ExQ1: 21 April 2021
Responses due by Deadline 2: 2 June 2021

	Question to:	Question:
AQ.1	**Air Quality**	
AQ.1.66	The Applicant, ONR, Environment Agency, Natural England, PHE	**Tritium Gas** Please comment on the concerns raised in [RR-785] in respect of the potential release of tritium gas and any controls that would be in place to safeguard human health and ecology.
	Response	Approximately 95% of tritium discharges are in liquid form, not gaseous, with systems included within the EPR design to preferentially partition tritium in aqueous waste. The principle of minimisation at source is applied for tritium in the EPR reactor design. Aqueous form is considered preferable as discharges to the marine environment have a lower dose per unit discharged than that of gaseous releases to atmosphere. Discharges of tritium form part of the requirements for the environmental permit issued by the Environment Agency (EA) and therefore questions on safeguards to human health and the ecology as a result of the discharges would be best answered by the EA.
AI.1	**Alternatives**	
AI.1.7	ONR	**Reactor design** The Office for Nuclear Regulation (ONR) [RR-0911] explains that in June 2020, NNB Generation Company (SZC) Ltd applied for a nuclear site licence to allow it to install and operate two EPR™ reactors at the Sizewell C site. The design of the proposed twin reactor development at Sizewell C is closely based on that for the power station that is currently under construction at Hinkley Point C. ONR carried out an assessment of the generic EPR design in 2012 and concluded that it could be safely constructed and operated in the United Kingdom. Whilst the ExA appreciates that the ONR is currently assessing the nuclear site licence application, does it have any concerns at this stage in the light of experience and development of the EPR reactor since 2012 at Hinkley Point C?
	Response	ONR has been regulating the activities of NNB GenCo (HPC) Ltd in relation to the construction of Hinkley Point C since we granted the company a nuclear site licence in December 2012. We are drawing on that experience to ensure that our approach to the licensing and subsequent regulation of Sizewell C construction is as efficient and effective as possible. Although this experience has provided ONR

	Question to:	Question:
		with useful learning, no matters of concern have arisen in our dealings with Hinkley Point C that undermine our view that we should be able to grant a licence for Sizewell C by mid-2022, provided NNB GenCo (SZC) Ltd can provide the necessary reassurances in relation to its corporate competences and the acceptability of the SZC site.
CC.1	**Climate change and resilience**	
CC.1.13	ONR	**The role of the Nuclear Regulators** The ONR [RR-0992] explains that in June 2020, NNB Generation Company (SZC) Ltd applied for a nuclear site licence to allow it to install and operate two EPR™ reactors at the Sizewell C site. The ONR is currently assessing this application: (i) Does the ONR have any concerns at this stage associated with the proposed development in relation to climate change impacts and the adaptation measures proposed in the light of experience gained since its assessment of the generic EPR design in 2012? (ii) In the light of EN-6, paragraph 2.7.5, are there any reasons at this stage for the ExA to be concerned that any necessary licence, permit or authorisation will not subsequently be granted? (iii) In the light of EN-6, paragraph 2.7.6, is the ONR aware of any regulatory requirements that are likely to be attached to the grant of a licence and the anticipated timing of the process?
	Response	(i) As part of ONR's assessment, ONR is currently engaging with the Applicant in relation to climate change. Information shared to date suggests it is likely that the Applicant's approach to assessing and managing climate change, including adaptation measures, will meet ONR's expectations for nuclear site licensing. (ii) Regarding para 2.7.5 of EN-6, although we have yet to complete our assessment of NNB GenCo (SZC) Ltd's nuclear site licence application, currently there are no matters of concern that undermine our view that we should be in a position to grant a licence for Sizewell C by mid-2022, provided NNB GenCo (SZC) Ltd can provide the necessary reassurances in relation to its corporate competences and the acceptability of the SZC site. (iii) Regarding para 2.7.6 of EN-6, although there is provision in the legislation for ONR to attach any conditions it considers appropriate to a nuclear site licence, our policy is to attach the same set of 36 standard licence conditions to every licence

	Question to:	Question:
		we grant. We foresee no exception to this policy for a nuclear site licence granted for Sizewell C. Our aim is to be in a position to grant such a licence by mid-2022.
DCO.1	**Draft Development Consent Order (DCO)**	
DCO.1.110	MMO, ONR	Sch 20 Para 8. *[of the draft DCO]* This states that certain failures by the licence holder "may render this licence invalid". This would appear to be a draconian penalty or remedy where essential elements of a nuclear power station are concerned, a remedy which cannot in reality be used when it is borne in mind that the licensed activities include maintenance and replacement of for example the cooling water intakes, outfalls and tunnels. It is obviously important that the DML is observed and that effective sanctions exist. Is invalidity a legal consequence which follows from certain failures by the licence holder? Please will the MMO explain what other remedies are available to it short of revocation whether it considers them to be adequate on the assumption that the licence could not in reality be revoked. Should there be some consultation or liaison between the MMO and ONR if invalidity or revocation were to be contemplated? These questions are addressed primarily to the MMO, and also to the ONR, but the Applicant should feel free to contribute.
	Response	ONR expects that any concerns that the MMO may have with regard to activities relating to the maintenance of the power station's cooling water structures would be conveyed to us either directly by the MMO, or via the nuclear site licensee.
DCO.1.111	MMO, ONR, The Applicant	Sch 20 Para 11. This requires prior approvals from the MMO for each licensed activity and prohibits commencement until that approval has been issued. There are similar and allied provisions in paras 12, 13, 14, 15, 16, 17, 18, 19 and 20. This may be appropriate during the construction phase. How is it intended to work during operation (again, the repair and maintenance of the structures are licensed activities) and should there not be exceptions for urgent or emergency works? Is the defence in s.86 of the MCA Act 2009 adequate?

	Question to:	Question:
	Response	As explained in the answer to the previous question, ONR expects that any concerns that the MMO may have with regard to activities being undertaken by the nuclear power station licensee offshore would be conveyed to us either directly by the MMO, or via the nuclear site licensee, and that appropriate discussions would then follow.
Radiological considerations		
R.1.1	The Applicant, ONR	**Low Level Waste (LLW)** (i) It is recognised that the current LLW Repository has a lifespan less than that of the proposed development. What provision is in place on site or elsewhere to safely deal with this waste over the lifetime of the plant? (ii) It is advised that "It is assumed that ultimately new disposal facilities will be provided by the NDA" (para 7.7.20) [APP-192] Have letters of assurance or similar been received from the NDA? (iii) Has one been sought? Please provide copies for the Examination as appropriate.
	Response	(i) In the event that LLW repository is not available, ONR would use routine regulatory tools (such as inspection and permissioning) to ensure waste is safely managed in accordance with our regulatory expectations. This includes aspects relevant to accumulation of radioactive waste (Licence Condition (LC) 32) and storage of nuclear matter (where radioactive waste is nuclear matter) (LC4(2)). The lifespan of LLW Repository is, in part, dependent upon the environmental safety case for disposals at LLW Repository, which is regulated by the Environment Agency not ONR. However, ONR notes the recent success in diverting wastes from LLW Repository through effective application of the waste hierarchy, which has driven the extension in the expected lifespan in LLW repository. (ii)&(iii) ONR has currently not sought any assurances from NDA relevant to disposal of LLW.
R.1.2	The Applicant, ONR	**Waste Acceptance Criteria** Para 7.7.27 [APP-192] refers to WAC – this does not appear in the Glossary of Terms. (i) Please confirm that this means 'Waste Acceptance Criteria' - or if not what it does relate to.

	Question to:	Question:
		(ii) It is understood that the UK has not formally adopted these criteria for dealing with High Level Waste or for spent fuel – does this have any implications in respect of the information provided?
	Response	(i) The Applicant is best placed to respond to this question. (ii) Radioactive Waste Management (RWM) is a wholly owned subsidiary of the Nuclear Decommissioning Authority (NDA) who are tasked with implementing government policy on geological disposal of higher activity waste (HAW i.e. ILW, HLW and spent fuel). To ensure they can deliver on this, RWM regularly update the inventory of HAW within the UK (and publish it online). The last update to the generic design system safety case for the geological disposal facility (GDF) included inventory from at least four EPR units. To ensure the safety case (and future waste acceptance criteria for HAW in the GDF) can be established as the design of the GDF advances, RWM and the waste owner (in this case NNB GenCo) engage early through the letter of compliance (LoC) process to ensure the inventory is up-to-date and waste forms are consistent with the assumptions in the current GDF generic design.
R.1.3	The Applicant, ONR	**Intermediate Level Waste (ILW)** Please give the latest update in respect of the letter of compliance process referred to in para 7.7.43 [APP-192]
	Response	ONR considers the applicant, NNB GenCo (SZC) Ltd is best placed to answer on the latest position, as this is a process between the potential waste owner and Radioactive Waste Management Ltd (RWM).
R.1.4	The Applicant (EA, ONR iv only)	**Intermediate Level Waste (ILW)** (i) What capacity for the onsite storage of ILW has been assessed within the ES? The documents appear to make reference to two periods for the prospective operation of the plant 60 years [Table 7.8 Vol 2 Ch 7 APP-192] and up to 76 years [para 22.6.244 of APP 317] (ii) Do the parameters include capacity for the extended lifespan of the power stations and any contingency? (iii) Currently it is not clear as 2.5 Main Development Site Main Platform Proposed General Arrangement (Operational) Plans for Approval [APP-017] indicates this is for approval later. Please clarify the situation

	Question to:	Question:
		(iv) The plans do not provide detailed drawings of the Interim Spent Fuel Store or Intermediate Level Waste Store, how is it intended that the details of these would be progressed and approved in the event the DCO were to be granted?
	Response	(iv) ONR maintains engagement with Hinkley Point C (HPC) on the development of the designs for the Interim Spent Fuel Store (ISFS) and Intermediate Level Waste (ILW) Store. Due to the replication strategy being implemented at Sizewell C (SZC), ONR expects the HPC designs to be used to inform the SZC site specific designs. Once the HPC designs are suitably developed, ONR will engage with SZC to ensure the SZC site specific designs fulfil the legal requirement to ensure the risks associated with the management of spent fuel and ILW on SZC are reduced so far as is reasonably practicable. ONR expects SZC to apply any lessons learnt from the design and construction of the facilities at HPC. Relevant information from HPC: • The ILW store is expected to be available prior to operations, the adequacy of the design will be assessed by ONR as part of the planned permissioning schedule. This is expected to be ahead of any construction requirements for ILW stores on SZC. • The spent fuel management strategy, and therefore ISFS safety case, for HPC (and SZC) assumes ~10 years of cooling of spent fuel within the spent fuel pool prior to transfer to dry storage in ISFS. Therefore, the ISFS in the HPC safety case is only required/the facility is made available about 10 years after operations start. The spent fuel pool capacity has been assessed by ONR as adequate to meet both the requirements for ISFS and the nuclear safety requirements for core management. ONR regularly engages with HPC on technical matters which are both driven by, and define, the ISFS design requirements. ONR would apply a consistent approach for SZC to ensure the ISFS is available when required.
R.1.10	The Applicant, ONR	**Spent Fuel** (i) Please confirm that the current proposal does not include the encapsulation facility referred to at para 7.7.95.

	Question to:	Question:
		(ii) Assuming this to be correct, are you able at this stage to confirm there would be sufficient space within the DCO site to accommodate such a facility? (iii) Do the ONR agree that there would be sufficient space?
	Response	(i)&(ii) The Applicant is best placed to respond to this question. (iii) The spent fuel encapsulation facility is not required until the spent fuel is retrieved from the Interim Spent Fuel Store (ISFS) and repackage for disposal to the GDF (>100 years after operations). At the time when the encapsulation facility will be constructed the reactors will have ceased generation, decommissioning will be well-progressed, with many structures removed from the site. Therefore, in ONR's opinion there will be sufficient space for the construction of new facilities to enable the safe retrieval, repacking, and encapsulation of spent fuel. The inclusion of the encapsulation facility and the principle to encapsulate spent fuel immediately prior to transfer to the GDF is consistent with the guidance provided by Department of Energy and Climate Change (DECC) in 2011 on Funded Decommissioning Programmes (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/42628/3797-guidance-funded-decommissioning-programme-consult.pdf).
R.1.11	The Applicant, ONR, EA	**Length of Plant Life** Much of the documentation refers to the power stations operating for between 60-76years. The DCO would however if granted not be time limited, consent would in effect be in place for two nuclear power stations in perpetuity. Does this have any implications for the advice you provide to the ExA or of the assessments that have been undertaken?
	Response	With regard to the length of plant life, nuclear site licensees are required, by standard Licence Condition 15, to undertake periodic and systematic reviews of their plant safety case. ONR assesses major periodic safety reviews and, in order to permit continued operation, needs to be satisfied that the facility continues to meet its original design standards; that the licensee has implemented all reasonably practicable modifications to close any gaps between those standards and modern standards; that findings arising from operational experience have been addressed and that there are robust measures in place to manage any safety-related, ageing mechanisms. If ONR is satisfied on all these aspects, the

	Question to:	Question:
		facility may continue to operate, providing that continuing monitoring activities do not reveal any new information that undermines the safety case. In practice at some stage in the life of a nuclear plant it is likely that the cost of maintaining the plant to acceptable safety standards will outweigh the financial gains from continued operation, and the operating organisation may therefore decide to close the plant down at that stage.
R.1.12	ONR	**Design Acceptance Confirmation (DAC)** The Applicant's DAC would appear to expire on 13 December 2022. (i) Please explain how this regulatory system works and whether a further DAC would be required as the station would not be operational at this date. (ii) Are there any further implications if work has not commenced on site by this date? (iii) Would you anticipate any reason why a further DAC would not be issued should a further application need to be made? (iv) Are there any other implications the ExA should be aware of in respect of the limited time of the current DAC?
	Response	(i) The GDA process is non-mandatory and there is no legal requirement for a valid Design Acceptance Confirmation (DAC). Within ONR's remit, to construct a new nuclear power plant in Great Britain requires a nuclear site licence to be granted. Even then, granting of a nuclear site licence does not provide regulatory permission for the start of construction. Under the conditions attached by ONR to a nuclear site licence, the licensee will require ONR's specific regulatory permission before any nuclear safety related construction can commence. It is ONR's policy that the output from GDA remains valid for a period of ten years from the date of issue. This period is consistent with the requirement for nuclear licensees to undertake periodic safety reviews of their existing nuclear facilities every ten years. For Hinkley Point C (HPC), the UK EPR design which was assessed as part of GDA was based on the 2008 EPR design under construction at Flamanville 3 (FA3) in Northern France. The GDA-assessed design formed the starting Reference Configuration (RC0) for HPC. That design was developed to a further reference configuration (RC1) that includes changes as a result of GDA, Fukushima response, FA3 feedback, UK context or site-specific requirements. The HPC design has been

	Question to:	Question:
		further developed to the current Reference Configuration 2 (RC2). The changes to the HPC design since GDA have been controlled under the licensee's licence condition compliance arrangements, subject to regulatory oversight by ONR. Unlike HPC, for Sizewell C the initial design configuration of the plant is not based on the GDA design, but is instead closely based on the current HPC configuration (RC2). Consequently, given ONR's close engagement with the HPC design development, we do not consider the ongoing validity of the DAC, issued by ONR at the end of GDA in 2012, is relevant to our assessment of the design proposed for Sizewell C. To summarise, no further DAC is required for Sizewell C as firstly a DAC is non-mandatory, and secondly the starting design is based on the design developed for HPC and not the final GDA design. (ii) There are no implications if the construction work at Sizewell C has not started by December 2022. (iii) Based on responses to questions (i), (ii) and (iv), as a DAC is non-mandatory, the design has evolved at HPC since GDA, from which Sizewell C is based, and due to ONR's ongoing regulatory oversight of HPC, an application for a new DAC is not needed and would have limited benefit. (iv) We do not consider there are any other implications relating to the time-limited nature of the DAC issued in 2012.
R.1.14	The Applicant, ONR, EA, MMO	**Sea Defences** There is concern identified by a number of RRs e.g. (RR 0038) regarding the ongoing maintenance of the sea defences beyond the lifetime of the operation of the plant when it is reasonable to assume ILW, Spent Fuel and LLW may well continue to be stored on site. (i) What is proposed to be in place to ensure the integrity of the sea defences in the longer term? (ii) How should the integrity of the defences be monitored through the lifetime of the plant? (iii) How is this to be secured through the DCO process?

	Question to:	Question:
	Response	(i) The Applicant is best placed to respond to this question. (ii) ONR expects the Applicant to adequately demonstrate that the sea defences will protect against the design basis coastal flood, which includes climate change, throughout the lifetime of the plant. As part of ensuring the integrity of the sea defences and consistent with Licence Condition 28, ONR expects the Applicant to commit to adequate arrangements for the examination, inspection, maintenance and testing (EIMT) of the sea defences as a nuclear safety classified structure. (iii) This is secured through the nuclear site licensing regime and not the DCO process. Given ONR's nuclear safety remit, ONR will expect the sea defence design and related monitoring to be 'secured' ahead of nuclear plant commissioning. For nuclear site licensing, most closely tied to DCO in terms of timescales, ONR expects the Applicant to demonstrate that the SZC site can be adequately protected against the design basis sea level; this includes the future effects of climate change on wave and tide height as well as the static sea level. The final sea defence design and related monitoring will be assessed by ONR post nuclear site licensing, but prior to commissioning of the SZC nuclear plant.
R.1.15	ONR, EA, MMO	**Sea Defences** In the event the power station operated beyond 60 years as referenced in a number of the ES documents what implications if any would this have?
	Response	ONR expects the Applicant to adequately demonstrate that the sea defences will protect against the design basis coastal flood, which includes climate change, throughout the lifetime of the plant. Should the lifetime of the plant be extended beyond planned timescales, ONR will require the site licensee to demonstrate that the site, including the sea defences, will remain safe for the extended timescales.
R.1.16	ONR, Emergency Services, ESC, SCC	**Emergency Plans** Are you satisfied with the Emergency Plans that are set out and how they correlate with the existing nuclear sites at Sizewell A and B?
	Response	Before making a licensing decision for SZC, ONR will seek assurance that the location is suitable for the establishment of an adequate emergency plan in accordance with the licence conditions and The Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR). As part of ONR's Land Use Planning (LUP) assessment (https://www.onr.org.uk/land-use-planning.htm), consultation was undertaken with Suffolk County Council

	Question to:	Question:
		Emergency Planner responsible for the Sizewell B REPPIR19 off-site emergency plan as well as the planning departments of Magnox Ltd for the Sizewell A site, EDF Energy (for Sizewell B) and NNB GenCo (SZC) Ltd for Sizewell C. This provided assurance that adequate emergency planning arrangements can be maintained or developed during the construction, active commissioning and operational phases of Sizewell C. ONR will take account of the assurance we have received in making a decision on whether to grant a licence for Sizewell C.
R.1.17	ONR, EA	**Transboundary Effects** A number of European governments and third parties have expressed concern about trans boundary effects particularly in the event of an accident beyond the design parameters of the power station e.g. see RR 802, RR 265, RR 155. (i) Are you satisfied this is adequately dealt with through the licensing regime? (ii) Does this assessment include the ancillary buildings such as the ISFS, and ILW storage?
	Response	(i) Yes. The UK-EPR design offers a number of lines of defence to protect against and mitigate the consequences of postulated design basis fault sequences. A risk reduction line of defence will also be implemented to mitigate the consequences of severe accidents. (ii) ONR maintains engagement with Hinkley Point C (HPC) on the development of the designs for the Interim Spent Fuel Store (ISFS) and Intermediate Level Waste (ILW) Store. Due to the replication strategy being implemented at Sizewell C (SZC) ONR expects the HPC designs to be used to inform the SZC site specific designs. Once the designs are suitably developed ONR will engage with SZC to ensure the site-specific designs fulfil the legal requirement to ensure the risks associated with the management of spent fuel and ILW on SZC are reduced so far as is reasonably practicable.
R.1.18	ONR, EA	**Spent Fuel Store/ILW Store** No details are provided to indicate at what depth the spent fuel or ILW would be stored. Are you satisfied the licensing arrangements would ensure appropriate and safe storage of these elements in the event of a flood event?

	Question to:	Question:
	Response	We are satisfied that ONR's regulatory framework provides appropriate oversight of the high standards of safety required to protect the spent fuel and ILW in the event of a flood event. The expectations for design/construction of facilities used to store spent fuel or ILW with respect to flooding do not differ from the nuclear facilities on the wider site, in that the stores should be able to withstand flooding conditions up to and including the design basis event (see ONR Safety Assessment Principle (SAP) EHA.12 *Flooding*). For completeness, it is noted that spent fuel and ILW would be stored above ground in the concept design for the EPR reactor station. It is noted that after the major earthquake near Japan in 2011 the spent fuel dry casks on the Fukushima site withstood the impact from both the earthquake and tsunami.
R.1.20	The Applicant, ONR, EA, PHE	**Spent Fuel Store/ ILW Store** (i) Does Appendix 25B when assessing radiological effects from the site include an assessment of effects from the ISFS and ongoing storage of spent fuel and ILW or is it just the operation of the power station? (ii) It would not appear to be explicit in the assessment. This would appear to be particularly important as paragraph 25.6.20 of [APP 340] indicates 'direct radiation from Sizewell C is therefore largely attributable to the Interim Spent Fuel and Intermediate Level Waste storage facilities on site.' Please clarify the position and advise what has been assessed under the ES. (iii) In light of the lack of detailed design for these facilities at this stage please explain how this assessment has been undertaken
	Response	(i)-(iii) ONR considers the details of the assessment are best answered by the Applicant. ONR notes that a similar regulatory approach will be applied to Sizewell C as with Hinkley Point C (HPC), where ONR will assess the adequacy of the detailed design of the ISFS Facility and the ILW store as they develop, including direct radiation. Based on the EPR Generic Design Assessment (GDA), and the approach taken for HPC so far, we would expect these aspects of the SZC site will be compliant with relevant regulatory requirements.
R.1.21	ONR	**Semi Urban Criterion** (i) Has your advice been sort in respect of the relationship of the site to the local population?

	Question to:	Question:
		(ii) Are you satisfied that the proposals do not result in a radiological hazard being sited in an area which exceed the semi-urban criterion?
	Response	(i) No, although it was when the extant National Policy Statement for Nuclear Power Generation (EN-6) was developed. (ii) ONR's assessment of the proposed development concluded that siting two reactor buildings at the centre points provided by NNB Generation Company (SZC) Ltd as part of their application for a DCO meets the Government's demographic siting criteria as specified in BEIS 'Government Response: Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity over 1Gigawatt beyond 2025' July 2018. The disposition of the radioactive hazard across various other non-reactor buildings on the site does not affect that conclusion.
R.1.22	ESC, ONR	**Semi Urban Criterion** (i) Has additional residential development been undertaken within the area which influences the assessment of the semi urban criterion since the sustainability assessment was undertaken? (ii) Are there any future planned developments that might influence this assessment?
	Response	(i) Although ONR has had no involvement with the sustainability assessment, ONR's demographic assessment, carried out as part of the ongoing consideration of the nuclear site license application, concludes that the semi-urban demographic criterion is met. This conclusion is tolerant of new residential development for the following reasons: • 100 years' worth of average predicted population growth was pessimistically added to the population data used in the assessment (supplied by the Health and Safety Executive on 24 August 2018); and • The "Site Population Factors" * calculated are significantly less than 1. *ONR considers a site where all "Site Population Factors" are less than 1 to have met the semi-urban demographic criteria (see https://www.onr.org.uk/documents/2018/ns-lup-gd-001-land-use-planning-and-the-siting-of-nuclear-installations.pdf). (ii) ONR is not aware of any such developments. We are informed by the local authority of such developments if they meet the consultation criteria in our Land Use Planning Policy which is published on the ONR website (www.onr.org.uk/land-use-planning.htm).

ExQ1: 21 April 2021
Responses due by Deadline 2: 2 June 2021

	Question to:	Question:
R.1.23	EA, ONR	**Sustainability Assessment** (i) The NPS relies on an understanding of the science around climate change and the effect on sea levels from 2009, has the understanding of the effects of climate change and effect on sea levels changed since the sustainability assessment was carried out? (ii) If the knowledge has developed what implications does this have?
	Response	(i) The understanding of the science around climate change and the effect on sea levels has changed since 2009. (ii) There are limited implications resulting from the evolution of understanding around climate change and the effect on sea levels. The advancements mean that the Applicant can better understand the site-specific impact of climate change, including the uncertainties, and factor this into their design. ONR expects the Applicant to use the latest climate change projections, such as UK Climate Projections 2018 (UKCP18), in their hazard analysis for nuclear site licensing; further information is provided in a UKCP18 position statement (https://www.onr.org.uk/documents/2020/ukcp18-position-statement-rev-1.pdf). ONR will expect the Applicant to periodically consider advances in climate change predictions and identify any impact on claims made in their safety cases and any subsequent measures that need to be implemented.
R.1.24	ONR, The Applicant	**Plant Life** The ES suggests the reactors may have their life extended to operate for up to 76 years. (i) As ILW and spent fuel would need to be stored on site beyond this time, what is the current best estimate of the date for the site to continue to store such radioactive materials?
	Response	The duration for storage of radioactive waste and spent fuel on the licenced site is dependent upon access to the geological disposal facility to enable transfer of material from the site. The 2016 update to Radioactive Waste Management's (RWM's) generic disposal system safety case (gDSSC) includes inventory from at least 4 EDF Energy EPR reactors (i.e. units 1 and 2 at HPC and units 3 and 4 and SZC). Figure 11 in NDA Report No DSSC/421/01 (available online) identifies nuclear new build (NNB) Solid

	Question to:	Question:
		ILW emplacement timings in the GDF to occur from 2100-2140 and nuclear new build (NNB) Spent Fuel emplacement activities in the GDF to occur from 2145-2190. There are several assumptions in the emplacement dates, and therefore the best estimate of the date the site will continue to store radioactive materials is not defined beyond these windows. It is noted that the emplacement dates/timescales quoted above are for nuclear new build inventory from 12 reactor units (of any design) in the UK, with SZC representing units 3 and 4. Cooler (older) inventory will be emplaced first in the GDF, so it is assumed that SZC would follow HPC, which is assumed to commence in 2100 and 2145 for ILW and spent fuel, respectively. Relative to end of generation for SZC these dates represent, in ONR's opinion, reasonable timescales.
R.1.25	EA, ONR	**Plant Life** The power stations and ongoing storage of ILW and spent fuel is likely to be on site beyond 2100 which was the date the NPS refers to as the date which had modelled climate change effects. What date can now be confidently forecast for such an assessment?
	Response	Many climate projections extend to the year 2100, although projections can and do extend far beyond this. Uncertainties are much greater the further into the future a prediction goes. Therefore, ONR expects Applicants to consider the uncertainties in any climate change projections used and to account for reasonably foreseeable climate change in their design over the lifetime of the facility. ONR's expectation is for nuclear site licensees to periodically consider advances in climate change predictions and identify any impact on claims made in their safety cases and any subsequent measures that need to be implemented. ONR's current understanding on the timescales for the removal of spent fuel and ILW inventories from the SZC site are captured within the response to R.1.24.
R.1.28	ONR	**ONR Permits/Licences** Please advise on the latest position in respect of the Applicant's position in respect of the Funded Decommissioning Programme (FDP) and the position in respect of any Licenses needed to be obtained from you. Do you consider there to be any impediment to the granting of any licenses for the site?
	Response	For Hinkley Point C (HPC) ONR has been consulted by the relevant government department (currently BEIS) on the technical aspects of the licensee's

	Question to:	Question:
		Decommissioning and Waste Management Plan (DWMP), which informs the HPC Funded Decommissioning Programme (FDP). We have not yet been consulted with regard to the Sizewell C DWMP. There is no link between the grant of a nuclear site licence by ONR and the approval by the Secretary of State (under the Energy Act 2008) of an FDP. However, as an approved FDP must be in place before the start of nuclear safety related construction, ONR would consult with the relevant department to ensure the FDP had been approved before giving consent for the start of construction of nuclear safety significant buildings at Sizewell C. This is likely to be several years after licence grant.
R.1.29	ONR, ESC, EA, The Applicant	**Public Health** PHE have indicated a series of shortcomings in their RR with regard to both radiological and air quality issues – please respond to each of the points that they have raised in so far as it relates to your responsibilities and explain whether you consider these issues could be overcome. In the event you consider the issues can be resolved please explain how the matters would be resolved and under which regime appropriate mitigation would be secured and operation monitored.
	Response	PHE's representation raised a number of points relating to the development's effects on local air quality and the consequences for public health. This is not a matter within ONR's regulatory remit, and we therefore offer no comments. With regard to radiological matters, the specific points raised by PHE relate to routine radiological discharges from the power station, for which the Environment Agency is the regulator and is best placed to provide comments on these.
R.1.30	ONR, The Applicant	**Relationship to Current Operations at Sizewell** Please respond to the points raised by Magnox Ltd (RR-991) and Pinsent Masons (RR-992) and in particular the concern regarding the assertion that "the Sizewell C Nuclear Generating Station can be constructed and operated in accordance with the Applicant's application proposals in a manner which adequately ensures the safe, secure and environmentally sound decommissioning of the Sizewell A Nuclear Site."
	Response	ONR's assessment of the Sizewell C nuclear site licence application will include consideration of the applicant's case that operations of the site do not pose a safety hazard to the adjoining nuclear licensed site (i.e. Sizewell B). As Sizewell A

	Question to:	Question:
		is further from the C site than is the B site, then we would expect any such hazard to the A station to be considerably smaller. This will become apparent as our assessment progresses. Nevertheless, if the A station licensee has specific concerns regarding the hazards presented by the C station, either during construction or operation then they should bring this to the attention of the prospective C station licensee; if necessary, ONR will then engage in discussions with the two companies.