals being developed in consultation with the Environment Agency, including installation of fish passes at Snape Maltings and Blythford Bridge as well as monitoring of smelt in the Alde (secured by the Deed of Obligation (Doc. Ref. 8.17(H)), would improve the status of smelt and other migratory species in the Alde & Ore and Blyth waterbodies. Moore, A., Ives, M., Davison, P., Privitera, L. 2015. A preliminary study on the movements of smelt, *Osmerus eperlanus*, in two East Anglian rivers. Fisheries Management and Ecology, 23 (2), 169-171. Natural England. 2018. Marine Conservation Zones Natural England's advice to Defra on Marine Conservation Zones to be considered for consultation in 2017. Annex 2: Advice on Tranche 3 MCZs with the species feature of conservation importance smelt (*Osmerus eperlanus*). Natural England Joint Publication JP026. June 2018.
e. Alde & Ore – reduction in numbers of fish entering – to understand the Environment Agency's position in their written representation [REP2-135] summarised at Annex B epage 74	**WFD Ore & Alde TFCI deterioration risk EA Position** The Environment Agency is concerned that as a result of entrapment losses to some fish species from the operation of SZC that a reduction in the number of fish entering the Ore & Alde and Blyth waterbodies has the potential to lead to a deterioration of this element under the Water Environment (Water Framework Directive) Regulations 2017 (WFD). The Blyth is not currently monitored for fish under the WFD	SZC Co. does not agree that there is sufficient uncertainty about the effects of the proposed development to conclude that there is a real risk of a deterioration in the status of the WFD fish classification of the Alde & Ore transitional waterbody. As described in Agenda Item 3.d. SZC Co. in consultation with the Environment Agency is seeking to implement measures to enhance the Alde and Ore and the Blyth by means of fish passes in both systems and monitoring in the Alde and Blyth. Proposals

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	programme and assessment will be undertaken on the Ore & Alde and applied to the Blyth by proxy. SZC Company at the request of the Environment Agency have run some potential fish reduction scenarios for the Ore & Alde Transitional Fish Classification Index (TFCI) looking at a targeted number of species of greatest importance in this waterbody. A within class deterioration is observed in all scenarios which brings the Ecological Quality Ratio (EQR) score close to the good/moderate boundary (0.58) and reduces the confidence in the classification to uncertain or no confidence. A greater number of scenarios have been run by the Environment Agency using a greater number of species that feature in the Ore/& Alde TFCI in the 6 year reporting cycle (2013-2018), these additional scenarios resulted in a class deterioration from good to moderate potential for fish in this waterbody. Due to the uncertainty which remains as to what the final predicted and actual entrapment loss figures will be from the operation of SZC, we are currently unable to conclude that a risk of deterioration for fish within this waterbody and by proxy the Blyth waterbody does not exist. In order for us to maintain WFD compliance we recommend requirements are included in the DCO to address this potential impact. These requirements would secure robust monitoring and provide mitigation and compensation to undertake improvements which would benefit fish in the affected waterbodies should a deterioration occur. EA have not received any proposals from applicant on additional monitoring, mitigation or compensation to accurately assess and	have been secured through the Deed of Obligation, Schedule 11, paragraph 9.1 - 9.5 (Doc. Ref. 8.17(H)). Based on Environment Agency concerns, SZC Co. ran a series of data manipulations whereby fish were removed from the WFD data series to determine the implications for manipulations of the fish status of the Alde & Ore waterbody. The report was reviewed by a TFCI technical expert and provided In the appendix for the Environmental Statement Addendum [see SPP108 in AS-238]. SZC Co. held consultations with the Environment Agency to present and discuss the results of the TFCI manipulations in March 2021. To determine the sensitivity of the TFCI to smelt abundance, smelt numbers in samples were manipulated at a range of levels including with the complete absence of smelt. A further test considered absence of smelt and twaite shad and 50% reductions in herring and seabass. The sensitivity of the TFCI was also tested through manipulated removals of thin-lipped mullet and Dover sole, as well as a scenario whereby smelt, thin-lipped mullet and Dover sole were all simultaneously reduced by 50%. Summary conclusions from pdf pg. 446 [AS-238] are provided: 1. The calculated Ecological Quality Ratio (EQR) was insensitive to manipulated reductions in smelt abundance of 25% and 50%. 2. Total absence of smelt reduced the EQR by 11% but 'good' status remained. Noting the numbers of smelt caught in the Alde & Ore TFCI in the Environment Agency comments on Agenda Item 3.d.,

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
	offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals	this manipulation is highly unlikely to reflect reality or the impacts of the station. 3. The extreme case requested by the Environment Agency, including absence of shad (1 individual caught between 2013-2018), absence of smelt, and 50% reductions in herring and sea bass. This extreme example resulted in a within class reduction of the EQR by 10.3%, however, 'good' status remained. 4. Total absence of thin-lipped grey mullet and Dover sole reduced the EQR by less than 4% in each case and 'good' status remained. 5. The status also remained 'good' following the combined 50% reduction of smelt, Dover sole and thin-lipped grey mullet. **Under all of the scenarios tested for fish manipulations, which are considerably worse than the predicted effects of SZC, there was no deterioration below 'good' status when the 2019 TFCI was calculated without fyke net data[2]. The report concluded that it is highly unlikely that the proposed development would cause a deterioration in the fish status of the Alde & Ore** [AS-238]. The Environment Agency has not provided details of the "*greater number of scenarios..... using a greater number of species* to SZC Co, nor what the justification for the selection of species is. In REP2-135 (Table 2), the Environment Agency introduced a new species of concern for the WFD; the five-bearded rockling *Ciliata mustela*. Five-bearded rockling are a common marine species that is impinged at Sizewell.

[2] All results shown are with the exclusion of fyke nets as the inclusion of fkye data in this situation results in statistical artefacts (SPP108 [AS-238]). .

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
		Under the WFD transitional fish classification index (TFCI) the five-bearded rockling can be found in all transitional ecotypes in England and Wales and is a 'marine seasonal' taxa. This benthic species feeds on invertebrates and is not an indicator species. A single five bearded rockling was detected in the Environment Agency Alde & Ore WFD sampling in the six-year cycle from 2013 to 2018 (see Table 3 of SPP108 pdf pg. 455 of [AS-238]). There is no ecological basis provided in support of its inclusion as a concern for the WFD status. The fact that a single occurrence exists in the TFCI data record suggest the concern is borne out of the potential for the removal of the species to have a statistical effect on the TFCI calculation. The chances, or not, of detecting five-bearded rockling are more likely dependent on the seasonal sampling intensity rather than any effects of the station. The status of the waterbodies upstream of the Alde & Ore and Blyth TraC have not achieved 'good' status for the fish classification due in part to a range of human and environmental pressures that are not connected to the identified impacts of SZC. The reasons for not achieving 'good' status for these various upstream water bodies include[3]: • Flow issues arising from groundwater abstraction by agricultural and rural land management practices. • Flow issues arising from groundwater abstraction by the water industry

[3] For further details please see the Environment Agency Catchment Data Explorer: https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3428

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
		• Diffuse source sediment issues arising from poor soil management from by agricultural and rural land management practices. • Point source nutrient (phosphate) issues from sewage discharges from the water industry and agricultural and rural land management. • Natural drought issues. • Reductions in DO due to drought. • Physical modification resulting in barriers and ecological discontinuity. As explained at Agenda item 3(d) these upstream issues are independent of the effects of the station. For example, the tide gates at Snape Maltings are *"considered to be impassable for smelt and therefore likely to be hindering the reproductive capacity of the population due to restricted access to spawning habitat. Fish and eel pass feasibility assessments completed by the Environment Agency confirm that the structure is considered impassable for all fish species (Wood, Environment Agency 2016 pers. comm.)"* (extract from Natural England, 2018). Whilst smelt may spawn the in the upper reaches of the estuary, the fish pass to which SZC Co is contributing to at Snape Maltings (and the one at Blythford Bridge) offer a positive enhancement to the current baseline.
g. Impacts of bromoform and hydrazine on birds, both direct and indirect are raised by RSPB in their	**No EA comments.** Some of these matter will be considered as part of the Environmental Permitting process and for this reason we are not commenting at the DCO stage.	Responses addressing the direct effects of bromoform and hydrazine toxicity on birds have been provided in Section 1.8 of Written Submissions Responding to Actions Arising from Issue Specific Hearing 10: Biodiversity, Ecology and HRA (27 August 2021) [REP7-073].

Agenda Item	EA Position	SZC Co. Response
3. Marine Ecology		
response to Ma.1.8. The Applicant's reply only addresses indirect effects. To understand the Applicant's position.		

Agenda Item	EA Position	SZC Co. Response
5. HRA Issues		
g. HRA and migratory fish2: i. Prey species – to seek clarification regarding the relationship between the fish entrapment calculations and indirect impacts of prey availability to SPA and SAC qualifying features; to explore which European sites and qualifying features this applies	**Additional Questions raised by ExA on 31/08** The ExA provided additional written questions within [EV-188] Request for Written Responses from Issue Specific Hearing 10 - 27 August 2021 *5.g.ii.a The Applicant has submitted a Technical Note on EAV and stock size (Appendix F of [REP6-024]). Could Natural England and the Environment Agency comment on this note and whether they agree with any of the EAVs and stock sizes assessed by the Applicant?* For Deadline 7 we have provided a response to the applicant's note on EAVs - [REP6-024] 9.63 Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 - Appendices - Revision 1.0. (pg 90) Appendix F: Technical Note on EAV and stock size. In summary, this note does not satisfy our concerns.	**EAV** SZC Co. has responded to Environment Agency and Natural England comments on the EAV and stock size Technical Note (Appendix F of [REP6-024]) at Deadline 8 is in "Comments on Earlier Deadlines and Subsequent Written Submissions to CAH1 and ISH8-ISH10 - Appendices Part 1 - Revision 1.0" [REP8-119]. **EIA and WFD assessments with outstanding impingement prediction concerns:** SZC Co. provided a series of reports and responses to address comments relating to stock size and EAV and impingement concerns. These include: • Technical Note on EAV and stock size (Appendix F of [REP6-024]).

Agenda Item	EA Position	SZC Co. Response
5. HRA Issues		
	The EA has not carried out a detailed review of the applicant's EAV calculations or their choice of underlying parameters, but has commented on broad concerns to help inform the Competent Authority's assessment. For repeat spawning species, for which the applicant has calculated EAVs, the EA considers that impacts may have been underestimated as detailed in our Deadline 5 Submission [REP5-150] Post Hearing submission of oral case for Issue Specific Hearing 7 (Biodiversity and Ecology), Part 1 and 2 (pg.22) At Deadline 2 we submitted REP2-135 EA Written Representation that contained Table 2. Species of relevance under the EIA and WFD assessments with outstanding impingement prediction concerns (pg. 20). – extract below	• BEEMS Scientific Position Paper SPP116 Quantifying uncertainty in entrapment predictions for Sizewell C [REP6-028]. Revision 2 addressing the potential for diurnal bias in the CIMP data, the entrainment gap for relevant species and responding to comments from stakeholder will be submitted at Deadline 10 as Doc. Ref. 9.67 (A). • Written Submissions Responding to Actions Arising from ISH7: Biodiversity and Ecology - Parts 1 and 2 [REP6-002] – including 'thin fish' and the 'entrainment gap'. • BEEMS Scientific Position Paper SPP103.v5 on Local Effects assessment considering uncertainty in mitigation efficiencies [REP6-016]. Further information is provided in response to Agenda Item 5.g.ii, on the uncertainty analyses below. In Table 2, the Environment Agency point to four species of EIA concern (river lamprey, twaite shad, European eel and European smelt) and 11 species of concern for the WFD. In relation to the WFD, as stated in our response to 3.e. it is difficult to ascertain the nature of the remaining WFD concern given: (a) the very low likelihood of impacts from the station influencing the status of the waterbody and (b) the commitment from SZC Co. to provide enhancement and monitoring options secured through the Deed of Obligation, Schedule 11, paragraph 9.1 - 9.5 [REP7-040].

<table>
<tr><th>Agenda Item</th><th>EA Position</th><th>SZC Co. Response</th></tr>
<tr><td colspan="3">5. HRA Issues</td></tr>
<tr><td></td><td>
<table>
<tr><th>Species</th><th>EIA</th><th>WFD</th><th>Repeat Spawner (iteroparous)</th><th>Agreement on stock comparator</th></tr>
<tr><td>River lamprey</td><td>Yes</td><td>No</td><td>No</td><td>Yes</td></tr>
<tr><td>Twaite shad</td><td>Yes</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>European eel</td><td>Yes</td><td>Yes</td><td>No</td><td>Yes</td></tr>
<tr><td>Five beard rockling</td><td>No</td><td>Yes</td><td>No data</td><td>No data</td></tr>
<tr><td>Herring</td><td>No</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>Bass</td><td>No</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>Thin lipped grey mullet</td><td>No</td><td>Yes</td><td>No data</td><td>No</td></tr>
<tr><td>European smelt</td><td>Yes</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>Plaice</td><td>No</td><td>Yes</td><td>Yes</td><td>No data</td></tr>
<tr><td>Sand goby</td><td>No</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>Dover sole</td><td>No</td><td>Yes</td><td>Yes</td><td>No</td></tr>
<tr><td>European sprat</td><td>No</td><td>Yes</td><td>Yes</td><td>No</td></tr>
</table>
Table 2. Species of relevance under the EIA and WFD assessments with outstanding impingement prediction concerns.

This table details species where we have concern regarding EAVs and scale of assessment. Where species are repeat spawners we have EAV concerns. Where we have not agree the stock comparator we have 'scale of assessment' concerns.
5.g.ii.b) In particular, the Applicant has explained that an EAV of 1 has been used for river lamprey and European eel and that this is the maximum theoretical number that could be applied. On this basis, could Natural England (and the Environment Agency where appropriate):
• Comment on whether it still has concerns about the EAV applied to river lamprey and European eel?
</td><td>
The majority of the remaining species, with the exception of sand goby, thin lipped grey mullet and five-beard rockling (see response to Agenda Item 3.e) are subject to ICES stock assessments and the stocks are well defined by international processes as described in BEEMS Scientific Position Paper SPP103.v5 [REP6-016]. Furthermore, SZC Co. has submitted a full ICES stock assessment for sea bass at Deadline 8 [REP8-131] to provide further confidence in the assessment of no significant effects on the viability of the population.

The remainder of the response considers the four remaining species of EIA concern for the Environment Agency:
River lamprey – SZC Co. and the Environment Agency agree on the application of a precautionary stock comparator from a single river catchment and the application of an EAV of 1. An EAV of 1 is the theoretical maximum for semelparous species that spawn once then die. The predicted effects are 0.06% of the population estimate as a mean and 0.10% as an upper 95th percentile (Doc. Ref. 9.67 (A)), so there is an extremely low risk of detectable impacts on this species.

Twaite shad – A highly precautionary EAV of 1 has been applied. There is disagreement relating to the population comparators including the confidence in the estimate of the population size of the Scheldt and Elbe. SZC Co. have addressed these concerns in SPP116.Revision 2 at Deadline 10 (Doc. Ref 9.67 (A)). However, the median annual effect on the single Elbe population is 0.07% (SPP116 Doc. Ref. 9.67 (A)). As described in SPP116 and SPP103.v5 [REP6-016], all the SACs designated for breeding populations of twaite shad are hundreds of
</td></tr>
</table>

Agenda Item	EA Position	SZC Co. Response
5. HRA Issues		
	European eel, river lamprey and sea lamprey do not repeat spawn, so yes, 1 is the maximum and we would not apply SPF EAV to these species. • *Confirm its position in relation to AEoIs to river lamprey of the Humber Estuary SAC?* • *Confirm its position in relation to breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA? (prey species matter). On this Natural England and the Environment Agency have both noted during the Examination that bittern feed on eels. They have therefore raised concerns that impingement of eels could then indirectly impact on breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA. So in relation to bittern: Given the clarification received that the Applicant used an EAV of 1 for European eel, can NE and the EA comment on whether this relieves their concerns for breeding bittern; specifically, do they have sufficient information to exclude an AEoI on breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA"* For these two matters the EA defer to Natural England's opinion as the statutory nature conservation body with regards to HRA matters for the DCO.	kilometers from SZC. Consistent with the proposed HRA approach all losses have been apportioned to single river populations where data is available. However, this is highly precautionary and the low entrapment rates and precautionary EAV strongly indicate no significant risk to the populations. **European Eel** – An EAV of 1 is the theoretical maximum and has been applied to yellow eel impinged at Sizewell. The Anglian RDB population comparator is agreed. The assessment is therefore precautionary for yellow eels. The uncertainty relates to glass eels as described in Agenda Item 3.c and measures have been proposed for monitoring entrainment of glass eels at SZC and to enhance local waterbodies by means of fish passes. **European smelt** – Concerns pertaining to smelt and actions being taken by SZC Co. in terms of enhancement and monitoring are discussed in Agenda Item 3.d.
iii. Entrapment uncertainty report – to seek the views of the EA and NE on the Applicant's report entitled 'Quantifying uncertainty in	**Additional Questions raised by ExA on 31/08** The ExA provided additional written questions within [EV-188] Request for Written Responses from Issue Specific Hearing 10 - 27 August 2021	SZC Co. has not received further responses from the MMO and Natural England on the uncertainty analyses in SPP116 [REP6-028] at Deadline 8. However, during consultation with the MMO as part of the Statement of Common Ground process they confirmed they are satisfied by the additional uncertainty analyses completed by SZC Co.

Agenda Item	EA Position	SZC Co. Response
5. HRA Issues		
entrapment predictions for Sizewell C' [REP6-028] and in particular on whether without the LVSE heads effects are below thresholds which would trigger further investigation for potential population level effects.	*5.g.iii.a Do the Environment Agency and Natural England have any comments on the Applicant's report entitled 'Quantifying uncertainty in entrapment predictions for Sizewell C' [REP6-028]. Do you agree with the Applicant that without the LVSE intake heads, effects are below the thresholds that would trigger further investigation for potential population level effects?* For Deadline 7 we have submitted comments on report [REP6-028] Deadline 6 Submission - 9.67 Quantifying Uncertainty in Entrapment Predictions for Sizewell C - Revision 1.0 The Environment Agency considers the report does not address our concerns relating to the data and methodologies used to consider the impact to marine ecology. In particular, significant issues remain that relate to the Comprehensive Impingement Monitoring Programme (CIMP) data, Equivalent Adult Value (EAV) calculations and scale of assessments. Without these issues being addressed we cannot advise whether the effects are below thresholds that would trigger further investigation to consider population level effects	Based on comments received to date from the Environment Agency and IPs, a revised version of "Quantifying Uncertainty in Entrapment Predictions for Sizewell C" ([REP6-028]) is provided at Deadline 10 (Doc. Ref. 9.67 (A)). The additional information includes: • Further analyses to determine the implications of overflows in bulk samples during the Comprehensive Impingement Monitoring Programme (CIMP). When overnight bulk samples overflow this can result in either over- or under-estimations in impingement predictions extrapolated from daylight hourly samples. Where impingement rates are potentially underestimated a correction factor has been applied. No correction has been applied to species potentially overestimated. • Determination of the uncertainty in the shad population estimates in the Scheldt and the Elbe. In the absence of known population estimates of twaite shad in the mainland European SACs scoped into the HRA, SZC Co. estimated the population size in the Elbe and the Scheldt based on monitoring data. Further scrutiny of the assumptions for estimating population size along with confidence intervals has been provided. • Quantification of the 'entrainment gap' for sand gobies, herring and sprat. This accounts for the size range of fish that may be inefficiently sampled between entrainment monitoring and impingement monitoring. The relative effect of this proportion of small size class fish to the entrapment predictions has been estimated and included in the uncertainty analysis.

Agenda Item	EA Position	SZC Co. Response
5. HRA Issues		
		The impingement and entrainment monitoring at SZB provide a very powerful data set to predict entrapment rates at SZC. Whilst these factors add further detail to the assessment, the underlying conclusions remain unchanged. Effects on all species assessed are below threshold levels likely to pose a risk to the viability of the population.

APPENDIX C: EMAIL CORRESPONDENCE FROM SZC CO. TO THE ENVIRONMENT AGENCY ON SIZEWELL LINK ROAD

[redacted]

From: [redacted]
Sent: 07 September 2021 16:38
To: [redacted] - Environment Agency ([redacted]@environment-agency.gov.uk); [redacted], [redacted]; [redacted], [redacted]
Subject: FW: SLR landowner flooding
Attachments: SW6_1A_100yr35CC.PNG; SW6_2_100yr35CC.PNG; SW6_Plot_100yr35CC.png

[redacted],

Many thanks for a very positive discussion earlier today.

It was an action on me to provide some additional information on Crossing 6 for SLR. We have provided the following to our land agent for onward transmission to landowners where they have concerns, and I have offered to talk them through the detail. The key point here is that the watercourse cross sections demonstrate that the increase in flood levels remains in bank, and therefore the apparent out of bank flooding is a result of coarseness within the model.

Regards, [redacted]

Note: We consider this information commercially sensitive and we are sharing it with you in confidence, if you are required to share this information please notify us first.

[redacted]

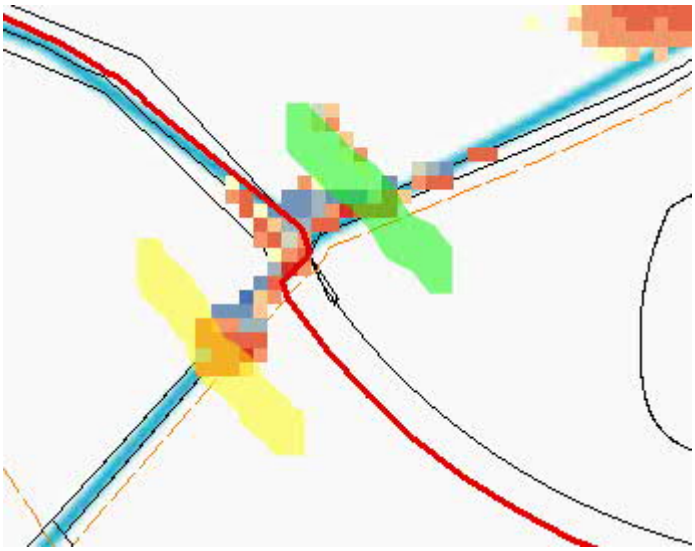
From: [redacted]
Sent: 24 August 2021 18:17
To: [redacted]
Cc: [redacted]
Subject: [EXTERNAL] RE: SLR landowner flooding

[redacted]

Prior to the information going to [redacted], I thought we'd drop you a quick line. Attached are three images:

- SW6_Plot_100yr35cc shows the alignment of the SLR at Crossing 6 and shows that we have the road in the correct location within the model (not like the 2VB). It shows the flooding is at the entrance to the culvert as you suspected. However, unlike 2VB which was a 2D model the SLR modelling is 1D only and so it shows the flooding to be present on the SLR embankment. In reality, the flooding would not be present due to:
    1. As the embankment is raised the flood depth is somewhat "artificial" as it is overlaying onto the underlying LiDAR and the ground will be raised once the SLR is built
    2. Having looked at the cross section in this location there is a low point in the LiDAR and the water is filling the low point – the modelling cross section shows the water levels are approx. 2cm below top of bank so in reality the water should be just staying in bank in this area. This is one of the limitations of 1D modelling where it overlays the water level onto the adjacent topography without figuring out if there is a flow route for water to reach that point.

- Of the two remaining plots, SW6_1A is the cross section at the approximate location shown as the yellow line upstream of the incoming watercourse and SW6-2 is the cross section at the approximate location shown as a green line downstream of the incoming watercourse. These show that the water is in bank during the 100 year plus 35cc event and the flooding is actually the water in the watercourse. The resolution of the model in this area is relatively coarse and as such it appears water is out of bank when it is actually wholly contained within the channel (as demonstrated by the cross section plots).



Happy to talk over if you think we need to elaborate on anything to support [redacted] and the land team in their discussions.

Regards,

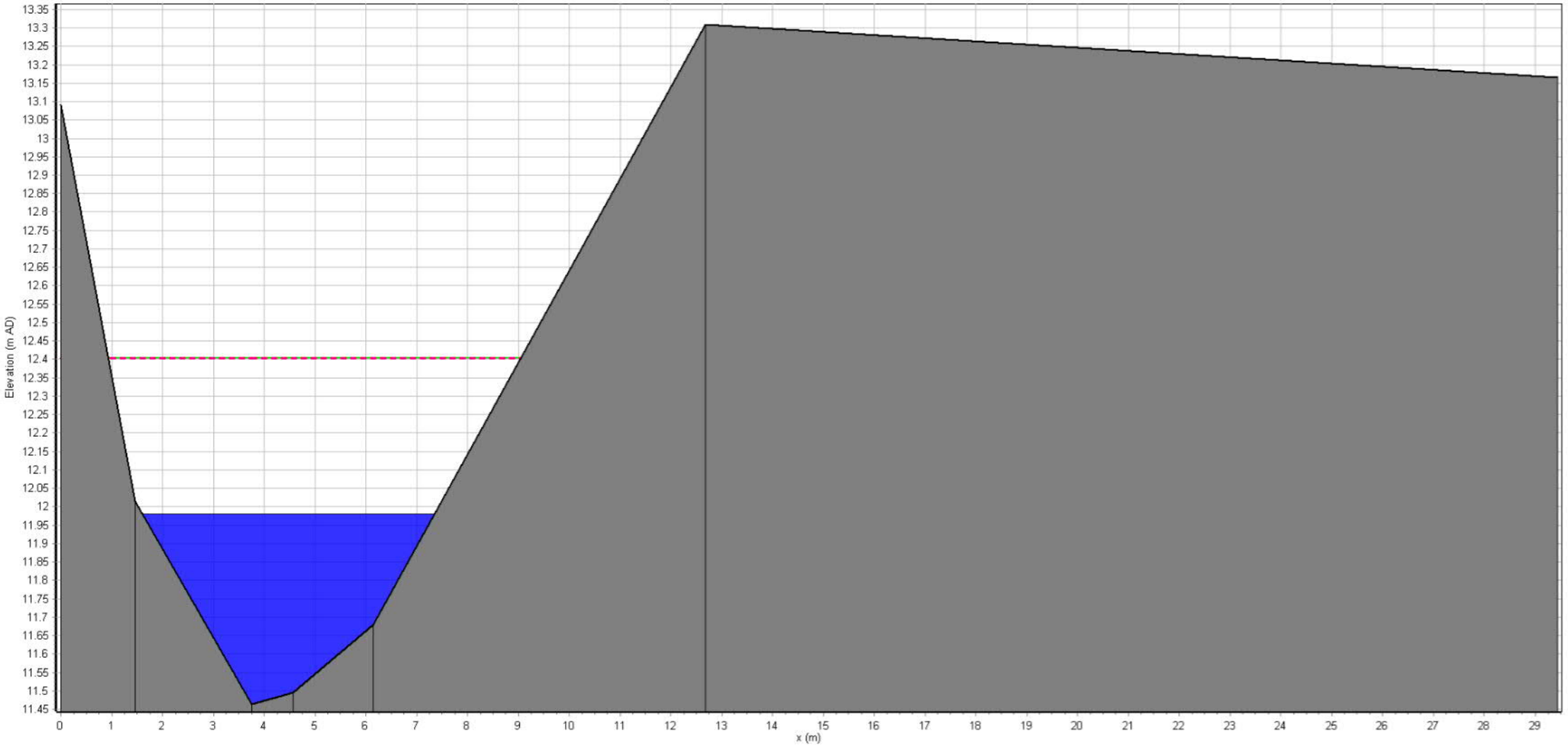
[redacted]

[redacted]

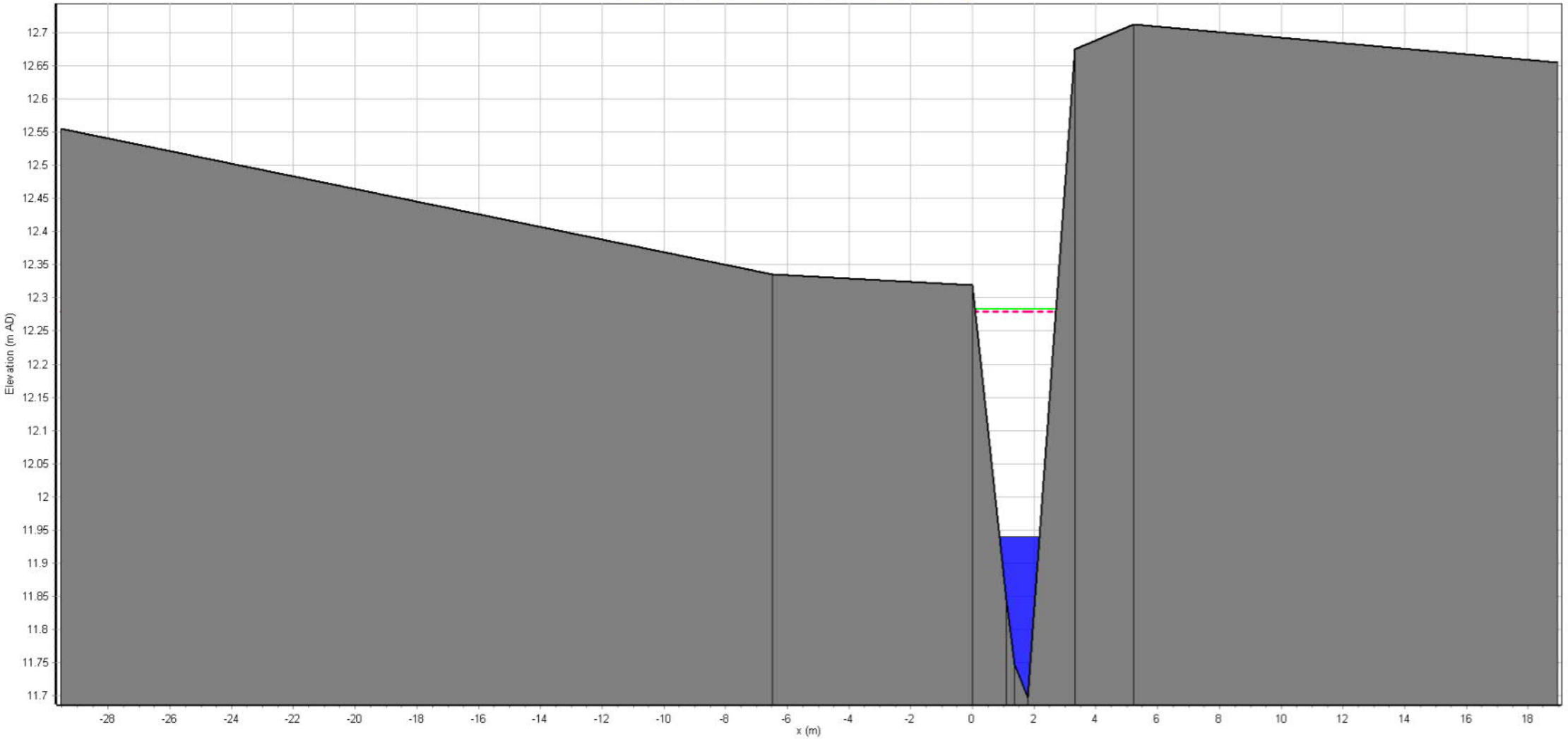
[redacted] | W: w[redacted]

My normal working days are Monday, Tuesday and Thursday

Cross-Section Data: SW6-1A



Crossing 6 - Cross-Section Data: SW6-2




N
0
12.5
25
50 Meters
Contains OS data © Crown Copyright and database right 2020

APPENDIX D: COPIES OF CORRESPONDENCE WITH DAVID AND BELINDA GRANT

ADDITIONAL PLANTING WITHIN TEMPORARY LAND TAKE AREA TO PROVIDE ADDITIONAL SCREENING

ADDITIONAL PLANTING AROUND BASIN (TO BE IMPLEMENTED AS TALLER PLANTING STOCK FOR EARLY SCREENING BENEFIT), WITH POTENTIAL USE OF ACOUSTIC FENCING TO PREVENT LIGHT SPILL FROM VEHICLES AT MIDDLETON MOOR LINK JUNCTION

POTENTIAL ENHANCEMENT OF EXISTING FIELD BOUNDARY BY AGREEMENT

PROPOSED 1M HIGH BUND

PROPOSED 2M HIGH BUND

ADDITIONAL PLANTING WITHIN TEMPORARY LAND TAKE AREA TO PROVIDE ADDITIONAL SCREENING

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

RETAINED HEDGEROW

RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)

RETAINED AND ENHANCED TREES AND SHRUBS

RETAINED AND ENHANCED POND

SOFTWORKS - PROPOSED

HEDGEROW PLANTING

NATIVE TREE AND SHRUB PLANTING AS SHOWN ON DCO DRAWINGS

NATIVE TREE AND SHRUB PLANTING - PROPOSED ADDITIONAL ENHANCEMENTS

GRASSLAND - RETAINED OR REINSTATED

TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

EXISTING POND TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

INDICATIVE POND FOR GREAT CRESTED NEWT MITIGATION

INDICATIVE POND FOR BIODIVERSITY NET GAIN

HARDWORKS - PROPOSED

HIGHWAY BOUNDARY FENCE

CLOSE BOARD FENCE

ACOUSTIC FENCE

VEHICLE SURFACING

TRACK

INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

CUTTING OR EMBANKMENT

INDICATIVE ATTENUATION BASIN

INDICATIVE SWALE

PROPOSED WATERCOURSE CULVERT

PROPOSED FLOOD RELIEF CULVERT

PROPOSED DITCH CULVERT

INDICATIVE WATERCOURSE DIVERSION

ACCESS ROUTES

EXISTING RIGHT OF WAY TO BE RETAINED

NEW PERMANENT RIGHT OF WAY

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
FORDLEY HALL

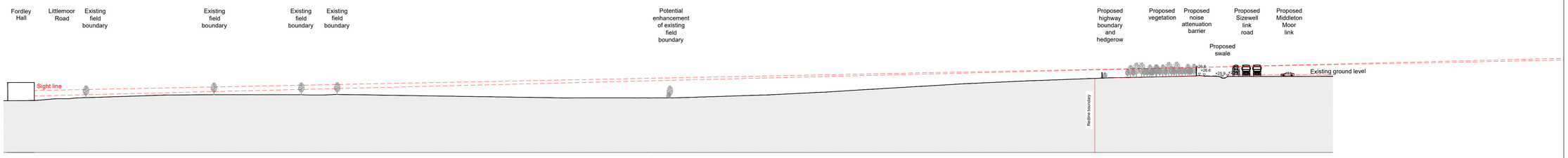
DRAWING NO:	REVISION:
7678_FH_SK001	

DATE:	DRAWN:	SCALE:
SEPT 2021	R.K.	1:2500 @ A1

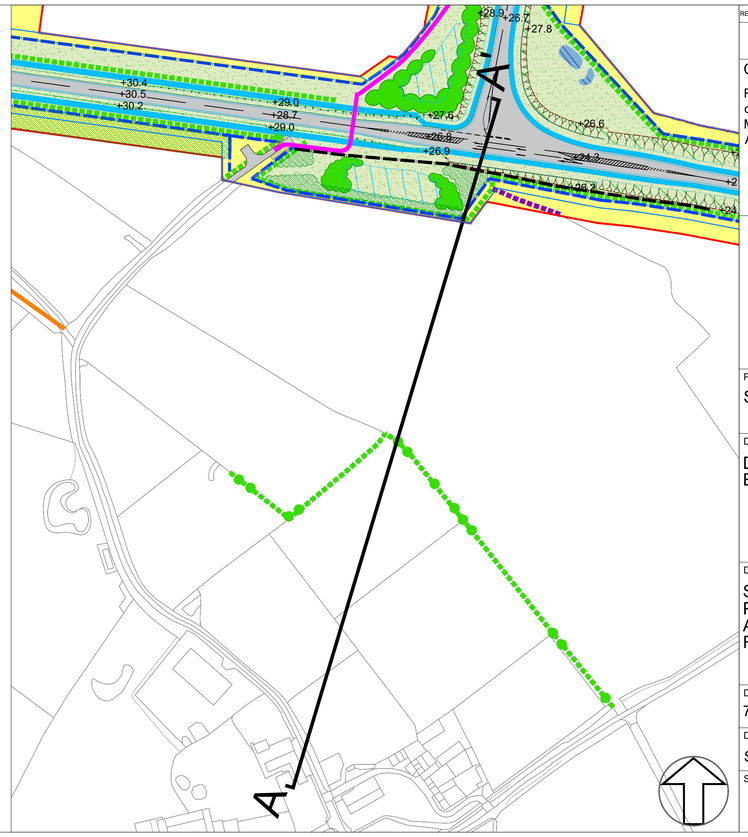
SCALE BAR:

50m 0 50 100 150m

NOTES: 1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS



SECTION A - A'



REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

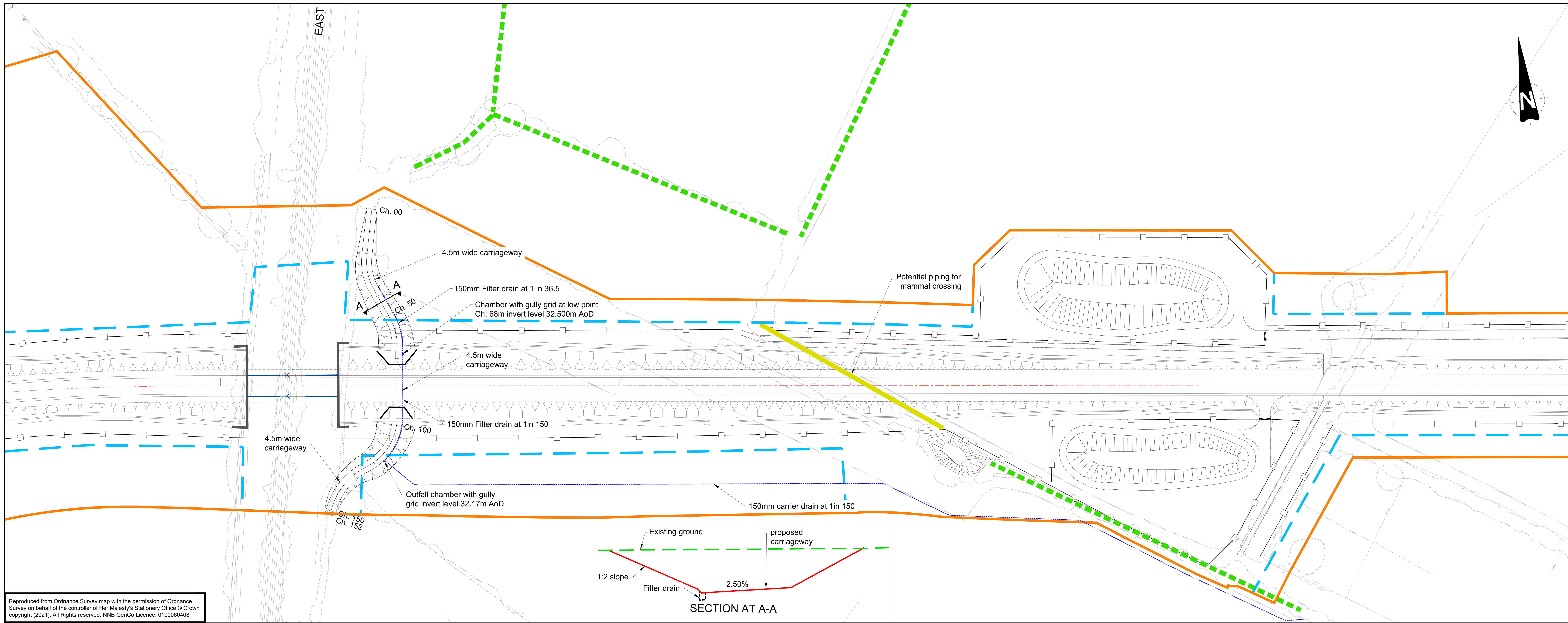
DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED SECTION
AND FINISHED LEVELS
FORDLEY HALL

DRAWING NO:	REVISION:
7678_FH_002	

DATE:	DRAWN:	SCALE:
SEPT 2021	B.B.	1:750 @ A1

SCALE BAR:
50m 0 50 100 150m



Notes:

1. Do not scale from this drawing.
2. All dimensions are shown in metres unless otherwise stated.
3. The drawing to be printed in colour
4. The alignment shown is preliminary only and subject to further design development at detailed design.
5. These drawings should not be used for construction.

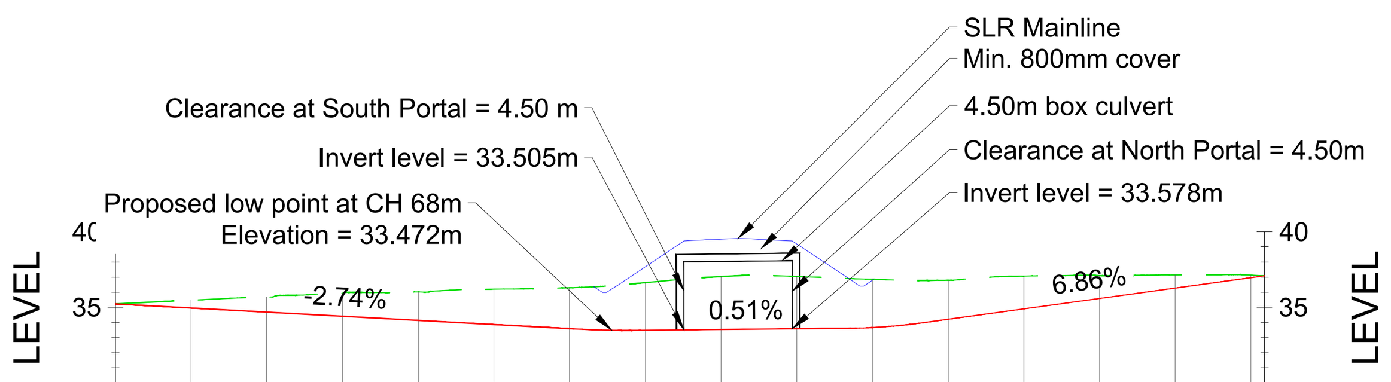
Key:

- Development Consent Order Boundary
- Proposed Permanent Land Take
- Carriageway Centreline
- Edge of Carriageway
- Highway Verge
- Embankment Slope
- Cutting Slope
- Highway Fence Line
- Proposed Swale
- Proposed Gate
- Proposed Pond
- Proposed Agricultural Filter Drain
- Existing Drain to be Maintained

Profile Key:

- Proposed Level
- Existing Level

GRANT UNDERPASS TRACK- LONGSECTION
SCALE: H 1:1000,V 1:500
DATUM: 30.00



Existing Levels	35.231	35.471	35.682	35.937	36.023	36.197	36.297	36.635	37.031	37.041	36.849	36.788	37.066	37.100	37.147	37.131	37.081
Proposed Levels	35.231	34.957	34.683	34.409	34.135	33.861	33.588	33.479	33.530	33.581	33.662	34.215	34.901	35.587	36.272	36.958	37.081
Level Difference	0.000	-0.514	-0.999	-1.528	-1.888	-2.336	-2.710	-3.156	-3.501	-3.460	-3.187	-2.573	-2.165	-1.514	-0.875	-0.173	0.000
Chainage	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	151.791

Horizontal Geometry: Straight Length = 21.4 | Arc R = 25.0 L = 15.5 | Straight Length = 14.3 | Arc R = 25.0 L = 12.8 | Straight Length = 32.1 | Arc R = 25.0 L = 27.7 | Arc R = 30.0 L = 24.7 | Straight Length = 3.2

Vertical Geometry: Straight G = -2.7% L = 60.4 | Sag Curve K = 2.8 L = 9.0 | Straight G = +0.5% L = 27.7 | Sag Curve K = 7.4 L = 9.0 | Straight G = +6.9% L = 45.7

Rev.	Date	Description	App'd	Auth'd
P01.1	05/10/21	First Revision	MB	---

wsp
Mountbatten House, Basing View, Basingstoke, RG21 4HJ, UK
T+ 44 (0) 1256 318 800, F+ 44 (0) 1256 318 700
wsp.com

Client: EDF Energy SZC CGN

Project Title: AD3 MAJOR ROAD SCHEMES
AD0310 SIZEWELL LINK ROAD

Drawing Title: SLR ALTERNATIVE ACCOMMODATION WORKS
GRANT UNDERPASS

Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:1000	05/10/21	SS	BS	MB	---

Suitability	Status	Stage
S0	Work In Progress	3

Drawing Number	Revision
SZC-AD0310-WSP-SLRHGN-ZZ0000-DRS-HCH-301044	P01.1

General Approach to Planting

The general approach to planting which would inform the specification and implementation of planting stock includes the following:

- Plants of local provenance should be used where these are available (but noting potential for inclusion of stock from more southerly latitudes as part of a climate change resilience strategy – referred to below).
- Species mixes should replicate as far as practicable the make-up and pattern of existing planting typologies found along the route of the SLR and immediate hinterland. This will be informed by the tree survey / schedules that are currently being prepared.
- Species which maximise biodiversity and provide habitat for wildlife should be included within mixes (guided by local requirements and objectives – e.g. local BAP / AONB management plan etc).
- Species should be resilient to climate change impacts and disease / pests as far as is practicable and foreseeable. Further research may be required but in general the following measures to consider should include (but are not limited to):
    - avoidance of specifying large numbers of a limited range of tree species, to minimise the spread and effect of disease;
    - select species which have a degree of drought tolerance;
    - consider procuring species from more southerly latitudes (within a range of say up to 1-5° south of the site);
    - avoid very shallow rooting trees which may be susceptible to windblow from unpredictable storm events; and,
- Smaller tree sizes (at initial planting – generally bareroot whips 60-90cm or 80-100cm) should typically be used in favour of mature stock as they are likely to establish more quickly and have a lower demand on irrigation. However, where planting is required to provide a screening function, larger tree stock may be specified (feathers 150-175cm or 175-200cm). In some locations, standard trees may also be specified as specimens or to provide further enhanced screening.
- All planting would be appropriately managed and monitored for a minimum period of 5 years to ensure successful establishment.

Indicative species

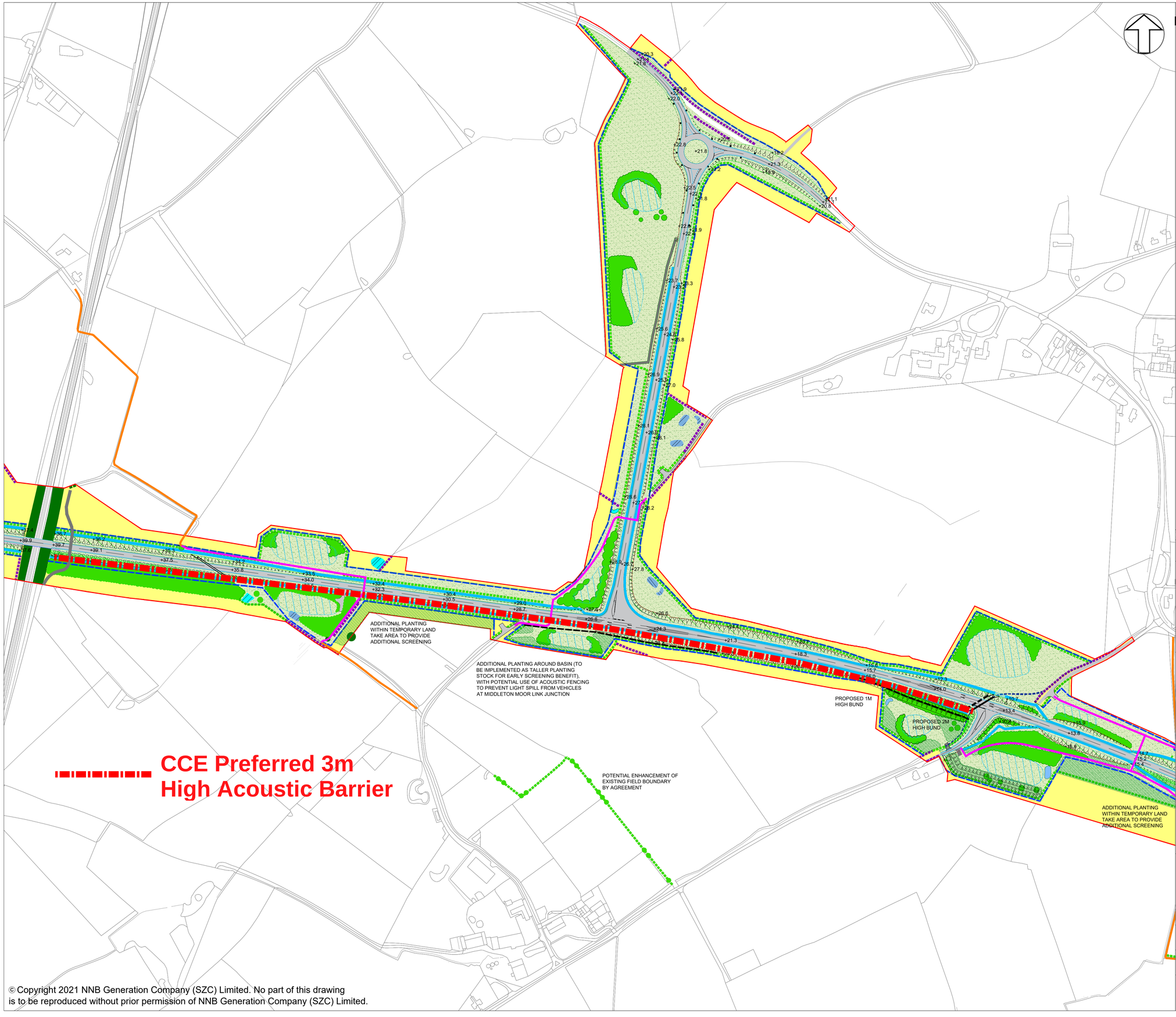
Hedgerows

- For native hedgerows a diverse mix of species would be proposed to increase biodiversity benefit and ensure long term resistance to disease. Where possible we would try to replicate ancient hedgerows which have at least 8 species present.
- Plant as staggered rows
- Indicative hedgerow species:
    - English Oak
    - Common Beech
    - Common Hazel
    - Holly
    - Wild cherry
    - Field Maple
    - Hawthorn
    - Blackthorn

    - Guelder rose
    - Spindle

Woodlands

- Planting spec will vary according to the context and function of the proposed woodland. A diverse mix of predominantly native species would be proposed to increase biodiversity benefit and ensure long term resistance to disease.
- Indicative mixed woodland species:
    - English Oak
    - Sweet Chestnut
    - Common Beech
    - Common Hazel
    - Holly
    - Common Lime
    - Small-leaved Lime
    - Silver Birch
    - Wild cherry
    - Field Maple
    - Blackthorn
    - Hawthorn
    - Guelder rose
    - Scots Pine
    - Corsican Pine
    - Yew



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

RETAINED HEDGEROW

RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)

RETAINED AND ENHANCED TREES AND SHRUBS

RETAINED AND ENHANCED POND

SOFTWORKS - PROPOSED

HEDGEROW PLANTING

NATIVE TREE AND SHRUB PLANTING AS SHOWN ON DCO DRAWINGS

NATIVE TREE AND SHRUB PLANTING - PROPOSED ADDITIONAL ENHANCEMENTS

GRASSLAND - RETAINED OR REINSTATED

TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

EXISTING POND TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

INDICATIVE POND FOR GREAT CRESTED NEWT MITIGATION

INDICATIVE POND FOR BIODIVERSITY NET GAIN

HARDWORKS - PROPOSED

HIGHWAY BOUNDARY FENCE

CLOSE BOARD FENCE

ACOUSTIC FENCE

VEHICLE SURFACING

TRACK

INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

CUTTING OR EMBANKMENT

INDICATIVE ATTENUATION BASIN

INDICATIVE SWALE

PROPOSED WATERCOURSE CULVERT

PROPOSED FLOOD RELIEF CULVERT

PROPOSED DITCH CULVERT

INDICATIVE WATERCOURSE DIVERSION

ACCESS ROUTES

EXISTING RIGHT OF WAY TO BE RETAINED

NEW PERMANENT RIGHT OF WAY

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
FORDLEY HALL

DRAWING NO:	REVISION:
7678_FH_SK001	

DATE:	DRAWN:	SCALE:
SEPT 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

ADDITIONAL PLANTING WITHIN TEMPORARY LAND TAKE AREA TO PROVIDE ADDITIONAL SCREENING

ADDITIONAL PLANTING AROUND BASIN (TO BE IMPLEMENTED AS TALLER PLANTING STOCK FOR EARLY SCREENING BENEFIT), WITH POTENTIAL USE OF ACOUSTIC FENCING TO PREVENT LIGHT SPILL FROM VEHICLES AT MIDDLETON MOOR T-JUNCTION

POTENTIAL ENHANCEMENT OF EXISTING FIELD BOUNDARY BY AGREEMENT

PROPOSED 1M HIGH BUND

PROPOSED 2M HIGH BUND

ADDITIONAL PLANTING WITHIN TEMPORARY LAND TAKE AREA TO PROVIDE ADDITIONAL SCREENING

CCE Preferred 3m High Acoustic Barrier

Innovus - Barrier 3m.

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

RETAINED HEDGEROW

RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)

RETAINED AND ENHANCED TREES AND SHRUBS

RETAINED AND ENHANCED POND

SOFTWORKS - PROPOSED

HEDGEROW PLANTING

NATIVE TREE AND SHRUB PLANTING AS SHOWN ON DCO DRAWINGS

NATIVE TREE AND SHRUB PLANTING - PROPOSED ADDITIONAL ENHANCEMENTS

GRASSLAND - RETAINED OR REINSTATED

TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

EXISTING POND TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

INDICATIVE POND FOR GREAT CRESTED NEWT MITIGATION

INDICATIVE POND FOR BIODIVERSITY NET GAIN

HARDWORKS - PROPOSED

HIGHWAY BOUNDARY FENCE

CLOSE BOARD FENCE

ACOUSTIC FENCE

VEHICLE SURFACING

TRACK

INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

CUTTING OR EMBANKMENT

INDICATIVE ATTENUATION BASIN

INDICATIVE SWALE

PROPOSED WATERCOURSE CULVERT

PROPOSED FLOOD RELIEF CULVERT

PROPOSED DITCH CULVERT

INDICATIVE WATERCOURSE DIVERSION

ACCESS ROUTES

EXISTING RIGHT OF WAY TO BE RETAINED

NEW PERMANENT RIGHT OF WAY

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
FORDLEY HALL

DRAWING NO:	REVISION:
7678_FH_SK001	

DATE:	DRAWN:	SCALE:
SEPT 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

12 October 2021

[redacted]

Dear [redacted]

RE: SZC - Fordley Hall updated Landscape and Mitigation proposals

Thank you for your email of 8th October on behalf of Mr Grant responding to the underpass and landscape and two sets of noise mitigation proposals put forward on 6th and 11th October. Please see the below responses in respect of the points you have commented on.

Underpass

At our meeting with Mr Grant and his agent Mr Horton on 2nd September, it was agreed that Mr Grant and his contract farmer would provide details of the various heights of the agricultural machinery used on the holding. Following a further request, Mr Horton emailed on 21st September (see copy attached) providing a required size for the proposed underpass of 4.5m in height and 4m in width, informed by Mr Grant's contract farmer. The underpass proposal has been designed to provide that clearance.

Increasing the height of the underpass to 5m as you suggest in your email is not possible due to the physical constraints in this area of the Sizewell link road. Obviously, this, the bend radius of the track, and other details can be discussed when we have our meeting to discuss and explain the various proposals.

SLR Noise and Lighting Mitigation

SZC Co.'s landscaping and noise mitigation proposals were designed following the meeting held with Mr Grant on 2nd September and informed by the discussions held between yourself and Mr Brownstone as you worked towards completing a statement of common ground (SoCG).

We are grateful for the noise and lighting mitigation proposals forwarded on 6th and 11th October 2021, including the modelled noise contour images. These proposals will form part of the ongoing discussions as SZC Co. seeks to reach a position that all parties can agree represents the optimum solution for your client.

SZC Co. has committed to a process under the **Associated Developments Design Principles**, which can be found at PINS library reference [REP9-011] where it must consider the potential acoustic benefits of any

hard landscaping proposals, or quiet road surfaces, in conjunction with Suffolk County Council and East Suffolk Council. The final agreed designs must be in place before the opening of the Sizewell link road.

While the consultation and agreement required by the **Associated Developments Design Principles** are necessarily with Suffolk County Council and East Suffolk Council, SZC Co. regards engagement and agreement with affected stakeholders to be important and wishes to continue to engage with your client to seek to reach an agreement.

The agreed measures will be secured under Requirements 35 or 36 of the DCO (formerly numbered 22 and 22A), depending on whether the measures are within or outside the highway boundary.

We look forward to discussing this matter with you further.

Yours sincerely,

[redacted]

Ian Cunliffe
Lead Land Programme Manager – Associated Development
Sizewell C Nuclear Development

APPENDIX E: COPIES OF CORREPSONDENCE WITH JUSTIN AND EMMA DOWLEY

LDĀDESIGN

[redacted]

–

7542
Tuesday 5th October 2021
Sizewell C

Dear [redacted],

Please find enclosed the following, which has also been sent to your home in Suffolk:

A. 'Control documents' which I referred to in our meeting on 3rd September :

1.Lighting Modelling Technical Note on Indicative Lighting Modelling [REP3-057]
2.Code of Construction Practice [REP8-082]
3.Lighting Management Plan [REP8-052]
4.Parameters Plan - construction phase Main Development Site Construction Parameter Plans [REP7-269]
5.Schedule of Works text to support Parameters plan - Section 4 of the Construction Method Statement [REP8-054]

B. Mitigation enhancement drawings prepared since our meeting to form the basis for ongoing discussions:

1. Theberton House overview /key plan
2. Roundabout planting strategy
3. Brown's Plantation interface with Sizewell link road (note no impact on listed gates)

[redacted]

4. Fishpond Grove with Sizewell link road tie in to B1122 including interim tree survey overlay
5. Eastbridge Farm planting strategy

We would like to agree access for SZC Co.'s tree surveyors to the woodland boundary east of the B1122 to undertake a detailed tree and vegetation survey. The nature of tree and hedgerow loss resulting from the Sizewell link road has been plotted on an initial survey undertaken by SZC Co.'s contractor and based on the highway engineer's most recent design. We have recommended that a full survey of Fishpond Grove and tree cover extending south of this, to the extent of the length anticipated to be disturbed, be surveyed. This survey will permit an accurate understanding of required tree works and inform enhanced mitigation. We would welcome your agreement for this to be organised.

I trust the documents and drawings are self-explanatory. We would like to meet you to walk you through the drawings and receive your feedback with a view to reaching an agreement for the scope and nature of enhanced mitigation. To that end [redacted] and [redacted] will be the points of contact and will be in touch.

Yours sincerely,

[redacted]

Sheet 5 - Eastbridge Farm

Sheet 4 - SLR

Sheet 3 - SLR

Sheet 2 - MDS Roundabout

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

DEVELOPMENT SITE BOUNDARY

BLACK TEXT INDICATES DCO PROPOSALS WITHIN DEVELOPMENT SITE BOUNDARY

BLUE TEXT INDICATES POTENTIAL ENHANCED PROPOSALS BY AGREEMENT

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
THEBERTON HOUSE
OVERVIEW PLAN

SHEET 1 OF 5

DRAWING NO:	REVISION:
SZC-SK001	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

New semi mature parkland trees in existing parkland to interrupt view towards opening in Greenhouse Plantation in first floor views from Theberton House (exact tree locations TBA).

Potential inter planting / under storey of existing mature woodland by agreement. New planting to be focused at the edge of the woodland and within gaps

Potential inter planting / under storey planting of existing immature woodland by agreement. New planting to include evergreen species with rabbit proof fencing and gates access

Existing hedgerow along unaltered section of Eastbridge Road retained and reinforced with new planting

New hedgerow planting proposed along bridleway boundary

Potential additional area of mixed woodland planting by agreement (this area may no longer be viable for arable use)

Hedgerow planting proposed within the DCO

Potential additional area of mixed woodland planting within the DCO boundary. Currently proposed as reinstated arable land

Mixed woodland planting proposed within the DCO

Amenity grass / verge proposed within the DCO

Proposed lighting columns (preliminary design)

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

DEVELOPMENT SITE BOUNDARY

BLACK TEXT INDICATES DCO PROPOSALS WITHIN DEVELOPMENT SITE BOUNDARY

BLUE TEXT INDICATES POTENTIAL ENHANCED PROPOSALS BY AGREEMENT

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
THEBERTON HOUSE
MDS ROUNDABOUT

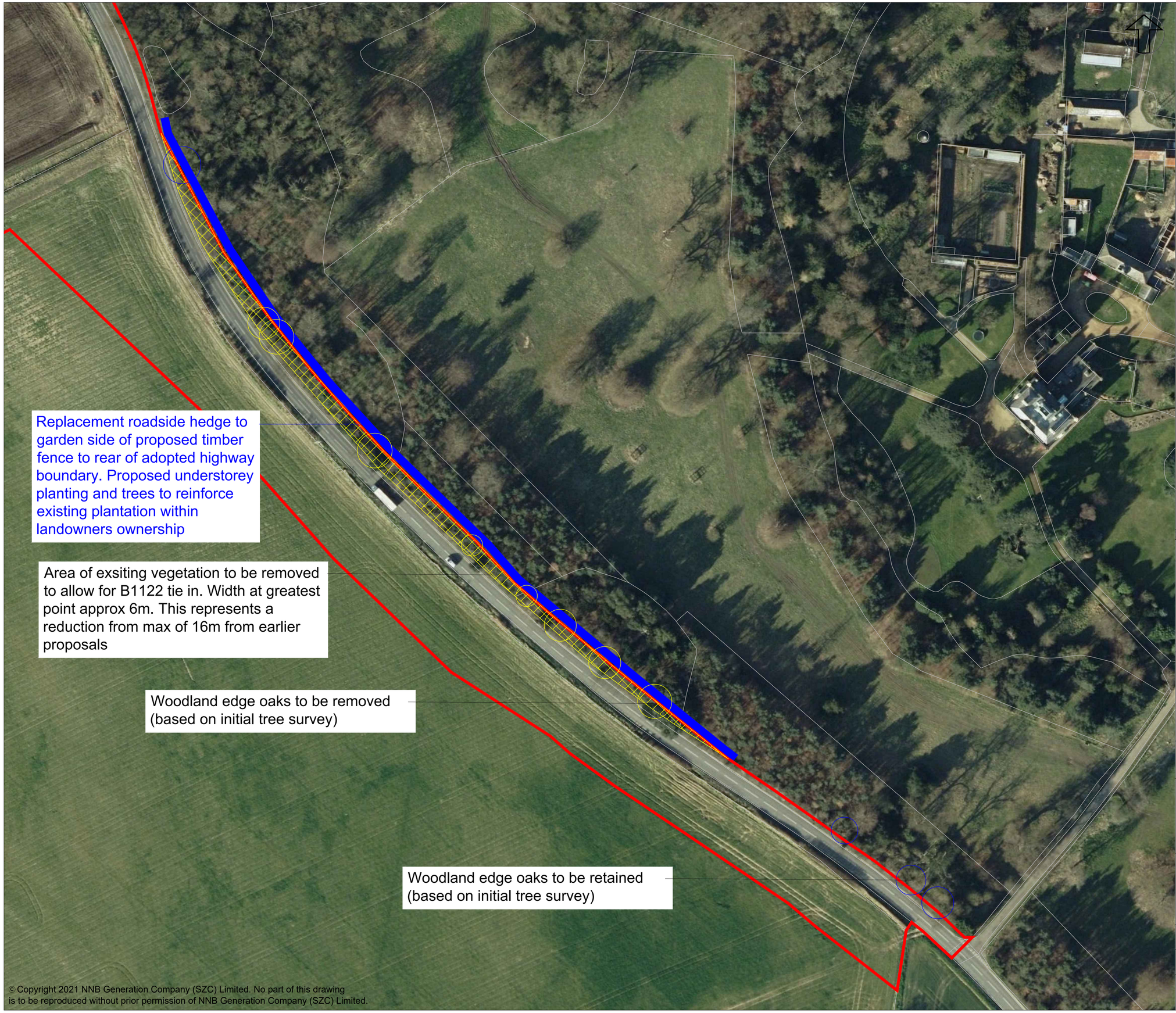
SHEET 2 OF 5

DRAWING NO:	REVISION:
SZC-SK001	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

DEVELOPMENT SITE BOUNDARY

BLACK TEXT INDICATES DCO PROPOSALS WITHIN DEVELOPMENT SITE BOUNDARY

BLUE TEXT INDICATES POTENTIAL ENHANCED PROPOSALS BY AGREEMENT

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
THEBERTON HOUSE
SLR

SHEET 3 OF 5

DRAWING NO:	REVISION:
SZC-SK001	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

DEVELOPMENT SITE BOUNDARY

BLACK TEXT INDICATES DCO PROPOSALS WITHIN DEVELOPMENT SITE BOUNDARY

BLUE TEXT INDICATES POTENTIAL ENHANCED PROPOSALS BY AGREEMENT

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
THEBERTON HOUSE
SLR

SHEET 4 OF 5

DRAWING NO: SZC-SK001

REVISION: 01

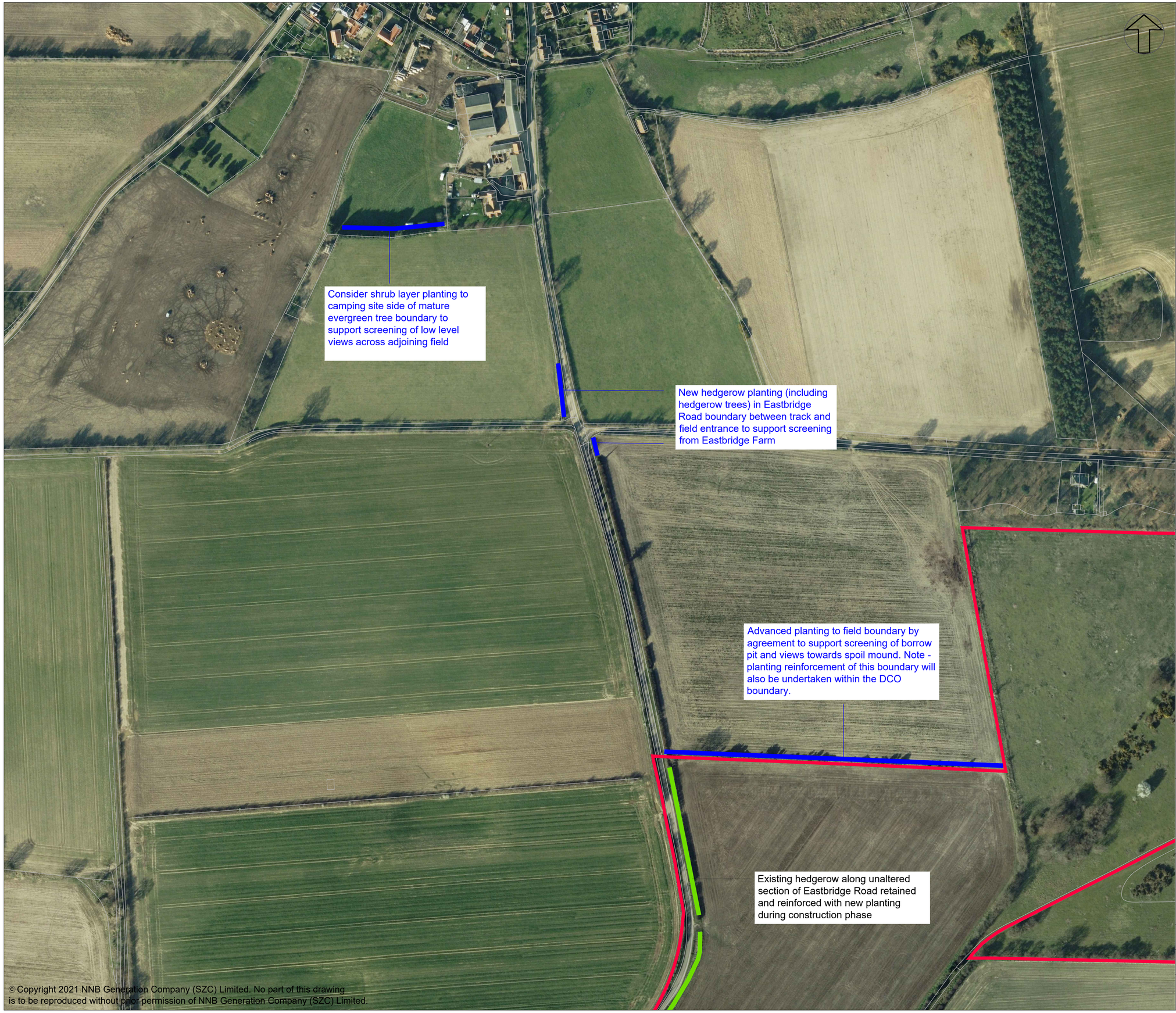
DATE: SEP 2021

DRAWN: R.K.

SCALE: 1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

DEVELOPMENT SITE BOUNDARY

BLACK TEXT INDICATES DCO PROPOSALS WITHIN DEVELOPMENT SITE BOUNDARY

BLUE TEXT INDICATES POTENTIAL ENHANCED PROPOSALS BY AGREEMENT

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
THEBERTON HOUSE
EASTBRIDGE FARM

SHEET 5 OF 5

DRAWING NO:	REVISION:
SZC-SK001	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

12 October 2021

[redacted]

Dear [redacted]

Following initial responses from your land agent [redacted], I wanted to provide some immediate responses to the points he has made with a view to keep our discussions moving forward.

My apologies for the speed of delivery of the information which was dispatched on 7 October. Our team have been supporting multiple issues in coordination with other disciplines to address landowner discussions as well as main Examination process. The information we issued to you required liaison with the highway design team, lighting team, acoustics, heritage and woodland survey team and all this has unfortunately, taken time.

We anticipate that discussions will continue well beyond the D10 deadline and the Examination in order to hopefully reach agreement to the enhanced mitigation and this in parallel to wider farm operational matters and issues relating to compensation.

The meeting at Theberton House gave a strong direction for the matters to be considered and the approach to be taken which is reflected in our proposals.

[redacted] specifically mentioned the limited nature of the proposals and an apparent lack of creative approaches to the treatment of the roundabout. The proposals are relatively straight forward and present simple robust responses to enhancement which we consider to be appropriate.

The roundabout proposals illustrate the location of the roundabout and its lighting in relation to existing woodland cover and three layers of new woodland extending either side of the proposed adopted highway boundary. We have not currently proposed bunding/mounding as this tends to reduce the success of plant establishment.

We have proposed reinforcement to the west of Greenhouse Plantation including strengthening the existing maturing reinforcement planting you have previously undertaken, as well as proposed new woodland edge planting to the east. This planting would include some evergreen component to support longer term screening. In addition, we propose some parkland tree planting in the grassland west of the

Potter's Street which would be strategically located to help address views toward the east and in the vicinity of the opening in Glasshouse Plantation.
The information for the B1122/Sizewell Link Road provides clarity on the reduced extent of vegetation loss resulting from the new road tie in, overlayed with an interim tree survey illustrating more exactly the loss of trees in the plantation and extents of proposed fencing and planting.

Planting in the vicinity of Eastbridge Farm is proposed to provide screening of views towards the site using new planting along field boundaries which we discussed.

We look forward to meeting you to discuss the proposals with you in more detail.

Yours sincerely,

[redacted]

APPENDIX F: COPIES OF CORRESPONDENCE WITH MOLLETT'S FARM

17 September 2021

Dear [redacted]

Re: Mollett's Farm - Updated proposals and Meeting on Wednesday 22 September 2021

Please find attached with this letter the following plans and Word documents:

- 7678_2VBP_landscape_levels_Enhancements
- 7678_2VBP_landscape_levels_Enhancements_sections
- 7678_2VBP_landscape_levels_Enhancements_zoom
- 7678_Planting Approach
- SZC - Noise TVB+SLR 17-09-21

The following provides context to these PDF files, which we will convert to DWG format for you in advance of the meeting at 13:30 on Wednesday 22 September at Mollett's Farm.

As promised, we have amended the plan presented to you on 2 September 2021, taking on board comments made during the meeting. The two additional drawings will help explain the proposals. They include a 'zoom in' of the plan on an aerial base to demonstrate how the proposal relate to the existing context of the two-village bypass and Mollett's Farm. There are also a series of cross-sections to demonstrate how the proposed levels work in relation to the existing landform and Mollett's Farm.

Visual Impact

The cross-sections indicate the line of sight from ground and first floor windows towards the proposed road, so that you can get a feel for how much of the traffic on the proposed road would be visible when looking towards the road. This demonstrates that in the areas where we are able to provide the 3m high bund (extents shown), the combination of that and the cutting would mean that lorries would not be visible.

Further north, at the existing footpath, without any bunding the top 1m of lorries would be visible, but the sight lines indicate that a hedgerow of 1.8m high will deflect visibility above the height of lorries on the proposed road. If there are any further cross-sections that we can produce for you to help with your understanding of the proposals, please let me know so we can produce them in advance of our meeting on Wednesday.

Bunding

We have been able to increase the height of the proposed bund to 3m within the DCO boundary by steepening the slope on the roadside of the bund and narrowing the top of the bund. We have also removed the gap in the bund at the location where we had previously made an allowance for the informal access to

pass through. We have continued to indicate a bund around the western and southern edge of the construction compound.
However, we have been advised that the landowner agreement for that land will mean it cannot be retained post construction as the whole of that field must be returned to the landowner. This also means that we are unable to alter the alignment of the bund to follow closer to the road alignment, with visibility splays for the roundabout placing a further restriction on the positioning of the bunds both during construction and in the longer term.

As a **potential** alternative, we would like to discuss with you the possibility of providing a secondary, longer-term bund to the west within your land ownership, which we have indicated on the proposed plans to aid discussion.

In terms of the ramps up to the pedestrian footbridge, Suffolk County Council, who would be the adopting highway authority, have advised that they could not support removal of the southern approach ramp and realignment of the footpath diversion. We have tested options for remodelling the slopes of the approach ramps but have been unable to achieve a workable solution that would provide more of a bunded appearance on the western side. We have therefore indicated the inclusion of a 2m high close board fence along the top of the slope to reduce views towards the proposed road until embankment planting matures and prevent users of the footpath having views towards properties.

Planting

We continue to indicate planting on and adjacent to the western side of the bunds to soften their appearance over time and support screening and integration. We have also been advised to pull back the planting to the western side of the southern approach ramp to the pedestrian footbridge so that it is within the area indicated as permanent land take within the DCO plans, as much of the land between the footbridge and Farnham Hall is temporary land take for the construction of the footbridge only and will be returned to the landowner post construction as per legal agreements.

We have prepared note '7678_Planting Approach' on the approach that will be taken to planting. This includes provision for planting larger planting stock in areas with greater visual sensitivities so that a higher degree of visual screening is provided from the outset. The exact details of all planting will need to be fully detailed and approved by East Suffolk Council as part of the discharge of Requirements.

Access proposals

My colleague [redacted] has discussed in detail with Suffolk County Council the situation in terms of continued access from Mollett's Farm to Friday Street Farm Shop.

SCC are happy to support an informal access route within the proposed highway boundary, including provision of a gate in the highway boundary fence that runs from the existing informal access north as far as the existing public footpath between Mollett's Farm and Friday Street, and south to join the public footpath that will be diverted over the footbridge.

Suffolk County Council are not able to support extending this link further north to allow a crossing at the roundabout. SCC have indicated that they consider the proposed diverted footpath across the two-village

bypass or the alternative route north to cross the current A12 and round the north of the proposed roundabout, using footways that will be provided as part of the proposals, provide alternative access options. An uncontrolled crossing of the existing A12 to join the footway can be provided during detailed design.

The existing informal access you have would not be impacted by the two-village bypass proposals as access to the highway will be provided and therefore this path could still be used to provide the link from the gate in your camping field to the highway boundary and Public Rights of Way.

Potential offsite planting by agreement

We would like to explore with you any potential opportunities to provide additional planting outside the DCO boundary but within your landownership, in order to provide further levels of screening. We have indicated a potential hedgerow along the boundary of the camping field. If this is something you would like to consider, this could take the form of a hedgerow with hedgerow trees or a more substantial strip of planting. We are aware of the existing mature hedgerow/tree belt along the southern boundary of the field but could also explore whether additional planting in this area would be beneficial should you wish to consider that.

Noise

As I mentioned in discussion with [redacted] today, we will be able to provide further information on the benefit of the updated landscaping proposals with regard to noise following further assessment next week. In the meantime, I have attached the information on mitigation measures and noise impacts previously sent for reference (SZC - Noise TVB+SLR 17-09-21).

Lighting

Among the questions raised by your advisers was a query as to whether the FP 29 crossing would be lit. I can confirm that no footpaths will be lit – only the roundabout.

Drainage and irrigation

I will provide more details on drainage and irrigation next week. Our understanding is that the irrigation pipe is a moveable above ground system. It may be a case of working with stakeholders to see whether it is practical to incorporate some form of duct into the design of the road to accommodate the irrigation pipe. In terms of both drainage and irrigation we are looking into the detail and potential solutions for both and will update you next week, in advance of our meeting.

Compensation

As [redacted] and I discussed this afternoon, we will try and send across proposals regarding potential compensation early next week so you can consider them, and we can discuss further on Wednesday. On Monday morning we have a meeting with members of the Executive Board of the project in order to confirm these draft proposals, so you can have confidence that the discussion is based on an endorsed approach from the Sizewell C leadership team.

One of the questions raised by your advisers included clarification on the right to claim Part 1 compensation at the end of one year from opening the Two Village Bypass. S.152 of the PA08 applies the compensation provisions of the Land Compensation Act 1973. In respect of Part 1 of the LCA, S.1) 1 sets out that a claim can be made 'Where the value of an interest in land is depreciated by physical factors caused by the use of public works.'

The 'public works' are defined in S.1) 3, with a) being 'a highway.' Any claim from you would be in respect of the highway as they would be the 'public works.' The 'relevant date' for a highway is set out in S.1) 9 (a), being 'the date on which it was first open to public traffic' (with a claim able to be made 1 year and a day from the 'relevant date' (LCA Part 1 S.3) 3. 2.)). So in short – the right to claim would follow the opening of the Two Village Bypass, not the completion of the Sizewell C Power Plant.

Next steps

As per the above, prior to our meeting next week I will send you updated information on potential compensation proposals and further details on drainage and irrigation. We will be updating the noise assessment and will endeavour to complete this as soon as possible next week.

Details for Meeting on 22 September

I will circulate a biography of [redacted] in advance of the meeting. We have all met each other apart from Ian. I would emphasise that keeping the meeting to the seven participants would assist greatly in keeping the meeting focussed. I hope this will meet with your approval but I have also asked for an independent minute-taker from Ubiquis to take notes. I think this will be useful for us all in order to aid a flowing discussion and to have a record of actions.

In terms of an agenda, I would suggest the following:

Part 1: Mitigation

- Presentation of landscaping proposals, including access arrangements ([redacted])
- Questions and suggestions on landscaping proposals (All)
- Summary of Actions resulting ([redacted])
- Outstanding questions relating to Drainage and Irrigation ([redacted])
- Outstanding questions relating to noise ([redacted]

Part 2: Compensation

- Presentation of potential compensation proposals [redacted]
- Questions and suggestions on proposals (All)
- Summary of Actions resulting ([redacted])

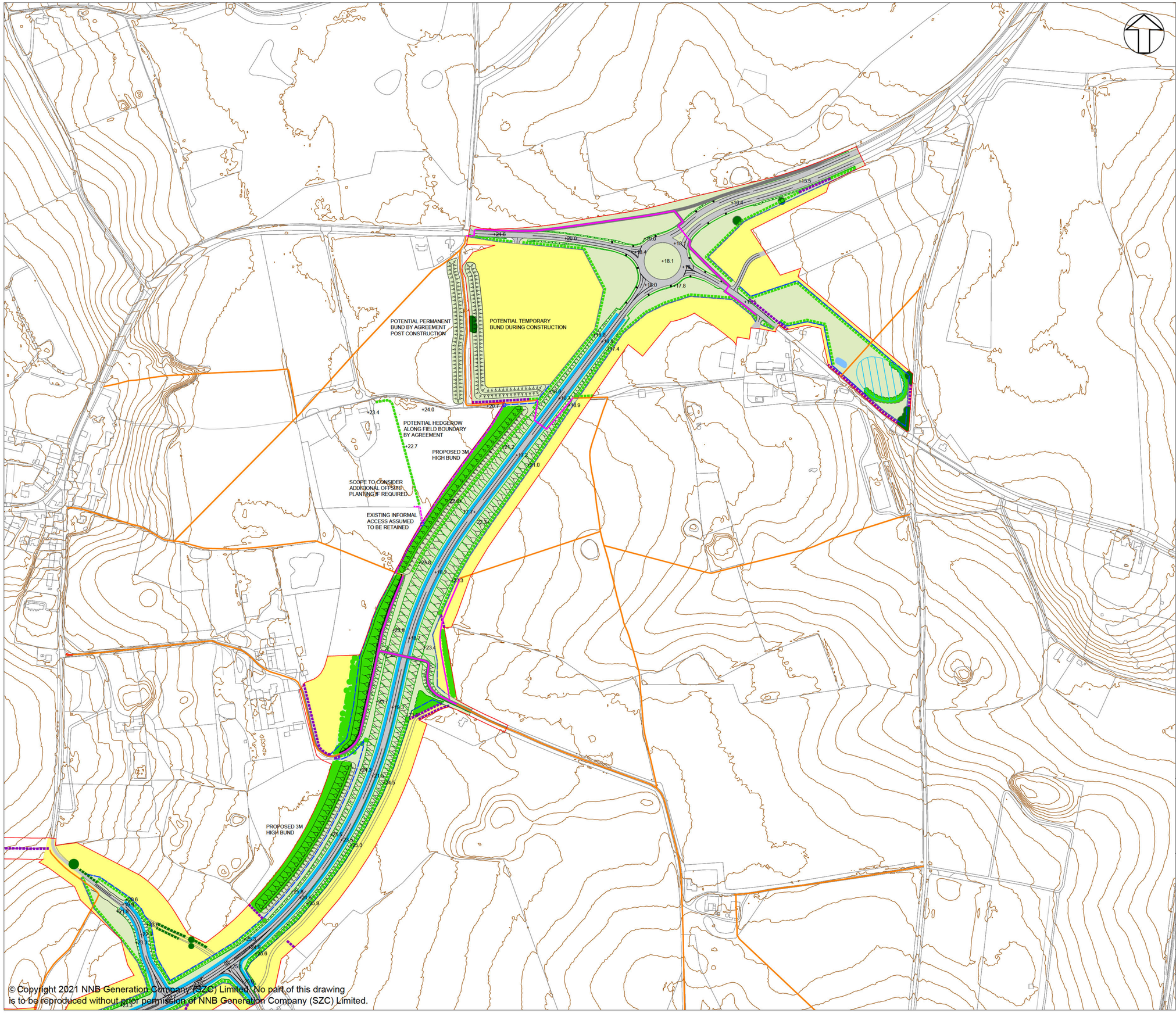
- Next Steps (All)

Please let me know if you think this fulfils your requirements or suggest any further items you feel should be added to the agenda.

I can assure that we understand this situation is difficult and stressful for you. We will continue to work with you to achieve an outcome that I hope can help to alleviate your worries and concerns.

Yours sincerely,

[redacted]



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

- DEVELOPMENT SITE BOUNDARY
- **SOFTWORKS - EXISTING**
- RETAINED HEDGEROW
- RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)
- RETAINED AND ENHANCED TREES AND SHRUBS
- **SOFTWORKS - PROPOSED**
- HEDGEROW PLANTING
- NATIVE TREE AND SHRUB PLANTING
- GRASSLAND - RETAINED OR REINSTATED
- TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS
- INDICATIVE POND FOR BIODIVERSITY NET GAIN
- INDICATIVE FLOODPLAIN GRASSLAND MITIGATION AREA
- **HARDWORKS - PROPOSED**
- HIGHWAY BOUNDARY FENCE
- GATE
- CLOSE BOARD FENCE
- VEHICLE SURFACING
- TRACK
- CULVERT
- MAMMAL CROSSING
- INDICATIVE LIGHTING COLUMN
- **EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED**
- EXISTING CONTOURS
- CUTTING OR EMBANKMENT
- INFILTRATION BASINS
- SWALE
- **ACCESS ROUTES**
- EXISTING RIGHT OF WAY TO BE RETAINED
- NEW PERMANENT RIGHT OF WAY
- NEW PERMISSIVE PATH

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

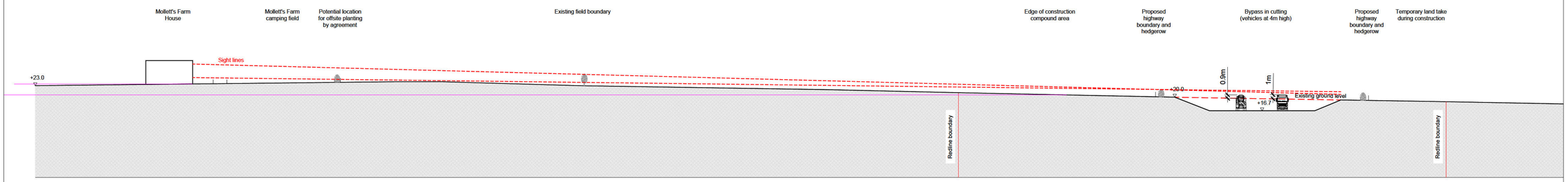
DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
SHEET 1 OF 3

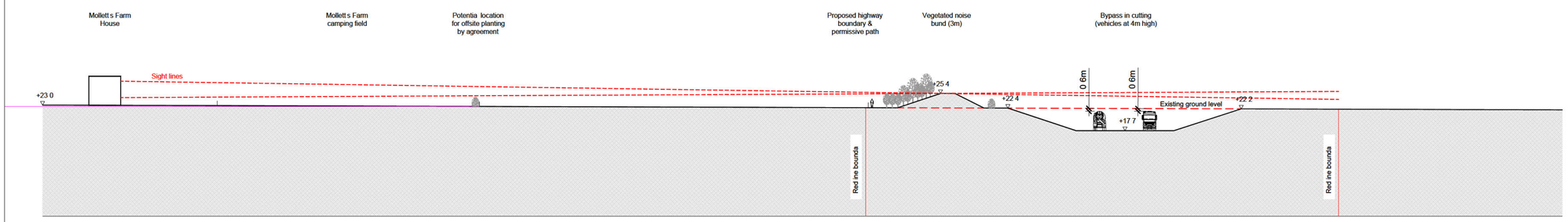
DRAWING NO:	REVISION:
SZC-SK001	01

DATE:	DRAWN:	SCALE:
AUG 2021	R.K.	1:2500 @ A1

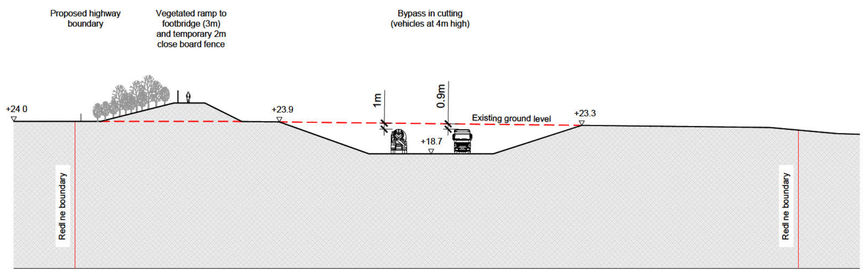
SCALE BAR:
50m 0 50 100 150m



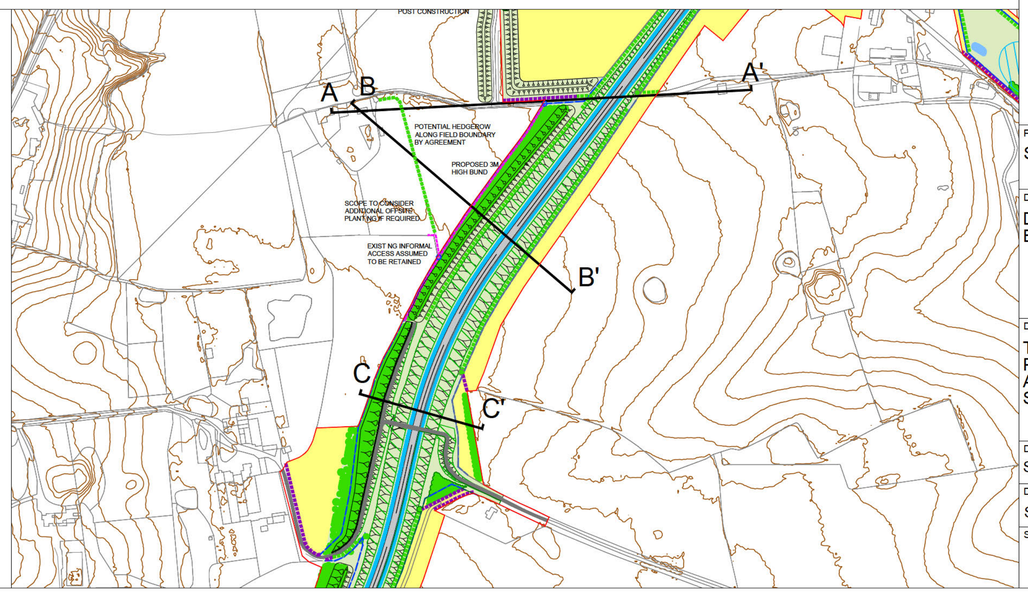
SECTION A - A'



SECTION B - B'



SECTION C - C'



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED SECTIONS
AND FINISHED LEVELS
SHEET 3 OF 3

DRAWING NO:	REVISION:
SZC-SK003	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:500 @ A1

SCALE BAR:
50m 0 50 100 150m

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

- DEVELOPMENT SITE BOUNDARY
- **SOFTWORKS - EXISTING**
- RETAINED HEDGEROW
- RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)
- RETAINED AND ENHANCED TREES AND SHRUBS
- **SOFTWORKS - PROPOSED**
- HEDGEROW PLANTING
- NATIVE TREE AND SHRUB PLANTING
- GRASSLAND - RETAINED OR REINSTATED
- TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS
- INDICATIVE POND FOR BIODIVERSITY NET GAIN
- INDICATIVE FLOODPLAIN GRASSLAND MITIGATION AREA
- **HARDWORKS - PROPOSED**
- HIGHWAY BOUNDARY FENCE
- GATE
- CLOSE BOARD FENCE
- VEHICLE SURFACING
- TRACK
- CULVERT
- MAMMAL CROSSING
- INDICATIVE LIGHTING COLUMN
- **EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED**
- EXISTING CONTOURS
- CUTTING OR EMBANKMENT
- INFILTRATION BASINS
- SWALE
- **ACCESS ROUTES**
- EXISTING RIGHT OF WAY TO BE RETAINED
- NEW PERMANENT RIGHT OF WAY
- NEW PERMISSIVE PATH

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS - ZOOM IN
SHEET 2 OF 3

DRAWING NO:	REVISION:
SZC-SK002	01

DATE:	DRAWN:	SCALE:
AUG 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

General Approach to Planting

The general approach to planting which would inform the specification and implementation of planting stock includes the following:

- Plants of local provenance should be used where these are available (but noting potential for inclusion of stock from more southerly latitudes as part of a climate change resilience strategy – referred to below).
- Species mixes should replicate as far as practicable the make-up and pattern of existing planting typologies found along the route of the SLR and immediate hinterland. This will be informed by the tree survey / schedules that are currently being prepared.
- Species which maximise biodiversity and provide habitat for wildlife should be included within mixes (guided by local requirements and objectives – e.g. local BAP / AONB management plan etc).
- Species should be resilient to climate change impacts and disease / pests as far as is practicable and foreseeable. Further research may be required but in general the following measures to consider should include (but are not limited to):
    - avoidance of specifying large numbers of a limited range of tree species, to minimise the spread and effect of disease;
    - select species which have a degree of drought tolerance;
    - consider procuring species from more southerly latitudes (within a range of say up to 1-5° south of the site);
    - avoid very shallow rooting trees which may be susceptible to windblow from unpredictable storm events; and,
- Smaller tree sizes (at initial planting – generally bareroot whips 60-90cm or 80-100cm) should typically be used in favour of mature stock as they are likely to establish more quickly and have a lower demand on irrigation. However, where planting is required to provide a screening function, larger tree stock may be specified (feathers 150-175cm or 175-200cm). In some locations, standard trees may also be specified as specimens or to provide further enhanced screening.
- All planting would be appropriately managed and monitored for a minimum period of 5 years to ensure successful establishment.

Indicative species

Hedgerows

- For native hedgerows a diverse mix of species would be proposed to increase biodiversity benefit and ensure long term resistance to disease. Where possible we would try to replicate ancient hedgerows which have at least 8 species present.
- Plant as staggered rows
- Indicative hedgerow species:
    - English Oak
    - Common Beech
    - Common Hazel
    - Holly
    - Wild cherry
    - Field Maple
    - Hawthorn
    - Blackthorn

    - Guelder rose
    - Spindle

Woodlands

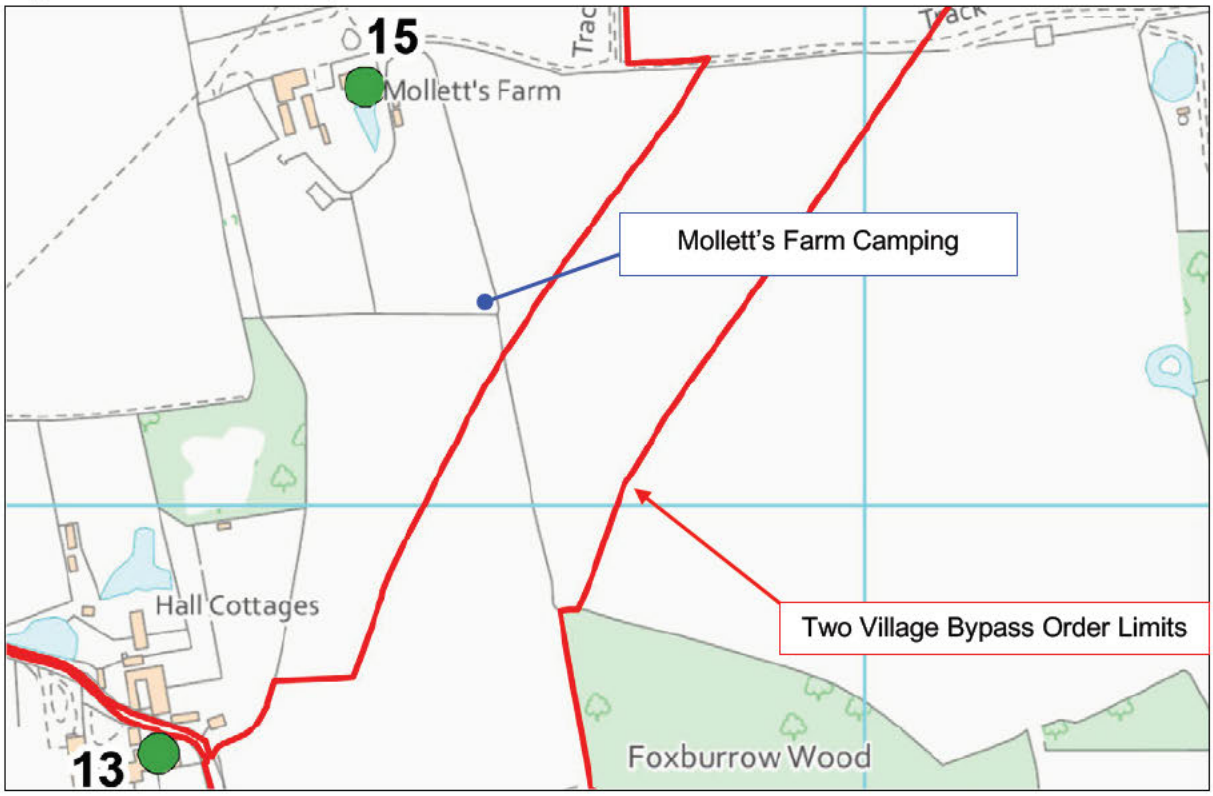
- Planting spec will vary according to the context and function of the proposed woodland. A diverse mix of predominantly native species would be proposed to increase biodiversity benefit and ensure long term resistance to disease.
- Indicative mixed woodland species:
    - English Oak
    - Sweet Chestnut
    - Common Beech
    - Common Hazel
    - Holly
    - Common Lime
    - Small-leaved Lime
    - Silver Birch
    - Wild cherry
    - Field Maple
    - Blackthorn
    - Hawthorn
    - Guelder rose
    - Scots Pine
    - Corsican Pine
    - Yew

Two Village Bypass – Mollett's farm

The updated landscaping proposals have been assessed to determine their potential to reduce road traffic noise levels from the two village bypass. The proposals have been incorporated into the SoundPLAN noise modelling software that has been used to calculate road traffic noise levels for the assessment of the two village bypass.

The calculations have been undertaken at receptor location 15, representing Mollett's Farm. At the request of Mollett's Farm's owners, an additional receptor location has been included in the calculations to represent their camping area. The position of the additional receptor point is shown in Figure 1.

Figure 1: Additional receptor location at Mollett's Farm



The potential noise reduction as a result of the updated landscaping proposals are shown in Table 1. Two scenarios have been considered, one including just the proposed landscape bunding, and the other including the 2m high fence that may be included on the overbridge access path.

Table 1: Reduction in traffic noise from updated landscaping proposals, dB

Rec No.	Receptor Name	Floor (Period)	Additional bunding only	Additional bunding plus fence
15	Mollett's Farm	Ground floor (Day)	-0.4	-0.5
		First floor (Night)	-0.2	-0.3
15A	Mollett's Farm (camping)	Ground floor (Day)	-1.4	-1.5
		Ground floor (Night)	-1.3	-1.3

It can be seen that the reductions are modest, which is likely to be due to the existing cutting already providing a reasonable degree of noise attenuation to these locations.

The potential effect of a quiet road surface has been considered, to determine if that would provide a noise benefit. The specification of a quiet road surface is not known at this stage, so the recommended -3.5dB correction set out in Annex A of the Design Manual for Roads and Bridges LA111 'Noise and Vibration'[1] has been applied to the two village bypass, for the sections where the traffic speed is in excess of 75km/h.

The expected reductions are shown in Table 2.

Table 2: Reduction in traffic noise from a quiet road surface, dB

Rec No.	Receptor Name	Floor (Period)	Quiet road surface
15	Mollett's Farm	Ground floor (Day)	-2.4
		First floor (Night)	-1.8
15A	Mollett's Farm (camping)	Ground floor (Day)	-2.5
		Ground floor (Night)	-2.2

Since the correction for a quiet road surface suggests it is between 2.5 to 3dB quieter than a standard hot rolled asphalt surface, depending on the exact specification of each surface, the reductions set out in Table 2 are considered to show that a quiet road surface may be effective for Mollett's Farm.

The combined effect of the two sets of measures is shown in Table 3.

[1] Design Manual for Roads and Bridges (DMRB) LA 111 Noise and vibration (May 2020)

Table 3: Reduction in traffic noise from updated landscaping proposals and quiet road surface, dB

Rec No.	Receptor Name	Floor (Period)	Additional bunding and quiet road surface	Additional bunding, fence and quiet road surface
15	Mollett's Farm	Ground floor (Day)	-2.7	-2.8
		First floor (Night)	-2.0	-2.0
15A	Mollett's Farm (camping)	Ground floor (Day)	-3.9	-3.9
		Ground floor (Night)	-3.5	-3.6

It should be noted that all of the stated reductions are rounded to one decimal place for the SoundPLAN model, so when the numbers are combined they may not match the exact sum of the individual elements set out in this letter.

The reductions shown for Receptor 15, Mollett's Farm, can be applied to the most up-to-date assessment outcomes shown in **Appendix A** of the **Third ES Addendum** [REP6-017] to determine their effect.

For the 2028 busiest day/night scenarios, which lead to the worst-case changes at these locations, applying the best reductions from Table 3 would alter the outcomes as shown in Table 4. An equivalent change is shown for Receptor 15A Mollett's Farm (camping), with a baseline figure calculated from the same SoundPLAN model as used for the baseline calculations in **Appendix A** of the **Third ES Addendum** [REP6-017].

Table 4: Change in road traffic noise, with updated landscaping and quiet road surface, dB

Rec No.	Receptor Name	Floor (Period)	2028 Ref Case	2028 Busiest	Change
15	Mollett's Farm	Ground floor (Day) (1)	52.5	52.7	+0.2
		First floor (Night) (1)	42.3	42.7	+0.4
15A	Mollett's Farm (camping)	Ground floor (Day) (2)	49.6	50.7	+1.1
		Ground floor (Night) (2)	39.7	44.1	+4.4

Notes:
(1) – daytime values are façade $L_{A10,18hr}$ values, and night-time values are free-field L_{night} values
(2) – daytime values are free-field $L_{A10,18hr}$ values, and night-time values are free-field L_{night} values

The change at the original Mollett's Farm receptor location (not the camping receptor) would become negligible and not significant in an EIA context. The change in road traffic noise at the additional Mollett's Farm (camping) receptor would be considered negligible during the daytime, and not significant in an EIA context, but a moderate adverse effect at night, which would be significant in an EIA context.

21 September 2021

Dear [redacted],

Re: Molletts Farm - Updated proposals and Meeting on Wednesday 22 September 2021

In my letter to you on 17 September I promised to provide the following in advance of our meeting on 22 September:

- Updated noise assessment
- Update on drainage and irrigation matters
- Proposals regarding compensation

I also received your email on 20 September 2021 requesting further cross sections and updated plans. We are aiming to bring in additional resource today to help deliver the requested cross-sections tomorrow. Please bear with me on this. The DWG files will be ready for your advisers tomorrow.

In terms of the aerial photography, we have checked what is available through our GIS mapping. The aerial photography we have been using is dated as being from 2011 but we have found another version that dates from 2017, so we will try to replace that in the drawing.

The wireframe overlay is the Ordnance Survey Masterplan data that was purchased for the Project as a whole and dates to 2018. There has not been a more recent update.

Updated noise assessment

We have run the updated landscaping proposals through the noise model, and the predicted reductions in noise are set out below.

We tested the 3m high bund adjacent to the contractor's compound. It is referred to as the 'proposed' bund in the table below. The 2m fence adjacent to the Two Villages Bypass (TVBP) overbridge is included in all scenarios to test the maximum potential benefit.

Table 1: Reduction in traffic noise from updated landscaping proposals, dB

Rec No.	Receptor Name	Floor (Period)	Additional bunding	Additional bunding plus 3m 'proposed' bund
15	Mollett's Farm	Ground floor (Day)	-0.7	-1.2
		First floor (Night)	-0.8	-0.9
15A	Mollett's Farm (camping)	Ground floor (Day)	-2.3	-2.3
		Ground floor (Night)	-1.6	-1.6

Overall, the reductions are marginally greater than the previous proposals. It can also be seen from Table 1 that the additional 'proposed' bund has a small benefit at your house but not at the camp site.

By way of comparison, the reductions from the updated landscaping proposal and from the landscaping proposals sent on 20th August are as set out in Table 2.

Table 2: Reduction in traffic noise from landscaping proposals on 20/8/21, dB

Rec No.	Receptor Name	Floor (Period)	Additional bunding only	Additional bunding plus 2m fence at overbridge
15	Mollett's Farm	Ground floor (Day)	-0.4	-0.5
		First floor (Night)	-0.2	-0.3
15A	Mollett's Farm (camping)	Ground floor (Day)	-1.4	-1.5
		Ground floor (Night)	-1.3	-1.3

This demonstrates the revised landscaping would assist in further reducing the noise levels.

If the reductions shown in Table 1 were combined with previously calculated reductions from a quiet road surface, the reductions are predicted in Table 3.

Table 3: Reduction in traffic noise from updated landscaping proposals and quiet road surface, dB

Rec No.	Receptor Name	Floor (Period)	Additional bunding	Additional bunding plus 3m 'proposed' bund
15	Mollett's Farm	Ground floor (Day)	-3.1	-3.6
		First floor (Night)	-2.6	-2.7
15A	Mollett's Farm (camping)	Ground floor (Day)	-4.8	-4.8
		Ground floor (Night)	-3.8	-3.8

Overall, an almost 3dB reduction is predicted to be achieved at both receptor positions during each period, with closer to a 5dB reduction at the camp site.

We will not be bringing a noise expert to the meeting tomorrow and would recommend that your adviser considers the above and should there be any queries, please do not hesitate to contact us.

Update on drainage and irrigation matters

The plan you sent to us on 4 August was received by land drainage consultants, LDC, working on behalf of SZC to assess impact to and mitigation for land drainage systems on agricultural land.

The ditch appears to be in line with the hedge and so crosses the TVBP at chainage 2+120. The road is in cutting at this location and is approximately 1.9 m below existing ground level. Any local ditch is unlikely to be this deep and so the ditch will almost certainly be severed. This is being surveyed imminently to confirm the size and depth of the ditch.

The obvious solution would be to divert the ditch and discharge into the highway drainage. This would require the consent of SCC as the adopting highway authority. We will raise this with SCC.

Regarding the irrigation system we do not believe there will be a problem as we could lay a pipe within the permanent boundary for a connection.

Proposals regarding compensation

Throughout our discourse you have been clear about your concerns relating to adequate mitigation, losses incurred during construction, and long-term impacts to your business and property value.

While we have outlined further mitigation proposals, we understand these need to be discussed and further informed by your feedback. It is yet to be confirmed if these measures alleviate your concerns. Therefore, I would like to outline – without prejudice – the principles for compensation for your consideration, which could take the form of a guarantee or bond in respect of any loss of income over the construction period for the 2VBP (anticipated to be circa two years). Accounts would need to be reviewed to identify the actual loss in profit that might be experienced. We would therefore request the accounts for the business.

Should any agreement develop out of this, it would need to be subject to a non-disclosure agreement.

Following construction, the compensation code provides no mitigation for this situation, although losses suffered to the value of the dwelling once the highway is operational will be able to be claimed.

In my letter dated 17 September 2021 I clarified the arrangements around a Part 1 claim. However, I think certainty over the eligibility (and quantum) of any future Part 1 claim would also assist considerably in relieving some of your concerns. When we reach the conclusion of our discussions and any further changes to the mitigation measures, we will need to carefully consider any remaining residual impacts. Based on the final, agreed mitigation and outcomes confirmed, we could consider if you would be eligible to make a Part 1 claim by having a qualifying interest on the appropriate date (1 year and 1 day after the road is operational). If that is the case, we could explore negotiation of that claim now, based on desktop evidence. You could instruct a valuation quantifying the injurious affection which could be reviewed and agreed by the project, with an ability to index link it, reviewable on the claim day. In summary, this would mean we could provide more certainty earlier.

We look forward to discussing all of these elements with you tomorrow. Please can you confirm you are content to progress with the agenda as outlined in my letter of 17 September 2021? In the meantime, you can contact me as always on [redacted].

Yours sincerely,

[redacted]

POTENTIAL PERMANENT BUND BY AGREEMENT POST CONSTRUCTION

POTENTIAL TEMPORARY BUND DURING CONSTRUCTION

POTENTIAL HEDGEROW ALONG FIELD BOUNDARY BY AGREEMENT

PROPOSED 3M HIGH BUND

SCOPE TO CONSIDER ADDITIONAL OFFSITE PLANTING IF REQUIRED

EXISTING INFORMAL ACCESS ASSUMED TO BE RETAINED

PROPOSED 3M HIGH BUND

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

- DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

- RETAINED HEDGEROW
- RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)
- RETAINED AND ENHANCED TREES AND SHRUBS

SOFTWORKS - PROPOSED

- HEDGEROW PLANTING
- NATIVE TREE AND SHRUB PLANTING
- GRASSLAND - RETAINED OR REINSTATED
- TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS
- INDICATIVE POND FOR BIODIVERSITY NET GAIN
- INDICATIVE FLOODPLAIN GRASSLAND MITIGATION AREA

HARDWORKS - PROPOSED

- HIGHWAY BOUNDARY FENCE
- GATE
- CLOSE BOARD FENCE
- VEHICLE SURFACING
- TRACK
- CULVERT
- MAMMAL CROSSING
- INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

- EXISTING CONTOURS
- CUTTING OR EMBANKMENT
- INFILTRATION BASINS
- SWALE

ACCESS ROUTES

- EXISTING RIGHT OF WAY TO BE RETAINED
- NEW PERMANENT RIGHT OF WAY
- NEW PERMISSIVE PATH

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:

SIZEWELL C

DOCUMENT:

DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:

TWO VILLAGE BYPASS
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
SHEET 1 OF 5

DRAWING NO:		REVISION:
SZC-SK001		01
DATE:	DRAWN:	SCALE:
AUG 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

POTENTIAL PERMANENT BUND BY AGREEMENT POST CONSTRUCTION

POTENTIAL TEMPORARY BUND DURING CONSTRUCTION

+18.0
+16.5
+17.4
+18.8
+16.7
+18.9
+20.7
+24.0
+23.4
POTENTIAL HEDGEROW ALONG FIELD BOUNDARY BY AGREEMENT
+22.7
PROPOSED 3M HIGH BUND
+21.2
+17.2
+21.0
SCOPE TO CONSIDER ADDITIONAL OFFSITE PLANTING IF REQUIRED
22.6+
17.7+
22.3+
EXISTING INFORMAL ACCESS ASSUMED TO BE RETAINED
+23.8
+18.2
+23.3
+23.8
+18.7
+23.4
+23.7
+19.3
+23.6
+24.3
+21.5
+24.5

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

- DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

- RETAINED HEDGEROW
- RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)
- RETAINED AND ENHANCED TREES AND SHRUBS

SOFTWORKS - PROPOSED

- HEDGEROW PLANTING
- NATIVE TREE AND SHRUB PLANTING
- GRASSLAND - RETAINED OR REINSTATED
- TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS
- INDICATIVE POND FOR BIODIVERSITY NET GAIN
- INDICATIVE FLOODPLAIN GRASSLAND MITIGATION AREA

HARDWORKS - PROPOSED

- HIGHWAY BOUNDARY FENCE
- GATE
- CLOSE BOARD FENCE
- VEHICLE SURFACING
- TRACK
- CULVERT
- MAMMAL CROSSING
- INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

- EXISTING CONTOURS
- CUTTING OR EMBANKMENT
- INFILTRATION BASINS
- SWALE

ACCESS ROUTES

- EXISTING RIGHT OF WAY TO BE RETAINED
- NEW PERMANENT RIGHT OF WAY
- NEW PERMISSIVE PATH

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

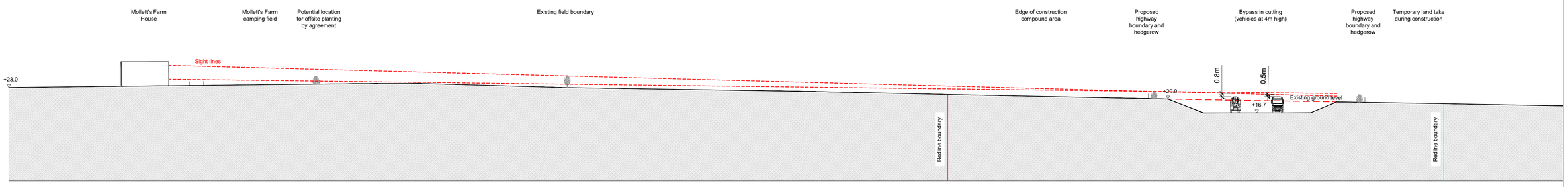
DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS - ZOOM IN
SHEET 2 OF 5

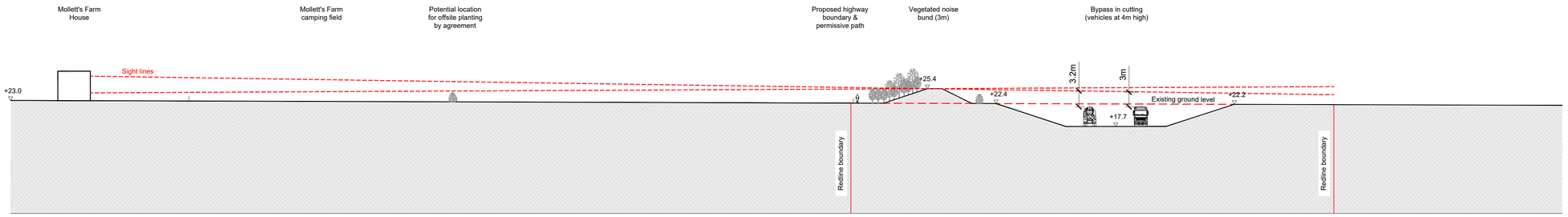
DRAWING NO:		REVISION:
SZC-SK002		01
DATE:	DRAWN:	SCALE:
AUG 2021	R.K.	1:2500 @ A1

SCALE BAR:

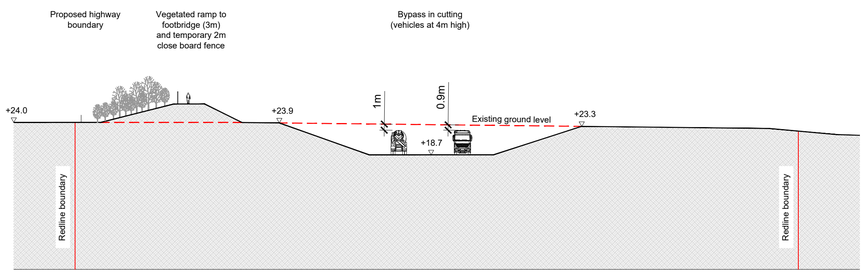
50m 0 50 100 150m



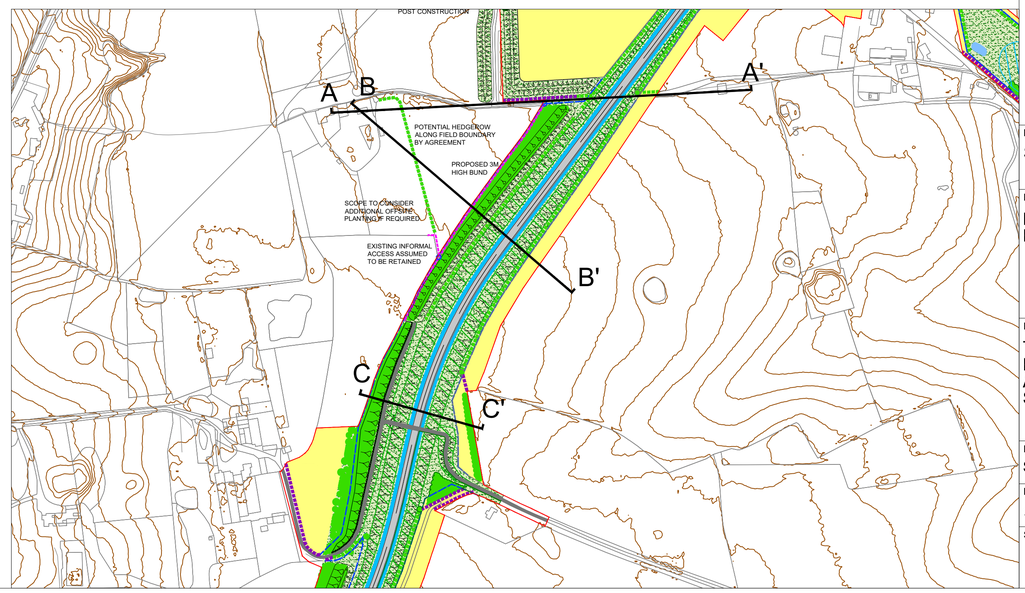
SECTION A - A'



SECTION B - B'



SECTION C - C'



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

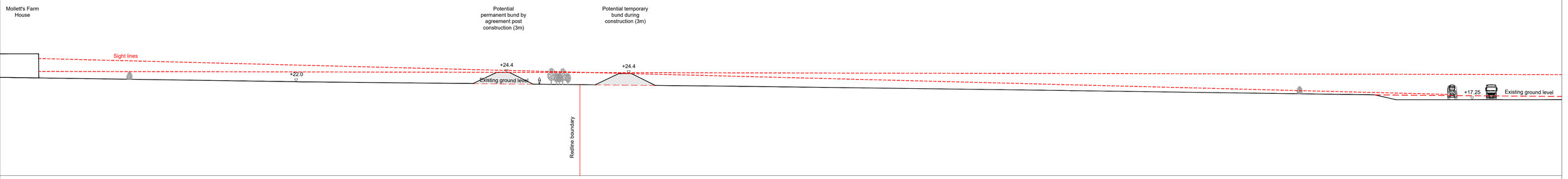
DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED SECTIONS
AND FINISHED LEVELS
SHEET 3 OF 5

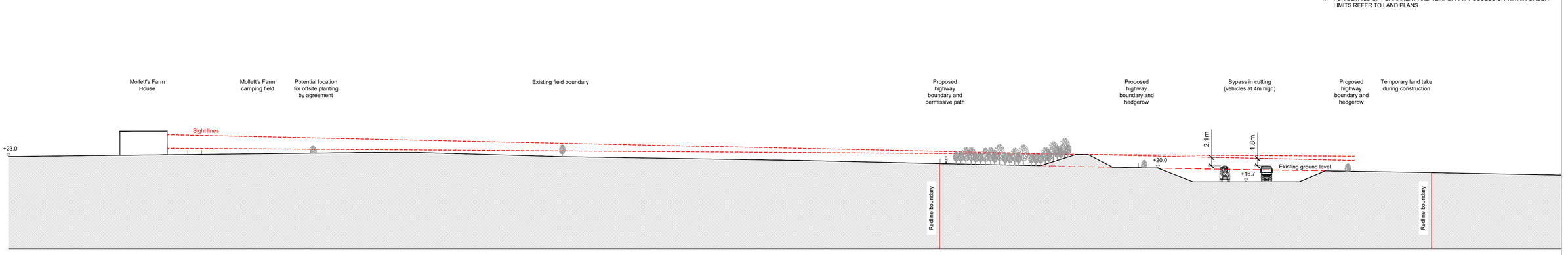
DRAWING NO:	REVISION:
SZC-SK003	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:500 @ A1

SCALE BAR:
50m 0 50 100 150m



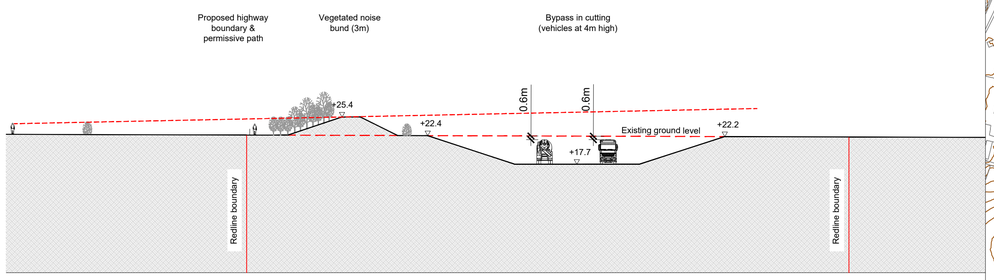
SECTION D - D'



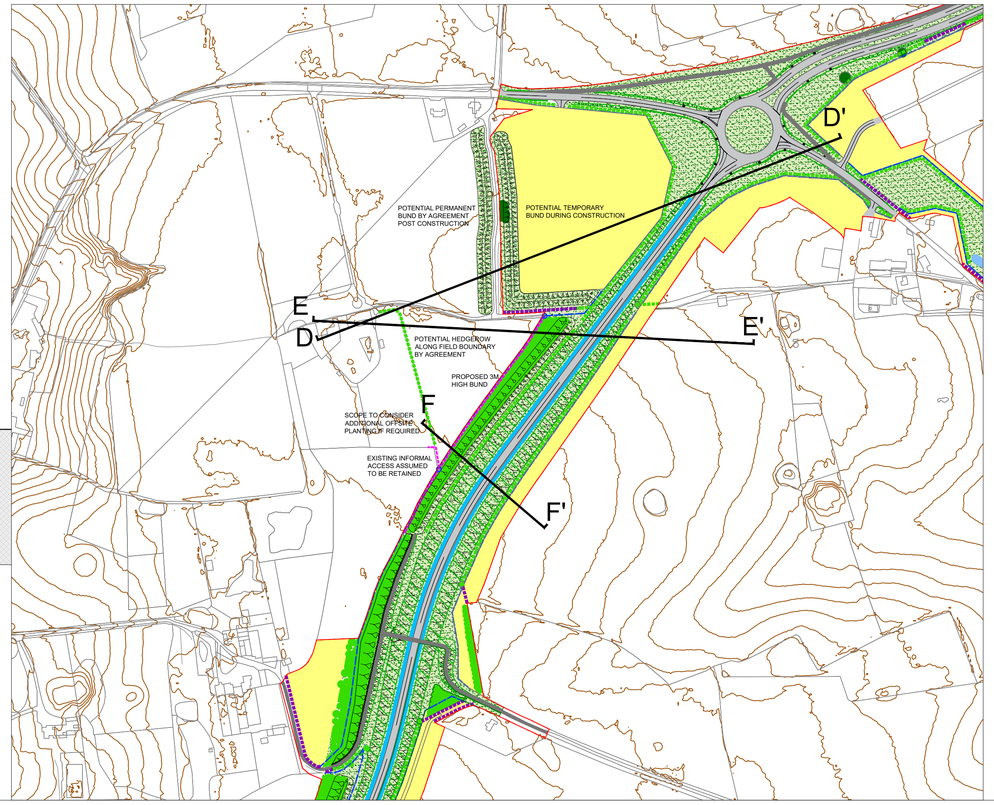
NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

SECTION E - E'



SECTION F - F'



REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

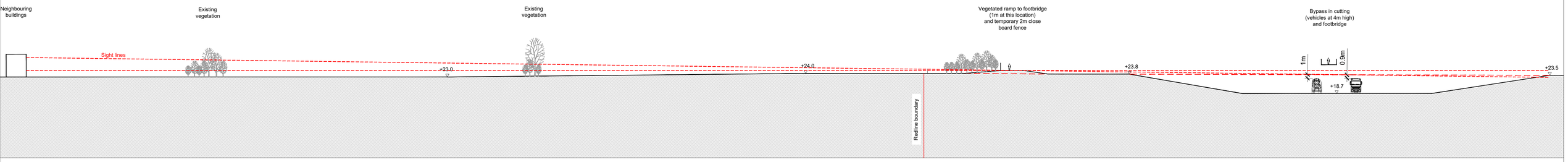
DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED SECTIONS
AND FINISHED LEVELS
SHEET 4 OF 5

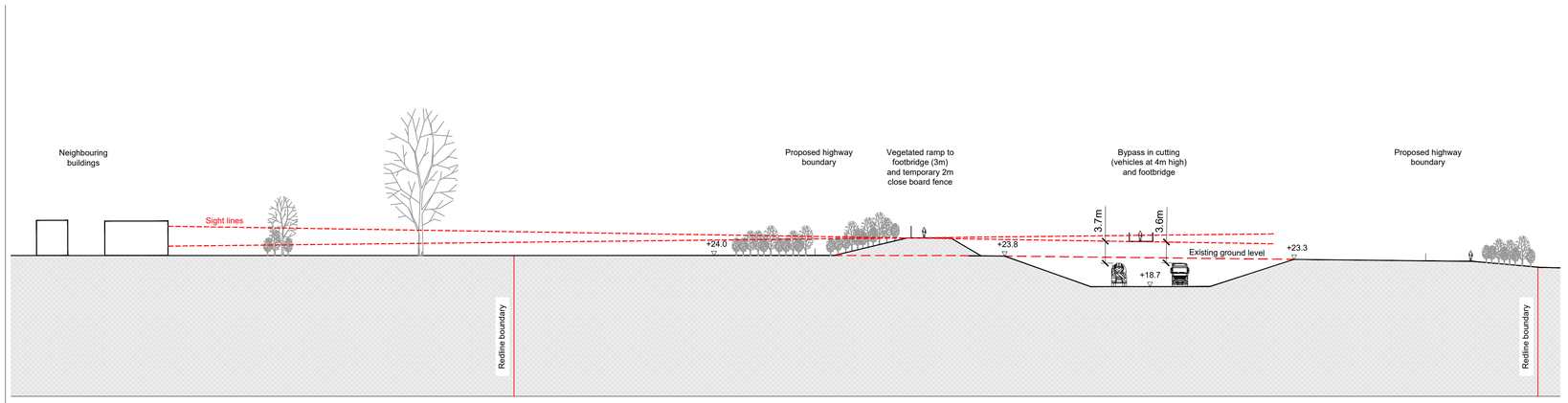
DRAWING NO:	REVISION:
SZC-SK003	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:500 @ A1

SCALE BAR:
50m 0 50 100 150m



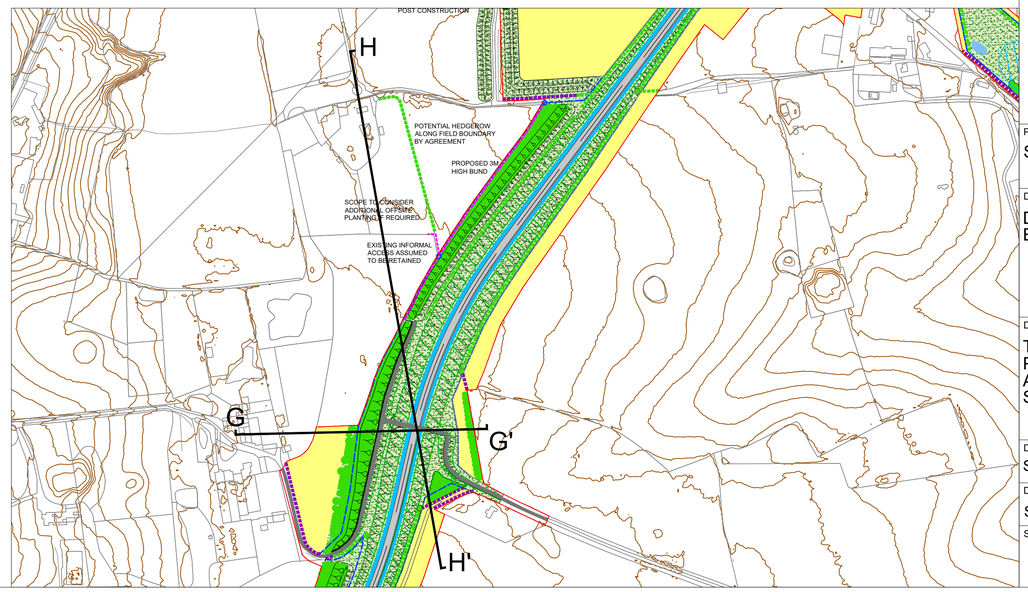
SECTION H - H'



SECTION G - G'

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS



REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
TWO VILLAGE BYPASS
PROPOSED SECTIONS
AND FINISHED LEVELS
SHEET 5 OF 5

DRAWING NO:	REVISION:
SZC-SK003	01

DATE:	DRAWN:	SCALE:
SEP 2021	R.K.	1:500 @ A1

SCALE BAR:
50m 0 50 100 150m

[redacted]

Mollett's Farm

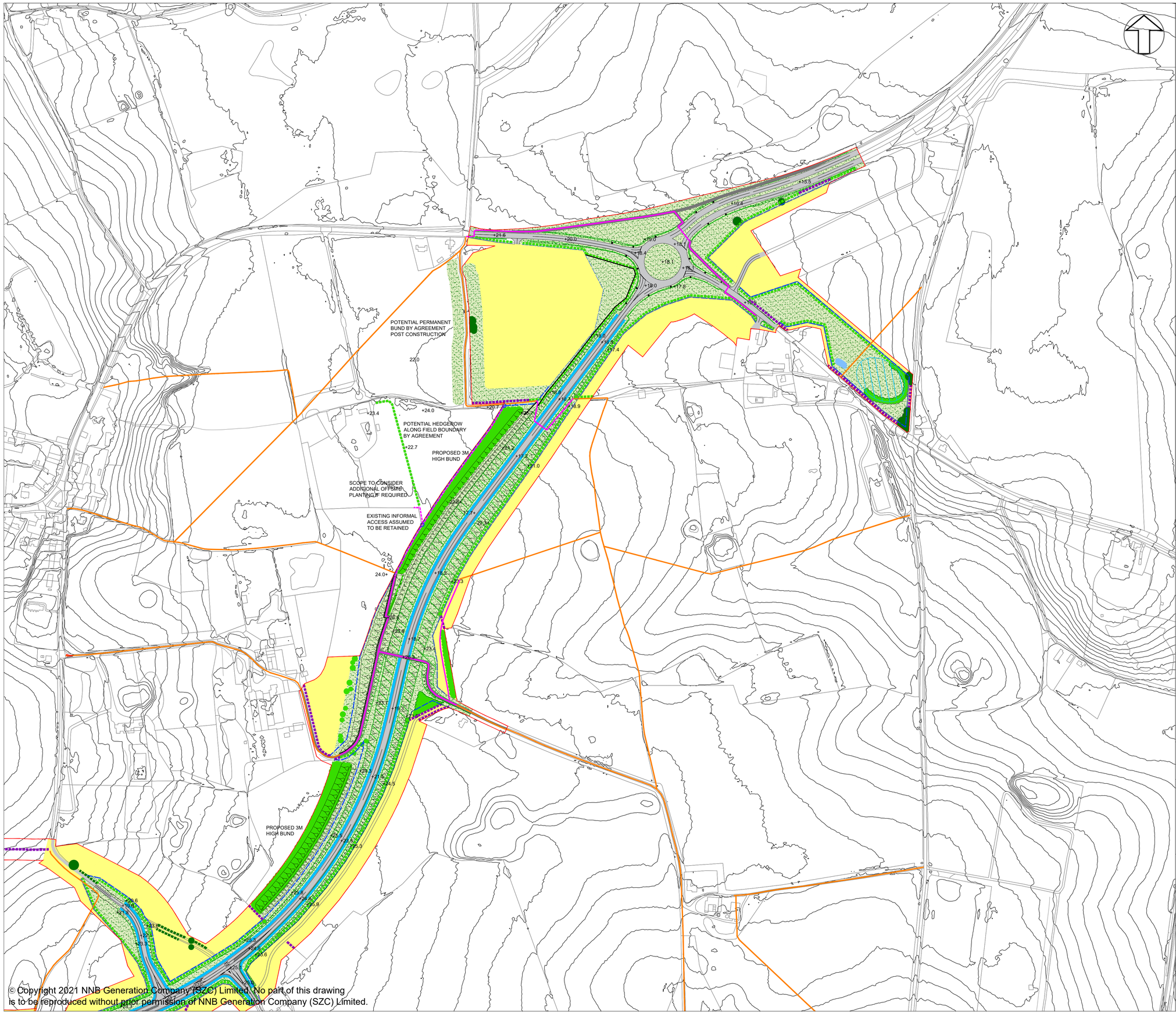
Questions for Meeting on 22/9/21

General questions on noise following the most recent submission

1. Do you acknowledge that sections 3.50 to 3.60 of LA111 of DMRB require that the acoustic context of the proposals and individual receptors must be taken into account when assessing the significance of effects?
2. Do you acknowledge that the specific acoustic context of Mollett's Farm (business USP, evolved orientation of site etc.), acts to increase the significance of effects of noise from the proposed route?
3. Why did yesterday's letter not include an updated version of Table 4 (as in the previous documents? Can one be provided?
4. The daytime levels for the camping field are L_{A10}, for an assessment of impact on amenity in the daytime L_{Aeq} (or L_{day}) would be more relevant. What is the predicted L_{Aeq}?
5. Do you acknowledge that the predicted night-time sound levels in the camping field for the new road render it unsuitable for that use?
6. Was the acoustic model used to optimize or advise the design process for the mitigation package or was it simply used to model the expected performance of a package derived in some other way?
7. Why is there a gap between the bund and the edge of the cutting?
8. Why does the roadside barrier (bund) not continue north of the public footpath due east of Mollett's Farm (proposed at grade road crossing) and what is the impact of this absence on noise levels at Mollett's Farm?
9. What acoustic criteria or acoustic inputs were applied to the design of the temporary bund around the construction compound and it's proposed permanent replacement and what are their predicted acoustic benefits?

Bearing in mind that there is now not sufficient time for us (or any other third party) to create a parallel acoustic model of the road. We need the following information:

1. What is(are) the exact location(s) of house receptors used in the modelling i.e. which façade of the building is it (are they) on for the before and after scenarios?
2. The bedrooms have been modelled at first floor height, whereas the house has bedrooms on the second floor. Can we have predictions from these rooms?
3. Can we have a drawing showing the road segments used in the model?
4. Can we have the table of the contributions from each segment so that we can compare them and identify where the improvements to mitigation are needed?



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

KEY:

- DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

- RETAINED HEDGEROW
- RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)
- RETAINED AND ENHANCED TREES AND SHRUBS

SOFTWORKS - PROPOSED

- HEDGEROW PLANTING
- NATIVE TREE AND SHRUB PLANTING
- GRASSLAND - RETAINED OR REINSTATED
- TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS
- INDICATIVE POND FOR BIODIVERSITY NET GAIN
- INDICATIVE FLOODPLAIN GRASSLAND MITIGATION AREA

HARDWORKS - PROPOSED

- HIGHWAY BOUNDARY FENCE
- GATE
- CLOSE BOARD FENCE
- VEHICLE SURFACING
- TRACK
- CULVERT
- MAMMAL CROSSING
- INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

- EXISTING CONTOURS
- CUTTING OR EMBANKMENT
- INFILTRATION BASINS
- SWALE

ACCESS ROUTES

- EXISTING RIGHT OF WAY TO BE RETAINED
- NEW PERMANENT RIGHT OF WAY
- NEW PERMISSIVE PATH

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

PROJECT:

SIZEWELL C

DOCUMENT:

DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:

TWO VILLAGE BYPASS
PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS
NOISE BARRIER OPTION

DRAWING NO:		REVISION:
SZC-SK001		01
DATE:	DRAWN:	SCALE:
AUG 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

[redacted]

04 October 2021

Dear [redacted]

Re: Mollett's Farm – Requested Information on Noise

Further to your Deadline 9 submission [REP9-037], the meetings on 22nd September 2021 and 1st October 2021, and the email from Mike Hewett of Acoustical Control Consultants (ACC) on 23rd September 2021, SZC Co. sets out below responses to the various questions asked on the topic of noise.

SZC Co. considers that it would be helpful at this point to summarise the considerable noise assessment work that has been undertaken to seek to determine a set of proposals that deliver the best outcomes for Mollett's Farm.

The noise assessment work had identified that the acoustically-best outcomes at Mollett's Farm would be achieved by a continuous barrier, be that a bund or a fence, extending from the southern overbridge approach ramp all the way to the proposed Friday Street roundabout. Pushing the crest, or highest point, of the barrier as close to the two village bypass as possible theoretically provides the greatest potential noise reduction, and on that basis, SZC Co. is seeking to blend the cutting into any additional mitigation on top of the cutting, so that there is no additional stand-off.

Beyond the southern approach ramp to the overbridge, the contribution to the noise levels at Mollett's Farm from the two village bypass are negligible.

ACC has stated in submissions that a further reduction of at least 5dB is required[1] above that already achieved by the cutting. It is known that the cutting provides a noise reduction of between 6 and 12dB, as was set out I SZC Co.'s responses to the Examining Authority's first set of questions at NV.1.44 [REP2-100, electronic page 1081]. The exact reduction is dependent on receptor location.

A barrier 4.5m high was modelled to test the efficacy of the design that ran from the southern overbridge approach ramp to the proposed Friday Street roundabout. It was found that this would provide a reduction of 3dB at the main residence at Mollett's Farm at ground floor and just over 2dB at first floor. A greater

[1] See page 2 of [REP8-246]

reduction was predicted at the southern extent of your camping area, with a reduction of almost 4.5dB expected.

SZC Co. and SCC have reviewed the feasibility of delivering a continuous barrier and a 4.5m barrier is not considered deliverable. SZC Co. does not consider a further 5dB reduction to be achievable with the road in its proposed alignment and the request to design a scheme to achieve this pre-determined reduction is not realistic. It is considered feasible to deliver a continuous barrier of 3m along from the southern overbridge approach ramp to the proposed Friday Street roundabout.

The difference between a 3m high continuous barrier and a 4.5m high continuous barrier is set out in Table 1, which shows that the additional 1.5m provides an additional reduction of approximately 1 to 1.5dB.

Table 1: Predicted noise reduction due to continuous barrier options

Location	Height	Reduction from 4.5m high barrier	Reduction from 3m high barrier
Mollett's Farm	Ground floor	-3.2	-2.1
	First floor(1)	-2.1	-1.9
Campsite	Ground floor	-4.4	-2.8
Note: (1) the calculations for a 4.5m high barrier were undertaken prior to SZC Co. being made aware of the presence of a second floor receptor. A value for the performance above first floor is not currently available			

The approach undertaken has been 'acoustically-designed' initially considering a 4.5m high acoustic fence as it was considered that this represented the greatest intervention that could be delivered in the location. The 'acoustically-designed' solution was not considered to be deliverable by the wider project and SCC, primarily due to the need to include a significant length of 4.5m high acoustic fence at the northern end of the barrier adjacent to the proposed Friday Street roundabout. A 3m high barrier is therefore considered the most appropriate solution from a noise reduction and landscape perspective.

The landscaping proposals that were presented to Mollett's Farm on 20th August 2021 and 17th September 2021 were based primarily on landscaping considerations, while seeking to retain as much of the known acoustic principles. The noise calculations that accompanied each of these proposals were calculated after the designs were completed to provide the information that you requested.

SZC Co. understands your need to independently review the design to see whether opportunities have been missed to improve matters further; however, since the proposed barrier stretches from the southern overbridge approach ramp all the way to the proposed Friday Street roundabout, it is not clear where an opportunity could have been missed to improve its performance, other than to increase its height.

The gap for the footpath is necessary to retain access, but the proposed stagger in the barrier should reduce the potential for noise to filter towards Mollett's Farm. Further betterment is possible and is under discussion, primarily to improve the experience for the footpath user, whereby the bund is extended further north, and rather than the staggered opening for the footpath being between two sections of 3m high fence, it would be between the end of the bund and the fence.

It is also noted that while SZC Co. would ideally like to achieve agreement on landscaping proposals prior to the close of the examination, the landscape proposals will still be subject to review and approval by SCC and East Suffolk Council (ESC).

A process for ongoing dialogue between SZC Co., SCC and ESC has therefore been included in the **Associated Development Design Principles** [REP9-011, electronic page 24] so that if consent is granted, the discussions can be resolved. SZC Co. is content is happy for Mollett's Farm to be involved in that discussion, subject to the agreement of SCC and ESC.

Having set out the work that has been undertaken to hopefully provide reassurance that a rigorous process has been applied, responses are set out below to the questions raised by and your team.

> *1. Do you acknowledge that sections 3.50 to 3.60 of LA111 of DMRB require that the acoustic context of the proposals and individual receptors must be taken into account when assessing the significance of effects?*
>
> *2. Do you acknowledge that the specific acoustic context of Mollett's Farm (business USP, evolved orientation of site etc.), acts to increase the significance of effects of noise from the proposed route?*

SZC Co. notes that paragraphs 3.50 and 3.60 of DMRB LA111[2] require the assessor to consider steps to modify the assessment outcomes or adopted thresholds, but the intervening paragraphs at 3.51 to 3.59 do not.

In SZC Co.'s opinion, the requirements of DMRB LA111 have been applied as required by the guidance, and the outcomes are appropriate.

The advice in paragraph 3.60 of DMRB LA111 refers to Table 3.60 and the advice in that table is that where the acoustic context is altered, or where there is a likely change in perception from the residents, a minor adverse effect may be considered a significant effect, in an EIA context. However, Mollett's Farm is already predicted to be subject to a significant adverse effect, so the assessment outcome is not changed by the advice in Table 3.60.

DMRB LA111 does not require an effect that is already considered to be significant to be assigned a greater level of significance. In the context of the EIA Regulations[3], outcomes are either significant in an EIA context, or they are not.

> *3. Why did yesterday's letter* [letter dated 21st September 2021] *not include an updated version of Table 4 (as in the previous documents? Can one be provided?*

[2] Design Manual for Roads and Bridges (DMRB) LA 111 Noise and vibration (May 2020)
[3] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017 No 572)

An updated version of Table 4 was not felt to be necessary as the information provided related to the acoustic performance of the landscaping proposals. However, in response to your request, please now find an updated version of Table 4 in the letter of 20th August 2021 below for the most recent proposals.

Table 2: Outcomes at Mollett's Farm, 2028 Busiest Day – 1st October 2021 Proposal

Receptor Location	Period (location)	Baseline (Reference Case)	As Per Submitted Scheme	With Additional Mitigation
Mollett's Farm	Day (ground floor)	52.5	55.5 (+3.0)	53.4 (+0.9)
	Night (first floor)	42.3	44.7 (+2.4)	42.8 (+0.5)
	Night (second floor)	44.4	45.6 (+1.2)	43.8 (-0.6)
Campsite	Day (ground floor)	49.6	57.9 (+8.3)	55.1 (+5.5)
	Night (ground floor)	39.7	47.7 (+8.0)	44.9 (+5.2)

Notes: Daytime levels are façade $L_{A10,18hrs}$ and night-time levels are free-field L_{night}
Changes in brackets are from the baseline noise levels.

4. The daytime levels for the camping field are L_{A10}, for an assessment of impact on amenity in the daytime L_{Aeq} (or L_{day}) would be more relevant. What is the predicted L_{Aeq}?

The values set out in Table 2 have been converted to $L_{Aeq,16hrs}$ noise levels using the TRL end correction method[4] to determine L_{day} and L_{eve} values, which are summed to obtain an $L_{Aeq,16hrs}$ value. The resultant values are set out in Table 3.

Table 3: Outcomes at Mollett's Farm, 2028 Busiest Day – 1st October 2021 Proposal

Receptor Location	Period (location)	Baseline (Reference Case)	As Per Submitted Scheme	With Additional Mitigation
Mollett's Farm	Day (ground floor)	50.7	53.6 (+2.9)	51.6 (+0.9)
	Night (first floor)	42.3	44.7 (+2.4)	42.8 (+0.5)
	Night (second floor)	44.4	45.6 (+1.2)	43.8 (-0.6)
Campsite	Day (ground floor)	47.9	55.8 (+7.9)	53.2 (+5.2)
	Night (ground floor)	39.7	47.7 (+8.0)	44.9 (+5.2)

Notes: Daytime levels are façade $L_{Aeq,16hrs}$ and night-time levels are free-field L_{night}
Changes in brackets are from the baseline noise levels.

5. Do you acknowledge that the predicted night-time sound levels in the camping field for the new road render it unsuitable for that use?

That is not a judgement for SZC Co. to make. Camp-sites exist in a range of locations and their suitability is a matter for those promoting them and those using them. SZC Co. accept that the night-time climate will change by the amounts shown in Tables 2 and 3 if the DCO is consented and the two village bypass

[4] Method for Converting the UK Road Traffic Noise Index LA10,18h to the EU Noise Indices for Road Noise Mapping. DEFRA (2006)

constructed, but the extent to which that renders the camp-site 'unsuitable', as opposed to just subject to a different noise climate, is not a judgement SZC Co. can make.

The assessment location used to provide the noise levels in Tables 2 and 3 was at the southern extent of the camping area, closest to the two village bypass it is likely that noise levels further from the road will be marginally lower.

> *6. Was the acoustic model used to optimize or advise the design process for the mitigation package or was it simply used to model the expected performance of a package derived in some other way?*
> *7. Why is there a gap between the bund and the edge of the cutting?*
> *8. Why does the roadside barrier (bund) not continue north of the public footpath due east of Mollett's Farm (proposed at grade road crossing) and what is the impact of this absence on noise levels at Mollett's Farm?*
> *9. What acoustic criteria or acoustic inputs were applied to the design of the temporary bund around the construction compound and it's proposed permanent replacement and what are their predicted acoustic benefits?*

The answers to all of these questions are informed by the information set out at the start of this letter. An 'acoustically-designed' solution was produced and considered, but was not considered to be deliverable. The proposals that were presented to Mollett's Farm on 20th August 2021 and 17th September 2021 were designed from a landscaping point of view, seeking to balance the various design goals, some of which conflicted with the need to only provide screening for Mollett's Farm.

The noise calculations were undertaken for the proposals to provide the noise data that Mollett's Farm had requested. The barrier adjacent to the contractor's compound was not designed from an acoustic point of view, and it is not considered to be an acoustically-effective location for a bund to control road traffic noise. The benefits of that bund alone were set out in the letter dated 22nd September 2021.

In terms of the additional detailed questions, calculations of the effect at second floor level have been provided in Tables 2 and 3 in this letter.

A plan showing the calculation locations of the primary assessment location in the noise calculations (Receptor 15 in the various two village bypass noise assessments) and the additional location at the southern edge of the camp-site is appended to this letter.

The approach to receptor locations in the noise modelling was to select a free-field location close to either the worst-affected location in a group of receptors, or close to the worst-affected façade of a single receptor. Since SZC Co. did not have access to definitive information on the sensitivity of particular uses within a particular façade of each receptor building, and since DMRB LA111 does not prescribe a specific method of selecting receptor points, this approach was considered to be the most appropriate way to capture representative effects from the project.

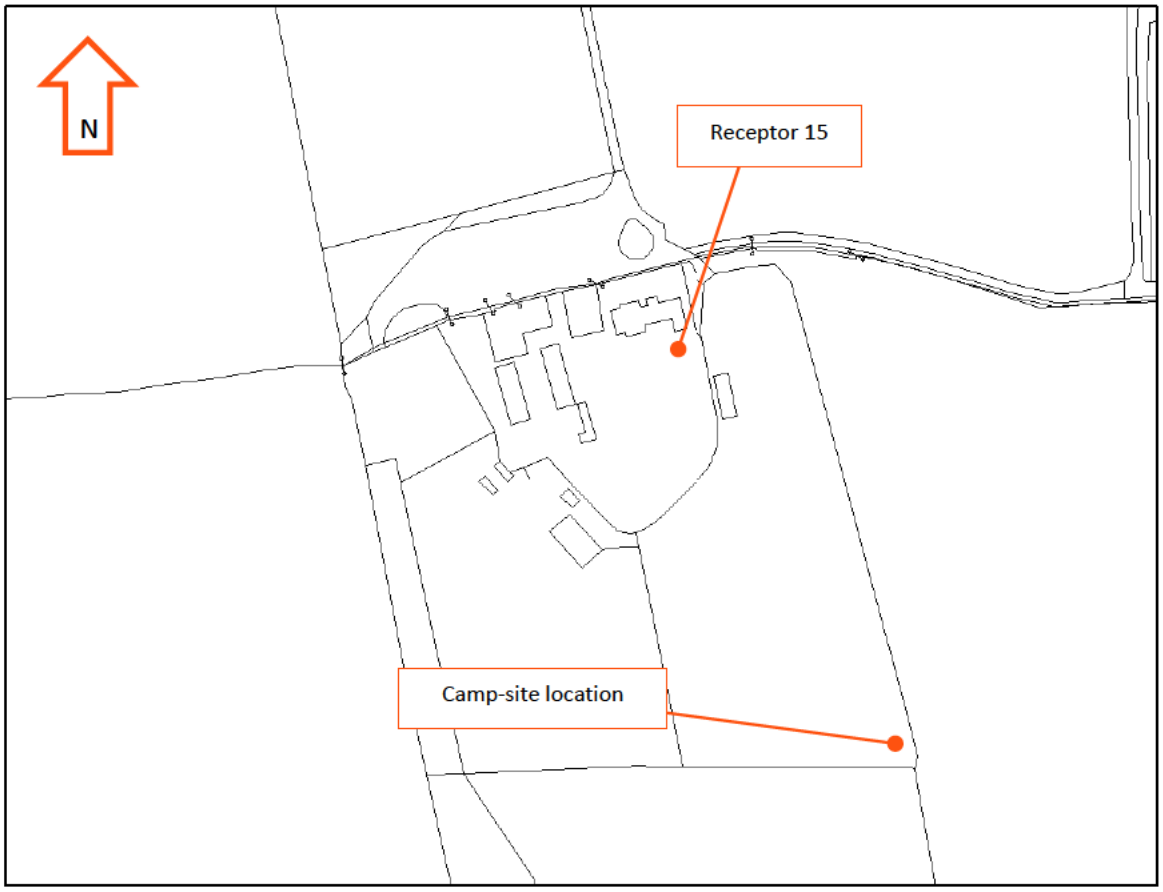
It is not possible to provide a breakdown of noise contributions by segment; the SoundPlan model provides data in two formats neither of which provide the information sought. One format provides a breakdown of the corrections for each segment but not the noise level, for example, it provides the reduction due to distance, angle of view, and/or barrier. The other format provides the basic noise level at 10m from the edge of segments. However, the two lists are not directly-equivalent and given that the latest proposals screen the entire length of the two village bypass from Mollett's Farm, the benefits of seeking to reconcile the two sets of the data are not clear.

We trust the information set out in this letter provides reassurance that SZC Co. is working to achieve appropriate mitigation for Mollett's Farm.

Yours sincerely,

[redacted]

Appendix A: Location of Mollett's Farm receptor



07 October 2021

Dear [redacted]

Re: Mollett's Farm – Requested Further Information on Noise

In his 5th October 2021 email to [redacted] raised two points in response to SZC Co.'s letter of 4th October 2021:

- Noise calculations have been requested on the façade of Mollett's Farm for the various assessment scenarios, on the basis of paragraph 3.53 of DMRB LA111[1], which is claimed requires predictions in a façade location; and
- Noise contours are requested for various mitigation options considered.

SZC Co.'s responses to these two points are set out in this letter.

Façade Calculations

[redacted] cites paragraph 3.53 of DMRB LA111, noting that in his view it requires calculations of noise in façade locations.

Paragraph 3.53 of DMRB LA111 states:

> *"Where the noise sensitive receptor is a building, the facade used to calculate noise change shall be chosen as follows:*
>
> > *1) the facade with the greatest magnitude of noise change;*
> > *2) where the greatest magnitude of noise change is equal on more than one facade, the facade experiencing the greatest magnitude of noise change and highest do-something noise level."*

[1] Design Manual for Roads and Bridges (DMRB) LA 111 Noise and vibration (May 2020)

The beginning of paragraph 3.53 is important; the direction to use a façade location is applied *"Where the noise-sensitive receptor is a building"*. SZC Co. did not assess building locations, as was stated in the letter of 4th October 2021:

> *"The approach to receptor locations in the noise modelling was to select a free-field location close to either the worst-affected location in a group of receptors, or close to the worst-affected façade of a single receptor. Since SZC Co. did not have access to definitive information on the sensitivity of particular uses within a particular façade of each receptor building, and since DMRB LA111 does not prescribe a specific method of selecting receptor points, this approach was considered to be the most appropriate way to capture representative effects from the project."*

Representative free-field locations were selected to identify the changes in noise level at representative receptor locations, which were then assigned to noise-sensitive receptors in the vicinity of the calculation point.

The representative receptor points used in the modelling were located in worst-case locations, such as at Mollett's Farm, where the receptor point was to the south of the buildings on the site, on the two village bypass side of the buildings, and screened from a significant proportion of the existing A12.

SZC Co. considers its approach delivers representative outcomes in a robust, proportionate way that is in accordance with DMRB LA111. On this basis, SZC Co. does not consider it necessary to provide further calculations at this time.

Noise Contours

As was summarised in the 4th October 2021 letter, SZC Co. has focussed on developing a landscaping scheme that provides Mollett's Farm with the enhanced acoustic screening that it seeks, in a way that is deliverable by the project.

The noise contours were offered to provide [redacted] with the information he requested in his email of 22nd September 2021. However, matters have progressed and the final draft landscaping proposals currently before you provide enhanced acoustic screening of the two village bypass along its entire length from the proposed Friday Street roundabout to the southern approach ramp to the overbridge.

It is considered that these proposals strike the appropriate balance between reducing road traffic noise levels to their practical lowest levels and deliver an appropriate scheme within the landscape, which will be developed further as part of the approval process under either Requirement 22 or 22A of the DCO, depending on whether SZC Co, East Suffolk Council and Suffolk County Council agree that the proposals sit within or outside the highways boundary.

The requirement to continue to engage on these matters if consent is granted is contained in Landscape Design Principle no. 9 in the **Associated Development Design Principles** [REP9-011, electronic page 23],

which provides the framework for those further discussions between SZC Co., East Suffolk Council and Suffolk County Council. That engagement process is a commitment under the DCO.

Conclusion

We have endeavoured to provide you with a package of measures that includes a comprehensive set of landscaping proposals. The plans go as far as practically possible to reduce road traffic noise. We will continue to discuss the compensation that will be available to you, acknowledging those impacts that cannot be fully mitigated. We will aim to provide certainty on the timing and quantum of compensation likely to be payable to ensure that you can confidently develop plans for the future operation of the business.

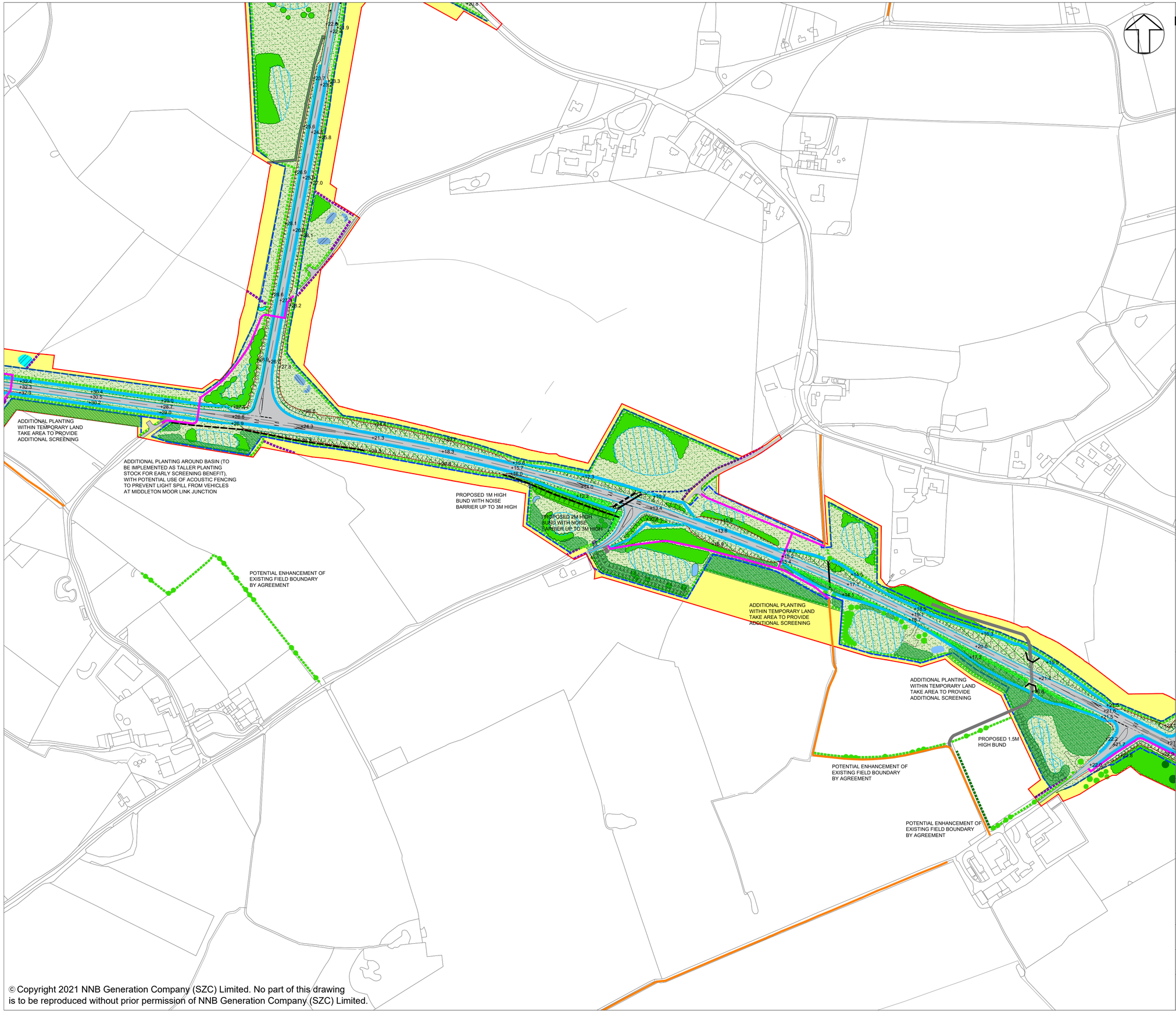
A process is in place to develop the current draft landscaping proposals to a level of detail that can be approved by the relevant authority should the DCO be consented.

We hope that the significant amount of information provided to date and the matters referred to above demonstrate that SZC Co. has been and is committed to continue to engage with you going forward as the mitigation proposals are formalised and approved under Requirement 22 or 22A as described above, if consent is granted.

Yours sincerely,

[redacted]

APPENDIX G: COPIES OF CORRESPONDENCE WITH MR AND MRS LACEY



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

RETAINED HEDGEROW

RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)

RETAINED AND ENHANCED TREES AND SHRUBS

RETAINED AND ENHANCED POND

SOFTWORKS - PROPOSED

HEDGEROW PLANTING

NATIVE TREE AND SHRUB PLANTING AS SHOWN ON DCO DRAWINGS

NATIVE TREE AND SHRUB PLANTING - PROPOSED ADDITIONAL ENHANCEMENTS

GRASSLAND - RETAINED OR REINSTATED

TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

EXISTING POND TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

INDICATIVE POND FOR GREAT CRESTED NEWT MITIGATION

INDICATIVE POND FOR BIODIVERSITY NET GAIN

HARDWORKS - PROPOSED

HIGHWAY BOUNDARY FENCE

CLOSE BOARD FENCE

ACOUSTIC FENCE

VEHICLE SURFACING

TRACK

INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

CUTTING OR EMBANKMENT

INDICATIVE ATTENUATION BASIN

INDICATIVE SWALE

PROPOSED WATERCOURSE CULVERT

PROPOSED FLOOD RELIEF CULVERT

PROPOSED DITCH CULVERT

INDICATIVE WATERCOURSE DIVERSION

ACCESS ROUTES

EXISTING RIGHT OF WAY TO BE RETAINED

NEW PERMANENT RIGHT OF WAY

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED LANDSCAPE MASTERPLAN
AND FINISHED LEVELS
FORDLEY ROAD

DRAWING NO:	REVISION:
7678_FR_SK001	

DATE:	DRAWN:	SCALE:
SEPT 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

ADDITIONAL PLANTING
WITHIN TEMPORARY LAND
TAKE AREA TO PROVIDE
ADDITIONAL SCREENING

ADDITIONAL PLANTING AROUND BASIN (TO
BE IMPLEMENTED AS TALLER PLANTING
STOCK FOR EARLY SCREENING BENEFIT),
WITH POTENTIAL USE OF ACOUSTIC FENCING
TO PREVENT LIGHT SPILL FROM VEHICLES
AT MIDDLETON MOOR LINK JUNCTION

POTENTIAL ENHANCEMENT OF
EXISTING FIELD BOUNDARY
BY AGREEMENT

PROPOSED 1M HIGH
BUND WITH NOISE
BARRIER UP TO 3M HIGH

PROPOSED 2M HIGH
BUND WITH NOISE
BARRIER UP TO 3M HIGH

ADDITIONAL PLANTING
WITHIN TEMPORARY LAND
TAKE AREA TO PROVIDE
ADDITIONAL SCREENING

ADDITIONAL PLANTING
WITHIN TEMPORARY LAND
TAKE AREA TO PROVIDE
ADDITIONAL SCREENING

PROPOSED 1.5M
HIGH BUND

POTENTIAL ENHANCEMENT OF
EXISTING FIELD BOUNDARY
BY AGREEMENT

POTENTIAL ENHANCEMENT OF
EXISTING FIELD BOUNDARY
BY AGREEMENT

NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS

DEVELOPMENT SITE BOUNDARY

SOFTWORKS - EXISTING

RETAINED HEDGEROW

RETAINED IMPORTANT HEDGEROW (HEDGEROW REGULATIONS 1997)

RETAINED AND ENHANCED TREES AND SHRUBS

RETAINED AND ENHANCED POND

SOFTWORKS - PROPOSED

HEDGEROW PLANTING

NATIVE TREE AND SHRUB PLANTING AS SHOWN ON DCO DRAWINGS

NATIVE TREE AND SHRUB PLANTING - PROPOSED ADDITIONAL ENHANCEMENTS

GRASSLAND - RETAINED OR REINSTATED

TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

EXISTING POND TO BE REINSTATED UPON COMPLETION OF CONSTRUCTION WORKS

INDICATIVE POND FOR GREAT CRESTED NEWT MITIGATION

INDICATIVE POND FOR BIODIVERSITY NET GAIN

HARDWORKS - PROPOSED

HIGHWAY BOUNDARY FENCE

CLOSE BOARD FENCE

ACOUSTIC FENCE

VEHICLE SURFACING

TRACK

INDICATIVE LIGHTING COLUMN

EARTHWORKS / INDICATIVE DRAINAGE - PROPOSED

CUTTING OR EMBANKMENT

INDICATIVE ATTENUATION BASIN

INDICATIVE SWALE

PROPOSED WATERCOURSE CULVERT

PROPOSED FLOOD RELIEF CULVERT

PROPOSED DITCH CULVERT

INDICATIVE WATERCOURSE DIVERSION

ACCESS ROUTES

EXISTING RIGHT OF WAY TO BE RETAINED

NEW PERMANENT RIGHT OF WAY

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
SIZEWELL LINK ROAD
PROPOSED LANDSCAPE MASTERPLAN
AND FINISHED LEVELS
FORDLEY ROAD OPTION 2

DRAWING NO:	REVISION:
7678_FR_SK002	

DATE:	DRAWN:	SCALE:
OCT 2021	R.K.	1:2500 @ A1

SCALE BAR:

50m 0 50 100 150m

12 October 2021

[redacted]

Dear [redacted],

Sizewell Link Road Landscaping Proposals

Further to our letter of 20th August and subsequent meeting on the 9th September, we have continued to develop our proposed landscaping to mitigate the impacts at Oakfield House. I mentioned at our meeting that I had been discussing with Suffolk County Council (SCC) the potential to adjust the proposed location of the Fordley Road/SLR junction approximately 30m east within the limits of deviation outlined within the drawings within the SZC application for Development Consent. This would require SCC to agree to some deviations from standard in the design of the junction to make this alignment acceptable, and it is understood that this can be achieved. However, this is something that will only be confirmed as the detailed design process develops in the coming months.

On that basis I attach two revised landscape plans for you to review as follows:

1. Existing alignment of the Fordley Road junction

   The revised landscape proposals maintain the proposed 2m high bund along the southern edge of the closest proposed attenuation basin, with a 15m wide belt of woodland planting on top. We also discussed in the meeting the stretch of close board fencing adjacent to your property boundary to provide additional screening while the planting establishes.

   We have also been considering the inclusion of an acoustic fence along the southern highway boundary from Fordley Road and eastwards until the road goes into cutting. This is illustrated on the updated drawing and would be agreed as part of detailed design.

2. Potential re-aligned Fordley Road junction (within DCO limits of deviation)

   The second landscape plan includes the mitigation set out in the first plan and also illustrates what could be achieved if the Fordley Road junction is realigned approximately 30m east as part of the detailed

design. This adjustment would make the proposed junction less visible from Oakfield House and provide a better opportunity to mitigate the noise impacts through additional landscaping. This barrier, which is expected to take the form of a landscaped bund of up to 2m high potentially with an acoustic fence of up to 3m in height, is calculated to provide a reduction in noise from the Sizewell link road of around 2.5 to 3dB.

There will be an agreed process to deliver an appropriate scheme within the landscape, which will be developed further as part of the approval process under either Requirement 22 or 22A of the DCO.

The requirement to continue to engage on these matters if consent is granted is contained in Landscape Design Principle no. 9 in the **Associated Development Design Principles** [REP9-011, electronic page 27], which provides the framework for those further discussions between SZC Co., East Suffolk Council and Suffolk County Council.

As mentioned in our previous letter we are also committed to discussing the specification of a quiet road surface with the County Council which would also assist in the reduction of noise levels for Oakfield House. The requirement to continue to engage on the use of quiet road surfaces if consent is granted in contained General Design Principle no. 14 in the **Associated Development Design Principles** [REP9-011, electronic page 26], which again provides the framework for those further discussions between SZC Co., East Suffolk Council and Suffolk County Council.

These are commitments under the DCO, and we will continue our engagement going forward with yourselves as very much a key part of this process.

Yours sincerely,

APPENDIX H: COPIES OF CORRESPONDENCE WITH MR MELLEN

Our Ref: SZC.191934

5th October 2021

[redacted]

[redacted]

Dear [redacted]

NNB Generation Company (SZC) Limited – Sizewell C New Nuclear Power Station

Further to your recent meeting with Josh Clarke-Davis, Mike Brownstone and Alister Kratt, and in Josh's absence this week, I can now provide a response to the actions taken away from the meeting.

Firstly, please see attached a response from Mike Brownstone in relation to the points raised in respect of noise surveys and assessment methods etc.

With regard to the prospect of additional screening from the railway line on the north-western side, this continues to be looked into.

Finally, with regard to confirming the mechanism for measuring baseline noise levels, and controlling both construction and operational railway noise:

- The mechanism for undertaking further baseline measurements will be contained in the **Noise Monitoring and Management Plan**, which will form part of the **Code of Construction Practice** [REP8-082]. A draft of a **Noise Monitoring and Management Plan** for an Associated Development site was submitted at Deadline 8 [REP8-085, electronic page 194] to demonstrate how the document will work.
- The mechanism for controlling noise and vibration from the construction works is set out in the **Code of Construction Practice** [REP8-082]. A **Noise Monitoring and Management Plan** will be developed and agreed with East Suffolk Council as part of the **Code of Construction Practice** controls. These controls will be secured by Requirement 2 of the DCO, if consent is granted.
- Controls for the operation of the railway movements will be set out in the **Rail Noise Mitigation Plan** [REP8-071], which will need to be agreed by East Suffolk Council before any trains can run, secured by Requirement 25 of the DCO, if consent is granted.
- Following consultation with both East Suffolk Council and local residents, the **Rail Noise Mitigation Plan** [REP8-071] now requires SZC Co. to further consider the need for railside acoustic barriers, including along the green rail route.

Please revert to myself with any queries or feedback in relation to the above whilst Josh is away on annual leave

[redacted]

HEAD OFFICE
1 Staplehurst Farm
Weston on the Green
Oxfordshire OX25 3QU

Dalcour Maclaren Ltd registered
in England number: 04836300
Regulated by the RICS
Dalcourmaclaren.com

At the meeting on 14th September 2021, SZC Co. undertook to establish whether it was possible to run additional rail noise calculations using the NORD2000 calculation method. It is noted that in your Deadline 8 submission, you stated that:

> *"Mr Brownstone agreed he would provide this as soon as he was able to , a relatively simple task by running the already inputed data along with wind speed and direction into the Nord 2000 module of SoundPlanTM."*

That is not an accurate reflection of the discussion. The action that was taken away was to determine whether it would be possible to run additional rail noise calculations; there was no commitment to undertake the calculations.

Having reviewed the parameters required to run the NORD2000 calculations, SZC Co. has concluded that it is not possible to undertake this exercise with any degree of reliability at this time. it is not a simple matter of selecting an alternative considered calculation method – there are fundamental differences in how NORD2000 works when compared with the UK's Calculation of Railway Noise (CRN)[1] and the ISO Standard ISO9613-2[2].

Some of the differences include:

- Source data are provided for Swedish, Danish and Norwegian trains, not UK trains;
- The various ground regions, which are fundamental to the propagation of sound, are defined in a way that is very different from the UK methods, requiring considerable reconfiguration of the model;
- The way which the model takes account of the presence of vegetation is complex and would require additional information not currently in the model;
- To avoid using the default Scandinavian weather conditions, it is necessary to obtain, collate and verify appropriate meteorological data.

NORD2000 is not a calculation method that is used in the UK, it being the standard method for noise calculations in Scandinavia. Given the complexity of switching the method of calculation, SZC Co. does not consider it appropriate to undertake calculations that would be subject to considerable uncertainty.

The methods used in the submitted assessments were:

- CRN for time-averaged daytime and night-time noise levels, which is the method that is required by the Noise Insulation Regulations[3] for railways in England and Wales; and
- ISO9613-2 for maximum sound levels utilising measurements of the same types of train proposed to be used by SZC Co. since CRN does not cover maximum sound levels.

---

[1] Calculation of Railway Noise (CRN). Department of Transport 1995

[2] International Standards Organisation (ISO), 1996, ISO 9613-2:1996 Acoustics -- Attenuation of sound during propagation outdoors - Part 2: General method of calculation, ISO

[3] The Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 SI 1996 no. 428

The two methods of calculation both take account of adverse meteorological conditions, i.e. conditions that are favourable to sound propagation, leading to a robust outcome:

> *"The procedures assume typical railway (and other guided transport system) traffic and noise propagation conditions which are consistent with wind direction from source to*
> *Reception point during the specified periods."* (paragraph 5, CRN)
>
> *"Downwind propagation conditions for the method specified in this part of ISO 9613 are as specified in 5.4.3.3 of ISO 1996-2: 1987, namely:*
>
> - *wind direction within an angle of ±45^{o} of the direction connecting the centre of the dominant sound source and the centre of the specified receiver region, with the wind blowing from source to receiver, and*
> - *wind speed between approximately 1m/s and 5m/s, measured at a height of 3m to 11m above the ground."* (Section 5, ISO9613-2)"
>
> *"These equations also hold, equivalently, for average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights."* (Section 5, ISO9613-2)

12 October 2021

[redacted]

Dear [redacted]

My apologies for the speed of delivery of the information. Our team have been supporting multiple issues in coordination with other disciplines to address landowner discussions as well as the main Examination process.

As set out in the recent meeting, we anticipate that discussions will continue well beyond the D10 deadline and the Examination in order to hopefully reach agreement to enhanced mitigation.

The meeting at Aldhurst Farm Cottages gave a strong direction for the information you required and the matters to be considered, which I trust is reflected in our proposals.

We have prepared amended plans for the route that explore the possibility of increased bunding to the east and the installation of acoustic fencing. We provide cross sections to further assist with understanding the performance of these two elements in relation to your property and the rail route at grade and on embankment.

The proposals are very much work in progress and will need to be discussed with yourselves along with the relevant authorities including Historic England.

The proposals comprise a bund up to 3m high with an acoustic fence up to 2.5m high which will screen views from your property (ground and first floor) towards trains on the rail track.

Our acoustic consultant has undertaken some initial noise modelling following the site visit. Based on a 5.5m high structure (3m high bund, plus 2.5m high fence) aligning the east side of the rail track, our consultant estimates a reduction in noise of 5.5 to 6.5dB from passing trains measured at your property.

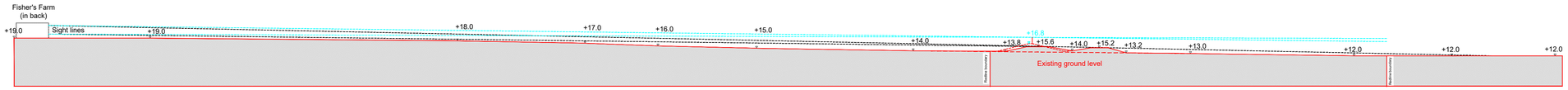
As you are aware we are predicting noise levels that are below the level we would expect to cause an adverse effect on sleep, but in recognition of the concerns you and your neighbours have expressed, we are seeking to explore mitigation to support a reduction in noise levels.

The Noise Mitigation Scheme, which is contained in Annex W of the Deed of Obligation (Doc Ref. 10.4) has been amended to provide for improvements to domestic sound insulation at lower levels of noise and to facilitate a more flexible approach to the mitigation that is available, should discussions between you and SZC Co. conclude that such measures are appropriate.

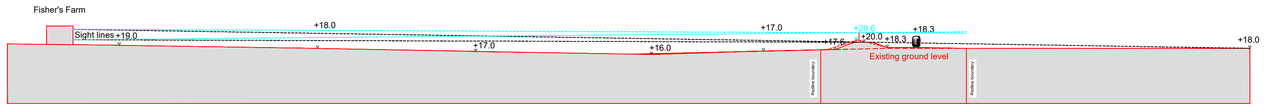
We look forward to meeting you to discuss the proposals with you in more detail.

Yours sincerely,

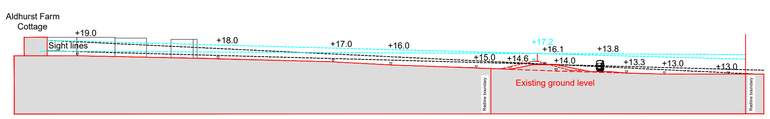
[redacted]



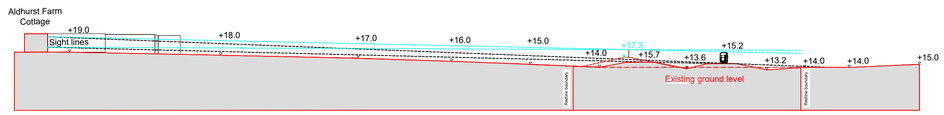
SECTION A - A'



SECTION B - B'

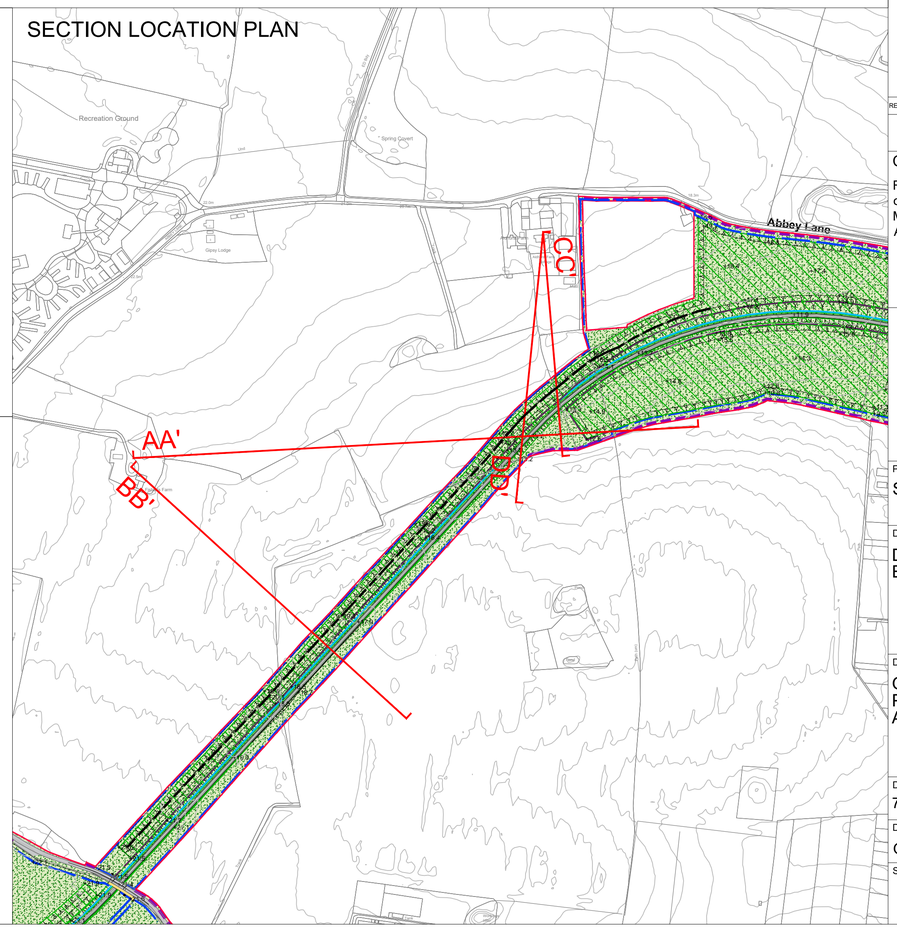


SECTION C - C'



SECTION D - D'

SECTION LOCATION PLAN



NOTES:

1. FOR DETAILS OF PERMANENT AND TEMPORARY POSSESSION WITHIN ORDER LIMITS REFER TO LAND PLANS.
2. FOR DETAILS OF THE DCO PROPOSALS, INCLUDING THE FULL DRAWING KEY, SEE THE GREEN RAIL ROUTE PROPOSED LANDSCAPE MASTERPLAN AND FINISHED LEVELS (DRAWING NO. SZC-SZ0701-XX-000-DRW-100183)
3. EXISTING PROPOSALS ARE INDICATED ON THE SECTIONS BY SOLID LINES, WITH SIGHT LINES FROM FISHER'S FARM AND ALDHURST COTTAGES INDICATED WITH BLACK DASHED LINES.
4. POTENTIAL AMENDMENTS TO THE CURRENT DCO SCHEME ARE INDICATED ON THE SECTIONS AS RED DASHED LINES FOR THE PROPOSED LANDFORM CHANGES, WITH THE POTENTIAL REVISED SIGHT LINES INDICATED BY BLUE DASHED LINES. THESE AMENDMENTS INCREASE THE HEIGHT OF THE PROPOSED BUND FROM APPROXIMATELY 2M TO APPROXIMATELY 3M, WITH A NOISE BARRIER OF APPROXIMATELY 2.5M IN HEIGHT INDICATED ON THE TOP OF THE BUND.
5. ON THE SECTION LOCATION PLAN THE PROPOSED CHANGES IN PLAN FORM ARE INDICATED WITH BLACK DASHED LINES AND THE POTENTIAL 2.5M HIGH NOISE BARRIER IS SHOWN AS A WIDER BLACK DASHED LINE.
6. ALL POTENTIAL AMENDMENTS ARE INDICATIVE AND SUBJECT TO FURTHER DISCUSSION WITH HISTORIC ENGLAND AND OTHER INTERESTED PARTIES.

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION / COMMENTS	APPROVED

NOT PROTECTIVELY MARKED

SizewellC
Doing the power of good for Britain
EDF CGN

PROJECT:
SIZEWELL C

DOCUMENT:
DRAFT
ENHANCED PROPOSALS FOR DISCUSSION

DRAWING TITLE:
GREEN RAIL ROUTE
PROPOSED SECTIONS AND POTENTIAL ALTERATIONS TO PROPOSALS

DRAWING NO:	REVISION:
7678_GRR_SK001	01

DATE:	DRAWN:	SCALE:
OCT 2021	K.S.	1:1000 @ A1

SCALE BAR:
50m 0 50 100 150m