



# The Sizewell C Project

## 6.3 Volume 2 Main Development Site Chapter 27 Major Accidents and Disasters Appendix 27A Sizewell C Project Environmental Risk Record

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## **Sizewell C Major Accidents and Disasters Environmental Risk Record**

### **Introduction**

This Appendix sets out the results of the review process undertaken for major accidents and disasters (MA&D) to arrive at the risk events set out in the Environmental Statement (ES).

A screening exercise of all identified project risks related to MA&D was first undertaken to identify which risks have the potential to result in serious damage without any mitigation.

This Environmental Risk Record sets out all such potential hazards and threats, with the identified hazard and threat sources, pathways, and receptors. Study areas for each hazard or threat were determined on the basis of the impact areas of past incidents of a similar nature or on the basis of professional judgement. A description of the receptors within the study areas for the identified hazards and threats is provided in **Tables 27.4** and **27.5** of the ES.

Each hazard was assigned a 'severity of harm' and 'duration' category on the basis of the risk assessment criteria followed within local Suffolk Risk Register under the Civil Contingencies Act (CCA) 2004 (Contingency Planning) Regulations 2005 (Ref. 1.1) and Chemicals and Downstream Oil Industries Forum (CDOIF) Guidelines for Environmental Risk Tolerability for COMAH Establishments (Ref. 1.2), assuming a reasonably foreseeable worst case impact and no mitigation. By combining the 'severity of harm' and 'duration' category, a 'consequence' category for the hazard was determined on the basis of the criteria set out within CDOIF guidelines.

Risks potentially resulting in a MA&D were further assessed in order to determine whether the tolerability of the risk with mitigation in place is acceptable. To do this, the likelihood of the risk event occurring with mitigation in place was determined on the basis of the definitions used in the Suffolk Risk Register under the CCA and the CDOIF guidelines. Risk tolerability limits set out within CDOIF were adapted, as they presented a worst-case assessment, to derive whether with mitigation in place the risk is tolerable, tolerable if As Low As Reasonably Practicable (TifALARP) or intolerable. This Environmental Risk Record summarises the mitigation relied upon.

Each hazard or threat has been considered on an individual basis. Where a hazard or threat has the potential to result in another hazard, this has been clearly identified within the Environmental Risk Record to identify where an assessment of the additional hazard that could occur can be found.

All risks categorised as tolerable or TifALARP are considered as 'not significant', all risks categorised as 'intolerable' are categorised as 'significant' for the purposes of the EIA.

### **Review of risks**

The objective of this risk review is to determine whether additional mitigation measures may be required to manage the identified risks to the environment to be ALARP. This has been done in consultation with the SZC Co. project team.

A major accident, in the context of this assessment, means an uncontrolled event caused by a man-made activity or asset that may result in immediate or delayed serious damage to human health, welfare and/or the environment and requires the use of resources beyond those of EDF Energy or its contractors to manage. It should be noted that malicious intent is not accidental, however, the outcome e.g. aeroplane crash, may be the same and therefore the same mitigation measures will apply to both deliberate and accidental events.

A disaster in the context of this assessment, is a naturally occurring phenomenon such as an extreme weather event (e.g. storm, flood, extreme temperatures) or ground-related hazard events (e.g. subsidence, landslide, earthquake) with the potential to cause an event or situation that leads to immediate or delayed serious damage to human health, welfare and/or the environment and requires the use of resources beyond those of EDF or its contractors to manage.

Serious damage has been defined as the potential loss of life or permanent injury and/or permanent or long-lasting damage to an environmental receptor which cannot be restored through minor clean-up and restoration efforts.

### **References**

- Ref 1.1 Her Majesties Stationary Office (2005), Civil Contingencies Act 2004 (Contingency Planning) Regulations 2005.
- Ref 1.2 Chemicals and Downstream Oil Industries Forum Guidelines, Environmental Risk Tolerability for COMAH Establishments.

Definitions for Severity of Harm

Assessment Terminology		No Serious Damage		Severe		Major		Catastrophic	
Receptors		CCA Ref	CDOIF ref	CCA Ref	CDOIF ref	CCA Ref	CDOIF ref	CCA Ref	CDOIF ref
CCA Ref	CDOIF ref	Insignificant	No Serious Damage	Minor or Moderate	Severe	Significant	Major	Catastrophic	Catastrophic
		While this level of harm might result in a significant effect, it is not considered to result in serious irrecoverable damage and therefore is outside the scope of the MA&D assessment.		The lowest level of harm that might be considered to result in serious damage.					
Health	People (including workers, members of the public)	Insignificant number of injuries or impact on health	Small number of minor injuries	Small number of people affected, no fatalities, and small number of minor injuries with first aid treatment  Or Moderate number of fatalities with some casualties requiring hospitalisation and medical treatment and activation of MAJAX, the automated intelligent alert  Notification system, procedures in one or more hospitals	Substantial number of people requiring medical attention	Significant number of people in affected area impacted with multiple fatalities, multiple serious or extensive injuries  Significant hospitalisation and activation of MAJAX procedures across a number of hospitals	Multiple life changing injuries, potential loss of life in low numbers.	Very large numbers of people in affected area(s) impacted with significant numbers of fatalities, large number of people requiring hospitalisation with serious injuries with longer-term effects	Potential loss of life in high numbers and substantial number of life changing injuries.
Social		Insignificant number of persons displaced and personal support required Insignificant disruption to community services, including transport services and infrastructure		Minor damage to properties Minor displacement of a small number of people for < 24 hours and minor personal support required Minor localised disruption to community services or infrastructure < 24 hours  Or Damage that is confined to a specific location, or to a number of locations, but requires additional resources  Localised displacement of >100 people for 1-3 days, or Localised disruption to infrastructure and community services		100 to 500 people in danger and displaced for longer than 1 week.  Local responders require external resources to deliver personal support or Significant impact on, and possible breakdown of, delivery of some local community services.		Extensive damage to properties and built up environment in affected area requiring major demolition  General and widespread displacement of more than 500 people for prolonged duration and extensive personal support required  Serious damage to infrastructure causing significant disruption to, or loss of, key services for prolonged period. Community unable to function without significant support	
Economic		Insignificant impact on local economy		Negligible impact on local economy and cost easily absorbed  Or Limited impact on local economy with some short-term loss of production, with possible additional clean-up costs		Significant impact on local economy with medium-term loss of production  Significant extra clean-up and recovery costs		Serious impact on local and regional economy with some long-term, potentially permanent, loss of production with some structural change  Extensive cleanup and recovery costs.	
	Designated Land/ Water Sites (Nationally important) <i>(e.g. NNR, SSSI, MNR)</i>		<0.5ha or <10%	>0.5ha or 10-50% of site area, associated linear feature or population	Significant impact on environment with medium-to long-term effects	>50% of site area, associated linear feature or population	Serious long term impact on environment and/or permanent damage	n/a	
	Designated Land/Water Sites (Internationally important) <i>(e.g. SAC, SPA, Ramsar)</i>		<0.5ha or <5% (<5% LF/Pop)	>0.5ha or 5-25% of site area or 5-25% of associated linear feature or population		25-50% of site area, associated linear feature or population			
	Other designated Land <i>(e.g. ESA, AONB, National Park, etc.)</i>		<10ha or <10%	10-100ha or 10-50% of land		>100ha or >50% of land			
	Scarce Habitat		<2 ha or <10%	2-20ha or 10-50% of habitat		>20ha or >50% of habitat			
	Widespread Habitat - Non designated Land		<10ha	Contamination of 10-100ha of land, preventing growing of crops, grazing of domestic animals or renders the area inaccessible to the public because of possible skin contact with dangerous substances. Alternatively, contamination of 10ha or more of vacant land.		100-1000ha (applied as per text under 'Severe')			
	Widespread Habitat - Non designated Water		n/a	Contamination of aquatic habitat which prevents fishing or aquaculture or renders is inaccessible to the public.		n/a			
	Groundwater Source of Drinking Water		Interruption of drinking water supply <1000 person-hours or For England & Wales only <1ha SPZ	Interruption of drinking water supplied from a ground or surface source (where persons affected x duration in hours [at least 2] > 1,000) or For England & Wales only 1-10ha of SPZ where drinking water standards are breached		>1 x 10 <sup>7</sup> person-hours interruption of drinking water (a town of ~100,000 people losing supply for month) or For England & Wales only 10-100ha SPZ drinking water standards breached		>1 x 10 <sup>9</sup> person-hours interruption of drinking (~1 million people losing supply for 1 month) or For England & Wales only >100ha SPZ drinking water standards breached	

Definitions for Severity of Harm

Assessment Terminology		No Serious Damage		Severe		Major		Catastrophic				
Receptors		CCA Ref	CDOIF ref	CCA Ref	CDOIF ref	CCA Ref	CDOIF ref	CCA Ref	CDOIF ref			
		Insignificant	No Serious Damage	Minor or Moderate	Severe	Significant	Major	Catastrophic	Catastrophic			
Environment	Groundwater – non Drinking Water Source	Insignificant impact on environment or Minor impact on environment with no lasting effects	<1ha	Limited impact on environment with short-term or long-term effects	1-100ha of aquifer where water quality standards are breached (or hazardous substance is discernible)	Significant impact on environment with medium-to long-term effects	100-10,000ha	Serious long term impact on environment and/or permanent damage	>10,000ha			
	Groundwater in unproductive strata		Groundwater not a pathway to another receptor.		<i>Where the groundwater is a pathway for another receptor assess against relevant criteria for the receptor.</i>							
	Soil or sediment (i.e. as receptor rather than purely a pathway)		Contamination not leading to environmental damage (as per ELD), or not significantly affecting overlying water quality		Contamination of 10- 100ha of land etc. as per Widespread Habitat; Contamination sufficient to be deemed environmental damage (Environmental Liability Directive)		Contamination of 100-1000ha of land, as per Widespread Habitat; Contamination rendering the soil immediately hazardous to humans (e.g. skin contact) or the living environment, but remediation available		Contamination of >1000ha of land, as per Widespread Habitat; Contamination rendering the soil immediately hazardous to humans (e.g. skin contact) or the living environment and remediation difficult or impossible.			
	Built environment <i>Under CDOIF, this is limited to Grade 1 / Cat A Listed buildings, scheduled ancient monuments, conservation area, etc</i>		Damage below a level at which designation of importance would be withdrawn.		Damage sufficient for designation of importance to be withdrawn.		Feature of built environment subject to designation of importance entirely destroyed.		n/a			
	Particular species (Note - these criteria apply nationally - i.e. England, Wales, Scotland)		Loss of <1% of animal or <5% of plant ground cover in a habitat.		Loss of 1-10% of animal or 5-50% of plant ground cover.		Loss of 10-90% of animal or 50-90% of plant ground cover.		Total loss (>90%) of animal or plant ground cover.			
	Marine		<2ha littoral or sublittoral zone, <100ha of open sea benthic community, <100 dead sea birds (<500 gulls), <5 dead/significantly impaired sea mammals		2-20ha littoral or sublittoral zone, 100-1000ha of open sea benthic community, 100-1000 dead sea birds (500-5000 gulls), 5-50 dead/significantly impaired sea mammals		20-200ha littoral or sub-littoral zone, 100-10,000ha of open sea benthic community, 1000-10,000 dead sea birds (5,000-50,000 gulls), 50-500 dead/significantly impaired sea mammals		>200ha littoral or sublittoral zone, >10000ha of open sea benthic community, >10000 dead sea birds (>50000 gulls), >500 dead/ significantly impaired sea mammals			
	Fresh and estuarine water habitats		Impact below that of Severe		WFD Chemical or ecological status lowered by one class for 2-10km of watercourse or 2-20ha or 10-50% area of estuaries or ponds. Plus interruption of drinking water supplies		WFD Chemical or ecological status lowered by one class for 10-200km of watercourse or 20- 200ha or 50-90% area of estuaries and ponds. Plus interruption of drinking water supplies		WFD Chemical or ecological status lowered by one class for >200km of watercourse or >200ha or >90% area of estuaries and ponds. Plus interruption of drinking water supplies			

Sources:  
CDOIF Guideline - Environmental Risk Tolerability for COMAH Establishments: [https://www.sepa.org.uk/media/219154/cdoif\\_guideline\\_environmental\\_risk\\_assessment\\_v2.pdf](https://www.sepa.org.uk/media/219154/cdoif_guideline_environmental_risk_assessment_v2.pdf)  
Cabinet Office's Emergency Preparedness guidance on part 1 of the CCA: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/61027/Chapter-4-Local\\_20Responder-Risk-assessment-duty-revised-March.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61027/Chapter-4-Local_20Responder-Risk-assessment-duty-revised-March.pdf)

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
**NOT PROTECTIVELY MARKED**

**Definitions for Duration / Recovery Criteria**

Description	Short term	Medium term	Long term	Very long term or Permanent
	Harm with such short recovery is not considered a MA&D.			
Population	Injury or impairment lasting up to 1 week	Injury or impairment lasting up to 4 months but no permanent consequences	Some permanent restriction to leisure and work activities	Death/fatality
Groundwater or surface water drinking water source (public or private)	n/a	n/a	Harm affecting drinking water source or SPZ < 6 years	Harm affecting drinking water source or SPZ >6 years
Groundwater (except drinking water sources): WFD Hazardous/Non Hazardous Substances	WFD hazardous substances < 3 months	WFD hazardous substances > 3 months	WFD hazardous substances > 6yrs	WFD hazardous substances >20 years
	WFD non-hazardous substances < 1yr	WFD non-hazardous substances > 1y	WFD non-hazardous substances >10 years	WFD non-hazardous substances >20 Years
Surface water (except drinking water sources – see above)	< 1year	>1 year	>10 years	>20 years
Land	< 3 years or < 2 growing seasons for agricultural land	> 3 years or > 20 growing seasons for agricultural land	>20 years	>50 years
Built environment	Can be repaired in < 3 years, such that its designation can be reinstated	Can be repaired in > 3 years, such that its designation can be reinstated	Feature destroyed, cannot be rebuilt, all features except world heritage site	Feature destroyed, cannot be rebuilt, world heritage site
Marine	< 1year	>1 year	>10 years	>20 years

Source: CDOIF Guideline - Environmental Risk Tolerability for COMAH Establishments:

[https://www.sepa.org.uk/media/219154/cdoif\\_guideline\\_\\_environmental\\_risk\\_assessment\\_v2.pdf](https://www.sepa.org.uk/media/219154/cdoif_guideline__environmental_risk_assessment_v2.pdf)

**Level of Consequence**

Severity of Harm	Duration			
	Short term	Medium term	Long term	Very long term or Permanent
Catastrophic	Not MA&D	C	D	D
Major	Not MA&D	B	C	D
Severe	Not MA&D	A	B	C
No Serious Damage	Not MA&D	Not MA&D	Not MA&D	Not MA&D

Source: CDOIF Guideline - Environmental Risk Tolerability for COMAH Establishments:

[https://www.sepa.org.uk/media/219154/cdoif\\_guideline\\_\\_environmental\\_risk\\_assessment\\_v2.pdf](https://www.sepa.org.uk/media/219154/cdoif_guideline__environmental_risk_assessment_v2.pdf)

Level of consequence considers the severity of harm and the duration of the harm to separate hazards and threats into five categories ('Not a MA&D' and categories A to D). 'Not a MA&D' represents the lowest level of consequence and category 'D' the highest.

**SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
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**Definitions for Likelihood and Tolerability**

Probability	Extremely improbable	Extremely remote	Remote	Rare	Unlikely	Likely	
CDOIF Quantitative definition	Less than 1 in 10,000,000 yrs	1 in 1,000,000 to 1 in 10,000,000 yrs	1 in 100,000 yrs to 1 in 1,000,000	1 in 10,000 to 1 in 100,000 years	1 in 100 years to 1 in 10,000 years	Greater than 1 in 100 years	
CCA Quantitative definition	> 1 in 20,000 chance over 5 years			> 1 in 2,000 chance over 5 years	> 1 in 200 chance over 5 years	> 1 in 20 chance over 5 years	> 1 in 2 chance over 5 years
CCA Qualitative definition	Negligible			Rare	Unlikely	Possible	Probable
Category D	Tolerable	TifALARP*	Intolerable	Intolerable	Intolerable	Intolerable	
Category C	Tolerable	Tolerable	TifALARP*	Intolerable	Intolerable	Intolerable	
Category B	Tolerable	Tolerable	Tolerable	TifALARP*	Intolerable	Intolerable	
Category A	Tolerable	Tolerable	Tolerable	Tolerable	TifALARP*	Intolerable	
Not a MA&D	Not within the scope of MA&D assessment						

\*TifALARP= Tolerable if ALARP (As Low As Reasonably Practicable)

Significant effect = unacceptable/ intolerable risks

Not significant effect = acceptable (tolerable) and TifALARP risks

Sources:

CDOIF Guideline - Environmental Risk Tolerability for COMAH Establishments:

[https://www.sepa.org.uk/media/219154/cdoif\\_guideline\\_\\_environmental\\_risk\\_assessment\\_v2.pdf](https://www.sepa.org.uk/media/219154/cdoif_guideline__environmental_risk_assessment_v2.pdf)

Cabinet Office's Emergency Preparedness guidance on part 1 of the CCA:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/61027/Chapter-4-Local\\_20Responder-Risk-assessment-duty-revised-March.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61027/Chapter-4-Local_20Responder-Risk-assessment-duty-revised-March.pdf)

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
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ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Post-mitigation				
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence	Proposed mitigation	Likelihood	Tolerability	Significance of Risk	Sources of information
<b>CONSTRUCTION</b>														
<i>Vulnerability of the proposed development to natural disasters during construction</i>														
C1	Flooding from rivers, surface water, groundwater reservoirs and sewers	MDS/ AD	Periods of heavy or extreme rainfall resulting in the flooding of the construction site and surrounding areas Proposed development affecting drainage pathways <u>Not covered under this item:</u> Release of contaminants into the environment, resulting in a major pollution incident due to run-off from the construction site (see Risk ID C18 and C19); Disruption to utilities (Covered under risk IDs C20-23 and IDs C41-C44).	On site: Construction personnel and equipment Off-site: Properties General public Agricultural land and livestock Sensitive environmental receptors - Biodiversity / ecological, heritage receptors	On site: Damage to construction equipment and risk of injury to construction personnel due to flooding; Off-site: Damage to and evacuation of affected properties, ecological sites and heritage assets due to flooding as a result of the proposed development; Damage to crops.	Relevant catchment area modelled in the Flood Risk Assessment (FRA)	Major	Medium term	Category B	<b>Outline Drainage Strategy</b> - sets out measures for the attenuation of flood waters during construction of the main development site and associated development sites and the operation of temporary associated development sites via Sustainable Drainage Systems (SuDS), where required. Furthermore, a groundwater control strategy is proposed to manage groundwater flooding risk at the main development site. Foul water drainage strategy sets out measures to prevent sewer flooding. Maintenance and cleaning schedule would be implemented for the management of the drainage system. <b>Code of Construction Practice (CoCP)</b> - sets out requirements for emergency preparedness and monitoring of extreme weather events.  24/7 on-site emergency response provision and financial contributions to emergency services. <b>Flood risk emergency plan</b> - to identify safe access and escape routes, demonstrate free and safe movement of people during a design flood and set out the potential for evacuation before a more extreme event.	Remote	Tolerable	Not significant	Flood Risk Assessments (FRAs) Outline Drainage Strategy Code of Construction Practice (CoCP) Community Safety Management Plan (CSMP)
C2	Coastal flooding	MDS	Coastal flooding as a result of a storm event or tsunami or breach of flood defences resulting in the flooding of the construction and surrounding areas. <u>Not covered under this item:</u> Release of contaminants into the environment, resulting in a major pollution incident due to run-off from the construction site (see Risk ID C18 and C19); Disruption to utilities (Covered under risk IDs C20-23 and IDs C41-C44).	On site: Construction personnel and equipment Off-site: Properties General public Agricultural land and livestock Sensitive environmental receptors - biodiversity / ecological, heritage receptors	On site: Collapse and subsidence of ground can lead to damage to equipment and death or injury; Off-site: Damage to property and risk of injury to general public; Physical damage to sensitive environmental receptors.	Relevant catchment area modelled in the Flood Risk Assessment (FRA)	Major	Medium term	Category B	<b>Main development site design</b> - as construction works progress, measures embedded within design will mitigate the risk of flooding. These measures include: - during initial stages of construction, a temporary reinforced coastal flood defence with crest level of 7m AOD would be built to form a haul road used for construction until the main sea defence is completed. - a raised platform to a level of 7.3m AOD, which has been set above the still water level for 1 in 1,000-year return period events for the theoretical maximum lifetime of the proposed development with an allowance for sea level rise with climate change. - The new coastal flood defence crest level would be 10.2m AOD with adaptive design to potentially raise the defence up to 14.2m AOD in the future to minimise the risk of overtopping in the later stages of the proposed development's lifetime, if required. The crest height has been set above the still water level for 1 in 10,000 year return period events over the lifetime of the proposed development with an allowance for sea level rise with climate change. - An adaptive design for the SSSI crossing to enable future raising from 7.3m AOD to 10.5m AOD to reduce the risk of overtopping. <b>CoCP</b> - sets out requirements for emergency preparedness and monitoring of extreme weather events. An appropriate risk management plan is required for the initial stages of construction while the temporary coastal defence is being constructed. <b>Section 106</b> - financial contributions to emergency services.  24/7 on-site emergency response provision <b>CoCP</b> - sets out requirements for monitoring of extreme weather events.	Remote	Tolerable	Not significant	FRA CoCP CSMP
C3	Storms and Gales	MDS/ AD	Strong winds resulting in the potential movement of debris across the construction site.	On site: Construction personnel and equipment Utilities Off-site: Properties General public	On site: Damage to construction equipment and risk of injury or death of construction personnel; Off-site: Damage to property and risk of injury to general public	500m radius	Major	Very long or permanent	Category D	A safe system of work will be established for the operation of lifting equipment, including the fitting of lifting equipment with anemometers and stopping work during strong winds, in line with the requirements of Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).  24/7 on-site emergency response provision and financial contributions to emergency services.	Extremely improbable	Tolerable	Not significant	CoCP CSMP
C4	Drought	MDS/ AD	Prolonged periods of dry weather creating hard and dry surfaces across the construction site. Potential creation of dust from construction site due to dry weather <u>Not covered under this item:</u> Heat exhaustion of construction personnel (considered under risk ID C5); Wildfire (considered under risk ID C13)	On site: Construction personnel and equipment Off-site: Properties General public Agricultural land Sensitive environmental receptors - biodiversity / ecological, heritage receptors	On site: Soiling of equipment; Off-site: Dust deposition on properties, agricultural land, and sensitive environmental sites.	500m radius	No Serious Damage	Short term	Not a MA&D	The effects are unlikely to result in serious damage as defined for the purposes of the MA&D assessment. Effects due to dust emissions from the construction site and appropriate mitigation have been considered as part of the air quality assessments presented in Volumes 2 to 9 of the ES.	N/A	N/A	Not significant	Air Quality ES chapters CoCP
C5	Heatwave	MDS/ AD	Extreme heat impacting construction workers	On site: Construction personnel	On site: Heat exhaustion of construction personnel	Site only	Severe	Short Term	Not a MA&D	The effects are unlikely to fall within the scope of the MA&D assessment. On-site 24/7 Sizewell Health service would provide first aid.	N/A	N/A	Not significant	
C6	Cold and snow	MDS/ AD	Extreme cold weather including snowfall impacting the construction site <u>Not covered under this item:</u> Utilities freezing on-site - see disruption to utilities (Covered under risk IDs C20-23 and IDs C41-C43). Icy surfaces resulting in traffic accidents involving construction traffic - see Risk ID C37 Melting snow and ice washing pollutants and contaminants into surrounding areas - see Risk ID C18 and C19	On site: Construction personnel and equipment	On site: Risk to the health of construction workers due to freezing temperatures; Failure of construction machinery;	Site only	Severe	Medium term	Category A	<b>CoCP</b> - sets out requirements for emergency preparedness and monitoring of extreme weather events.  A safe system of work will be established for the operation of construction machinery and for undertaking works, which will consider risks associated with adverse weather conditions, such as snow (e.g. risks associated with frozen machinery, as well as any increased risk of slips, trips and falls for work at height).  24/7 on-site emergency response provision.  The contractor is to comply with the provisions of the Health and Safety at Work Act 1974, ensuring occupational health and safety arrangements are in place;	Remote	Tolerable	Not significant	CoCP CSMP
C7	Lightning and Electrical Storms	MDS/ AD	Tall equipment which may attract lightning (e.g. cranes) <u>Not covered under this item:</u> Fire at a Sizewell C Project site (considered under risk IDs C14 and C15). Loss of electricity (considered under risk IDs C20) Loss of telecommunications (considered under risk IDs C23)	On site: Construction personnel and equipment	On site: Damage to construction equipment and risk of injury or death of construction personnel;	Site only	Major	Very long or permanent	Category D	<b>CoCP</b> - sets out requirements for emergency preparedness and monitoring of extreme weather events.  A safe system of work will be established for the operation of equipment which may attract lightning or for any works at increased risk (e.g. roofing, pipework etc.).  24/7 on-site emergency response provision	Extremely improbable	Tolerable	Not significant	CoCP CSMP
C8	Reduced visibility, e.g. due to volcanic ash, dust, sand or fog	MDS/ AD	Volcanic eruptions overseas can produce ash clouds which may reach the UK and impact on the construction site. Reduced visibility at the construction site due to weather. <u>Not covered under this item:</u> Traffic accidents involving construction traffic due to adverse weather - see Risk ID C37	On site: Construction personnel	On site: Deposition of ashes, sand on construction areas and equipment Reduced visibility limiting construction works.	Site only	No Serious Damage	Short term	Not a MA&D	The effects are unlikely to result in serious damage as defined for the purposes of this assessment, assuming that any work would stop if visibility was seriously reduced. <b>CoCP</b> - sets out requirements for emergency preparedness and monitoring of extreme weather events.	N/A	N/A	Not significant	CoCP
C9	Ground instability hazards, e.g. landslides, ground collapse and sinkholes	MDS/ AD	Unstable ground conditions, landslides, sinkholes following heavy rainfall	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors	On site: Collapse and subsidence of ground can lead to damage to equipment and death or injury; Off-site: Damage to property and risk of injury to general public; Physical damage to sensitive environmental receptors.	500m	Major	Very long or permanent	Category D	<b>Ground investigation</b> - Additional ground investigation to confirm ground conditions and ground related risks. <b>Geotechnical design</b> - design of earthworks and foundations and selection of materials in accordance with relevant standards, taking into account potential for ground movement and compaction.	Extremely Remote	TIFALARP	Not significant	Geology and Land Quality chapters
C10	Seismic hazards such as earthquakes or tremors	MDS/ AD	Earthquakes, tremors resulting in physical damage	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors (ecological and heritage sites)	On site: Collapse and subsidence of ground can lead to damage to equipment or injury; Off-site: Damage to property and risk of injury to general public; Physical damage to sensitive environmental receptors.	500m	Catastrophic	very long term or permanent	Category D	24/7 on site emergency services provision. <b>Geotechnical design</b> - design of earthworks and foundations and selection of materials in accordance with relevant standards, taking into account potential for ground movement and compaction. All safety critical features would be seismically qualified.	Extremely improbable	Tolerable	Not significant	British Geological Survey and Musson and Sargeant (2007)
C11	Space weather (e.g. geomagnetic storms, radiation storms and solar flares)	MDS/ AD	Increased radiation risk to human health Disruption to railway signalling <u>Not covered under this item:</u> Loss of communication (covered under risk ID C23 and C44) Loss of electricity transmission network (covered under risk IDs C20 and C41)	On site: Construction workers	On-site Increase in exposure to radiation resulting in illness Disruption to the use of East Suffolk Line, Saxmundham to Leiston branch line and green rail route	Site only	No Serious Damage	Short term	Not a MA&D	In line with Public Health England guidance, a significant space weather event may cause people on the ground to receive an unusual radiation dose, however it would be far too small to produce an observable health effect  Disruption to railway signalling would stop freight trains from running, however is unlikely to result in serious damage.	N/A	N/A	Not significant	Cabinet Office (2015) Space weather preparedness strategy. Available at: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/449593/BIS-15-457-space-weather-preparedness-strategy.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/449593/BIS-15-457-space-weather-preparedness-strategy.pdf</a> PHE (2014) Space weather and radiation. Available at: <a href="https://www.gov.uk/guidance/space-weather-and-radiation">https://www.gov.uk/guidance/space-weather-and-radiation</a>

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Post-mitigation				
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence	Proposed mitigation	Likelihood	Tolerability	Significance of Risk	Sources of information
C12	Wildfires	MDS/ AD	Wildfire spreading onto the construction site <u>Not covered under this item:</u> Emergency response activities could result in impacts on sensitive receptors off-site (covered under risk ID C24)	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors (ecological and heritage sites)	On site: Damage to construction equipment and risk of injury or death of construction personnel; Off site: Fire spreading from site to a neighbouring site resulting in damage to property and risk of injury or death to the general public; Physical damage to sensitive environmental receptors; Indirect effects on human health, property, heritage assets and wildlife due to smoke and ash deposition.	500m	Catastrophic	very long term or permanent	Category D	CoCP - sets out requirements for fire prevention and control. 24/7 on-site emergency response provision	Extremely Improbable	Tolerable	Not significant	Met Office Fire Severity Index
C13	Extreme humidity condition (high and low)	MDS/ AD	Periods of high and low humidity impacting the construction site	On site: Construction personnel and equipment	On site: Risk of illness for construction personnel and failure of equipment.	Site only	Severe	Short Term	Not a MA&D	The effects are unlikely to fall within the scope of the MA&D assessment. On-site 24/7 Sizewell Health service would provide first aid.	N/A	N/A	Not significant	N/A
<b>Vulnerability of the construction of the proposed development to major accidents from on-site sources and the potential major accidents resulting from construction works and operation of temporary associated developments</b>														
C14	Fire and/or explosion at the main development site	MDS	Cutting or drilling into unidentified utilities; Release of ground gas as a result of construction activities; Fire/ explosion at a neighbouring site leading to a domino effect; Unexploded Ordnance (UXO); Storage and handling of fuel or other flammable and combustible material; Electrical faults and faulty wiring; Hot work operations (e.g. welding, smouldering, grinding etc.); Smoking; Portable heaters; Temporary lighting and lamps; <u>Not covered under this item:</u> Emergency response activities could result in impacts on sensitive receptors off-site (covered under risk ID C24)	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors (ecological and heritage sites)	On site: Damage to construction equipment and risk of injury or death of construction personnel; Off-site: Fire spreading from site to a neighbouring site resulting in damage to property and risk of injury or death to the general public; Indirect effects on human health, property, heritage assets and wildlife due to smoke and ash deposition.	500m	Major	very long term or permanent	Category D	CoCP - utilities searches, further Ground Investigations, and a detailed UXO desk study and risk assessment would be used to determine mitigation measures required to minimise risks associated with these hazards. Fire safety risks at the construction site will be managed in compliance with CDM Regulations 2015 and Regulatory Reform (Fire Safety) Order 2005 (FSO) (England and Wales). A fire risk assessment will be completed and implemented to manage the risks throughout construction, including emergency plans and procedures and measures for the safe storage and handling of fuel. Any hot work operations will be completed under a Hot Work Permit. <b>Main development site design</b> - Gas mitigation measures would be provided in the buildings on site and other relevant structures where required, the design of which would be dependent on the risk profile and the nature/usage of the building/structure. 24/7 on-site emergency response provision and financial contributions to emergency services.	Extremely Remote	TIFALARP	Not significant	CoCP CSMP
C15	Fire and/or explosion at the off-site associated development sites	AD	Cutting or drilling into unidentified utilities; Release of ground gas as a result of construction activities; Fire/ explosion at a neighbouring site leading to a domino effect; Unexploded Ordnance (UXO); Storage and handling of fuel or other flammable and combustible material; Electrical faults and faulty wiring; Hot work operations (e.g. welding, smouldering, grinding etc.); Smoking; Portable heaters; Temporary lighting and lamps; <u>Not covered under this item:</u> Emergency response activities could result in impacts on sensitive receptors off-site (covered under risk ID C24)	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors (ecological and heritage sites)	On site: Damage to construction equipment and risk of injury or death of construction personnel; Off-site: Fire spreading from site to a neighbouring site resulting in damage to property and risk of injury or death to the general public; Indirect effects on human health, property, heritage assets and wildlife due to smoke and ash deposition;	500m	Major	very long term or permanent	Category D	CoCP - utilities searches, further Ground Investigations, and a detailed UXO desk study and risk assessment would be used to determine mitigation measures required to minimise risks associated with these hazards. Fire safety risks at the construction site will be managed in compliance with CDM Regulations 2015 and Regulatory Reform (Fire Safety) Order 2005 (FSO) (England and Wales). A fire risk assessment will be completed and implemented to manage the risks throughout construction, including emergency plans and procedures and measures for the safe storage and handling of fuel. Any hot work operations will be completed under a Hot Work Permit. <b>Associated development site design</b> - Gas mitigation measures would be provided in the buildings on site and other relevant structures where required, the design of which would be dependent on the risk profile and the nature/usage of the building/structure. 24/7 on-site emergency response provision and financial contributions to emergency services.	Extremely Remote	TIFALARP	Not significant	CoCP CSMP Geology and land quality chapters
C16	Unexploded Ordnance in the marine environment	MDS	Disturbance of unidentified UXO during the installation of marine infrastructure	On site: Construction personnel and equipment Sensitive environmental receptors - marine environment Off-site: Sensitive environmental receptors - marine ecology	On site: Death or injury of construction personnel. Mortality and potential mortal injury of fish species and marine mammals Off-site: Mortality and potential mortal injury of fish species and marine mammals	3.5km of offshore works area	Major	very long term or permanent	Category D	<b>Draft Marine Mammal Mitigation Protocol</b> - detailed marine UXO risk assessment would be used to determine mitigation measures required to minimise risks. If UXOs are discovered at the site, alternative disposal methods and relocation would be considered over underwater detonations, if possible.	Extremely remote	TIFALARP	Not significant	Marine Ecology and Fisheries chapter
C17	Ground instability - collapse of deep excavations and stockpiles	MDS/ AD	Collapse of slopes during deep excavations and stockpiling	On site: Construction personnel and equipment Off-site: Properties General Public Agricultural Land Sensitive environmental receptors (ecological and heritage sites)	On site: Collapse and subsidence of ground that can lead to damage to equipment and death or injury of construction personnel. Off-site: Damage to property, agricultural land, heritage assets and risk of injury or death to the general public; Physical damage to sensitive environmental sites.	500m	Major	very long term or permanent	Category D	<b>Ground investigation</b> - Additional ground investigation to confirm ground conditions and ground related risks. <b>Geotechnical design</b> - design of earthworks and foundations and selection of materials in accordance with relevant standards, taking into account potential for ground movement and compaction. <b>Materials Management Strategy (MMS)</b> - stockpiling of materials will be undertaken in accordance with the MMS. <b>Main development site design</b> - deep excavation within the cut off wall will be sheet piled and ground anchors used to maintain the stability of slopes.	Extremely remote	TIFALARP	Not significant	Geology and Land Quality chapters
C18	Major leaks and spillages at the main development site resulting in contamination or release of hazardous substances	MDS	Handling and storage of hazardous substances, i.e. chemicals and fuels; Loss of containment; Contaminated run-off from site; Creation of new drainage pathways to sensitive receptors	On site: Construction personnel and equipment Off-site: Properties General public Agricultural land Sensitive environmental receptors (ecological and heritage sites, groundwater, surface water and marine receptors)	On site: Risk of contact with hazardous substances to construction personnel Off-site: Risk of contact with hazardous substances by general public; Contamination of sensitive environmental receptors and agricultural land.	5km	Major	Long term	Category C	<b>Outline Drainage Strategy</b> - measures embedded within the drainage design for pollution prevention and control. CoCP - measures relating to pollution prevention included within the CoCP, including arrangements for incident response and control, compliance with regulatory requirements (such as Control of Substances Hazardous to Health Regulations) and environmental permits.	Remote	TIFALARP	Not significant	Outline Drainage Strategy CoCP
C19	Major leaks and spillages at the off-site associated development sites resulting in contamination or release of hazardous substances	AD	Handling and storage of hazardous substances, i.e. chemicals and fuels (note quantity of hazardous substances to be stored at AD sites is expected to be minimal); Loss of containment; Contaminated run-off from site; Creation of new drainage pathways to sensitive receptors	On site: Construction personnel and equipment Off-site: General public Agricultural land Sensitive environmental receptors (ecological and heritage sites, groundwater and surface water receptors)	On site: Risk of contact with hazardous substances to construction personnel Off-site: Risk of contact with hazardous substances by general public; Contamination of sensitive environmental receptors and agricultural land.	500m	Severe	Long term	Category B	<b>Outline Drainage Strategy</b> - measures embedded within the drainage design for pollution prevention and control. CoCP - measures relating to pollution prevention included within the CoCP, including arrangements for incident response and control, compliance with regulatory requirements (such as Control of Substances Hazardous to Health Regulations) and environmental permits.	Remote	Tolerable	Not significant	Outline Drainage Strategy CoCP
C20	Loss or failure of electricity transmission	MDS/ AD	Unidentified utilities impacted by excavation, piling, cutting and drilling works. Damage to electricity transmission network from meteorological conditions or due to flooding impacting the proposed development. <u>Not covered within this item:</u> Disruption of utilities can lead to an interruption of communications (covered under risk ID C23 and C44) and services which may increase other MA&D risks;	On site: Construction equipment and activity Off-site: Properties served by such utilities	On site: Failure of equipment reliant on mains power. Disruption to construction activity and the operation of AD sites. Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response. Limited ability to implement and effective safety, security and environmental management systems Off-site: Disruption to properties Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response.	500m	Severe	Medium term	Category A	CoCP - sets out requirements for emergency preparedness. Utilities connections would be protected at all times during the construction works. Inspection pits for buried utilities would be performed and clearances clearly demarcated on site. Critical services may require back up power supply or batteries. 24/7 on-site emergency response provision.	Remote	Tolerable	Not significant	
C21	Loss or failure of gas supply	MDS/ AD	Unidentified utilities impacted by excavation, piling, cutting and drilling works. Damage to gas supply network from meteorological conditions.	On site: Construction equipment and activity Off-site: Properties served by such utilities	On site: Failure of equipment reliant on gas supply (e.g. CHP plant at accommodation campus). Disruption to construction activity and the operation of AD sites. Off-site: Disruption to properties	500m	No Serious Damage	Short term	Not a MA&D	The loss of utilities is unlikely to result in serious damage as defined for the purposes of this assessment. Utilities connections would be protected at all times during the construction works. Inspection pits for buried utilities would be performed and clearances clearly demarcated on site.	N/A	N/A	Not significant	
C22	Loss or failure of water supply	MDS/ AD	Unidentified utilities impacted by excavation, piling, cutting and drilling works. Damage to water supply network from meteorological conditions.	On site: Construction equipment and activity Off-site: Properties served by such utilities	On site: Disruption to construction activity and the operation of AD sites. Limited ability for an emergency response plan to be implemented, if reliant on water supply, and delay to emergency response. Limited ability to implement and effective safety and environmental management systems Off-site: Disruption to properties Limited ability for an emergency response plan to be implemented, if reliant on water supply, and delay to emergency response.	500m	Major	Long term	Category C	CoCP - sets out requirements for emergency preparedness. Utilities connections would be protected at all times during the construction works. Inspection pits for buried utilities would be performed and clearances clearly demarcated on site. 24/7 on-site emergency response provision. <b>Main development site design</b> - includes water resource storage area for the provision of on-site water supply.	Remote	TIFALARP	Not significant	CoCP CSMP

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Proposed mitigation	Post-mitigation			Sources of information
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence		Likelihood	Tolerability	Significance of Risk	
C23	Loss or failure of telecommunications	MDS/ AD	Unidentified utilities impacted by excavation, piling, cutting and drilling works. Loss of telecommunications due to cyber attack Damage to electricity transmission or telecommunications networks from meteorological conditions.	On site: Construction activity Off-site: Properties served by such utilities	On site: Interruption of communications and services which may lead to other MA&D risks; Limited ability of an emergency response plan to be implemented and delay to emergency response Limited ability to implement effective safety, security and environmental management systems Off-site: Disruption to properties Limited ability for an emergency response plan to be implemented and delay to emergency response	500m	Catastrophic	Very long term or Permanent	Category D	CoCP - sets out requirements for emergency preparedness. Utilities connections would be protected at all times during the construction works. Inspection pits for buried utilities would be performed and clearances clearly demarcated on site. 24/7 on-site emergency response provision.	Extremely Remote	TIFALARP	Not significant	CoCP CSMP
C24	Emergency response activities implemented on a Sizewell C Project site impacting on sensitive receptors	MDS/ AD	Water from fire extinguishing draining into environmentally sensitive areas and/ or controlled waters	On site: Sensitive environmental receptors (surface water, groundwater, marine receptors) Off-site: Agricultural land Sensitive environmental receptors (surface water, groundwater, marine)	On site: Contamination and pollution of identified sensitive environmental receptors Off-site: Contamination and pollution of identified sensitive environmental receptors	500m	Severe	Medium term	Category B	<b>Outline Drainage Strategy</b> - measures embedded within the drainage design for pollution prevention and control. CoCP - measures relating to pollution prevention included within the CoCP, including arrangements for incident response and control, compliance with regulatory requirements (such as Control of Substances Hazardous to Health Regulations) and environmental permits.	Remote	Tolerable	Not significant	Outline Drainage Strategy CoCP
C25	Absent or deficient safety and environmental management systems (e.g. inadequate planning, resource provision, procedures)	MDS/ AD	Increased risk of MA&D hazards described within this register.	On site: Construction personnel and equipment Off-site: General public Agricultural land Sensitive environmental receptors (ecological and heritage sites, groundwater, surface water and marine receptors)	As described within this register for all hazards relevant to the construction phase.	500m AD sites 5km MDS	Catastrophic	very long term or permanent	Category D	CoCP - construction works will be completed in compliance with accredited safety and environmental management systems (e.g. certified to ISO 45001 and I4001 standards or equivalent). Regular audits will be undertaken to monitor compliance against the site management systems.	Extremely remote	TIFALARP	Not significant	CoCP
C26	Marine Navigation	MDS	Risk of collision, disruption to activities and vessel grounding	On-site/ off-site Construction personnel and equipment Commercial and fishing vessels Sensitive environmental receptors in the marine environment	On-site/ off-site Loss of life or injury Contamination of the marine environment	An assessment of the marine navigation risks is presented in Volume 2, Chapter 24. The assessment concludes that the all marine navigation risks are considered not significant.				CoCP - measures set out within the CoCP to mitigate marine navigation risks during construction, including but not limited to communication of information, compliance with relevant regulatory requirements, deployment of temporary safety zones around works areas, implementation of a delivery and logistics plan and Fisheries Liaison Officer to safely manage marine navigation. Furthermore, buoyed construction zones and patrol launch to assist vessels in difficulty are proposed.		TIFALARP, Not significant		Marine Navigation chapter and Navigational Risk Assessment CoCP
C27	Construction within the marine environment	MDS	Handling and storage of hazardous substances, i.e. chemicals and fuels; Loss of containment; Contaminated run-off from site.	On-site/ Off-site: Sensitive environmental receptors in the marine environment	Off-site: Risk of contact with hazardous substances by general public; Contamination of marine environment	5km	Catastrophic	very long term or permanent	Category D	CoCP - measures set out within the CoCP relating to pollution prevention in the marine environment, including compliance with relevant environmental permits for construction discharges to the sea, site-wide speed restrictions for all working vessels and compliance with relevant regulatory controls. Measures set out with regards to emergency arrangements and incident control.	Extremely remote	TIFALARP	Not significant	Marine Ecology and Fisheries chapter CoCP
C28	Absent or deficient security provision (e.g. inadequate planning, resource provision, procedures)	MDS/ AD	Increased risk of vandalism/ crime/ terrorism	On site: Construction personnel and equipment Off-site: General public	On site: Death or risk of injury to construction personnel; Damage to construction equipment Off-site: Risk of long term injury of death of members of the public	500m	Catastrophic	very long term or permanent	Category D	<b>Main development site and associated developments design</b> - Implements Secured By Design principles, provision of security fencing, lighting and CCTV amongst other security arrangements. CoCP - 24/7 on-site security provision. Security vetting and drug and alcohol testing will be implementing across the site. Required standards of behaviour as a condition for working on site will be set out in the Workers Code of Conduct. Section 106 - financial contributions to emergency services.	Extremely remote	TIFALARP	Not significant	CSMP
C29	Ionising radiation risk from radiography during construction	MDS	Ionising radiation risk from radiography during construction, impacting on the health of site workers	On site: Construction personnel	On site: Risk of long term injury to construction personnel	Site only	Severe	Very long term or Permanent	Category C	CoCP - requirement for compliance with relevant regulatory requirements (e.g. Risk Analysis as required by the CDM Regulation, Ionising Radiation Regulations, regulations for the carriage of dangerous goods) NSL - contractors mobile permits.	Extremely remote	Tolerable	Not significant	Radiological Considerations ES Chapter
C30	Train derailment or collision	MDS/ AD	Object on the line human factors including driver error leading to train travelling at the wrong speed, signal error, unsafe decisions or points wrongly set Rolling stock failure	On site: Construction personnel and general public Off-site: General public	On site: Risk of injury or death to members of the public or construction personnel using a level crossing. Off-site: Risk of injury or death to members of the public or construction personnel in proximity to the operational railway.	Site only	Major	Very long term or Permanent	Category D	Design and operation in accordance with relevant Network Rail standards.	Extremely remote	TIFALARP	Not significant	
C31	Injury to member of public using level crossing	AD	Introduction of new level crossings and increased train frequency at existing level crossings on the Saxmundham to Leiston branch line.	On site: Construction personnel and general public	On site: Risk of injury or death to members of the public or construction personnel using a level crossing.	Site only	Major	Very long term or Permanent	Category D	Design and operation in accordance with relevant Network Rail standards.	Extremely remote	TIFALARP	Not significant	
<b>Vulnerability of the construction of the main development site and associated developments, and operation of temporary associated developments to major accidents from off-site sources</b>														
C32	Civil nuclear incident at Sizewell B	MDS	Civil nuclear incident at Sizewell B impacting Sizewell C construction	On site: Construction personnel and equipment	On-site: Risk of injury or death to construction workers and damage to equipment/ site	Site only	Major	Very long term or Permanent	Category D	CoCP - sets out requirements for emergency preparedness. 24/7 on-site emergency response provision NSL - LC 11 requires emergency arrangements on a nuclear licenced site that will reflect the adjacent hazard and the construction site area will be enveloped with this.	Extremely remote	TIFALARP	Not significant	CoCP CSMP
C33	Fire at a neighbouring site	MDS/ AD	Fire at a neighbouring site impacting on the construction of the proposed development or the operation of temporary associated developments <u>Not covered under this item:</u> Potential to result in fire on site (covered under risk ID C14) Impeded access to site, limiting the ability to implement emergency response activities (covered under risk ID C49).	On site: Construction personnel and equipment	On-site: Indirect effects on human health and equipment due to smoke and ash deposition.	Site only	Severe	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment. Sizewell Health will provide first aid on site.	N/A	N/A	N/A	
C34	Explosion and structural collapse at neighbouring sites	MDS/ AD	Explosion and structural collapse at a neighbouring site impacting on the construction of the proposed development or the operation of temporary associated developments <u>Not covered under this item:</u> Impeded access to the main development site, limiting the ability to implement emergency response activities (covered under risk ID C49);	On site: Construction personnel and equipment	On site: Falling debris or collapse of infrastructure within the neighbouring area resulting in damage to construction equipment and risk of injury of construction personnel	Site only	Major	Long term	Category C	CoCP - sets out requirements for emergency preparedness 24/7 on-site emergency response provision.	Extremely remote	Tolerable	Not significant	
C35	Contamination or release of hazardous substances by off-site sources	MDS/ AD	Contamination or release of hazardous substances from off-site sources impacting on the construction of the main development site and associated development or the operation of temporary associated development.	On site: Construction personnel	On site: Risk of contact with hazardous substances to construction personnel	Site only	No Serious Damage	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment. Sizewell Health will provide first aid on site.	N/A	N/A	N/A	
C36	Vandalism/crime/terrorism leading to increased risk to the safety of members of public and site workers	MDS/ AD	Criminal damage/ vandalism; Theft; Terrorist acts; Unauthorised access to the construction site; Ionising radiation exposure from stolen goods.	On site: Construction personnel and equipment Off-site: General public	On site: Death or risk of injury to construction personnel; Damage to construction equipment Off-site: Risk of injury or death to the general public.	500m	Catastrophic	Very long term or Permanent	Category D	<b>Main development site and associated developments design</b> - Implements Secured By Design principles, provision of security fencing, lighting and CCTV amongst other security arrangements. CoCP - 24/7 on-site security provision. Security vetting and drug and alcohol testing will be implementing across the site. Required standards of behaviour as a condition for working on site will be set out in the Workers Code of Conduct. Section 106 - financial contributions to emergency services.	Extremely improbable	TIFALARP	Not significant	
C37	Road Traffic Accident on the wider traffic network (including high consequence dangerous goods)	MDS/ AD	Traffic accident on the wider traffic network involving Sizewell C construction traffic Traffic accident on the wider network involving the carriage of high consequence dangerous goods associated with Sizewell C construction <u>Not covered under this item:</u> Could limit the ability to implement emergency response activities (covered under risk ID 49);	Off-site: Motorised and non-motorised users of routes assigned for proposed development's construction traffic Properties Sensitive environmental receptors	Off-site: Death or injury of road users on construction personnel; Damage to properties; Risk of contact with hazardous substances by general public; Contamination of sensitive environmental receptors and agricultural land.	Area modelled within the Transport Assessment	Major	very long term or permanent	Category D	<b>Construction Traffic Management Plan (CTMP) and Construction Worker Travel Plan (CWTP)</b> set out measures for the management of construction traffic, including measures to reduce risks associated with road safety. <b>Traffic Incident Management Plan</b> sets out arrangements to control Heavy Goods Vehicles (HGV) and bus movements in the event of an incident on the routes between park and rides and the main development site, and sets out proposals for coordinated working practices between EDF Energy, Suffolk County Council and emergency services in the event of a traffic incident. Section 106 - financial contributions to emergency services.	Extremely remote	TIFALARP	Not significant	
C38	Civil unrest or protest	MDS/ AD	Members of the public protesting; Construction staff industrial action <u>Not covered under this item:</u> Criminal damage or vandalism - see risk ID C36.	On site: Construction personnel and equipment	On site: Disruption to construction activities.	Site only	No Serious Damage	Short term	Not a MA&D	No effects resulting in serious damage as defined for the purposes of this assessment are considered likely to occur as a result of civil unrest or protest.	N/A	N/A	Not significant	
C39	Outbreak of disease (emerging infectious disease or pandemic influenza)	MDS/ AD	Disease outbreak or epidemics impacting construction workers.	On site: Construction personnel and equipment	On site: Death or risk of injury to construction personnel.	Site only	Catastrophic	Very long term or Permanent	Category D	Section 106 - On-site 24/7 Sizewell Health service for construction personnel and financial contributions to emergency services.	Extremely remote	TIFALARP	Not significant	

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
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						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence		Likelihood	Tolerability	Significance of Risk	
C40	Animal health – notifiable disease	MDS/ AD	Disease outbreak impacting the movement of construction workers and materials. <u>Not covered under this item.</u> Impacts on limiting emergency response activities are considered under risk ID C49.	On site: Construction personnel and equipment	On site: Restricted access to site	Area modelled within the Transport Assessment	No Serious Damage	Medium term	Not a MA&D	No effects resulting in serious damage as defined for the purposes of this assessment are considered likely to occur.	N/A	N/A	Not significant	
C41	Loss or failure of electricity transmission	MDS/ AD	Damage to electricity transmission network from other developments or meteorological conditions impacting on service provision for proposed development. <u>Not covered within this item.</u> Disruption of utilities can lead to an interruption of communications (covered under risk ID C23 and C44) and services which may increase other MA&D risks.	On site: Construction equipment and activity	On site: Failure of equipment reliant on mains power. Disruption to construction activity and the operation of AD sites. Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response. Limited ability to implement and effective safety, security and environmental management systems	Site only	Severe	Medium term	Category A	CoCP - sets out requirements for emergency preparedness. Critical services may require back up power supply or batteries. 24/7 on-site emergency response provision.	Remote	Tolerable	Not significant	
C42	Loss or failure of gas supply	MDS/ AD	Damage to gas supply network from other developments or meteorological conditions impacting on service provision for proposed development.	On site: Construction equipment and activity	On site: Failure of equipment reliant on gas supply (e.g. CHP plant at accommodation campus). <u>Disruption to construction activity and the operation of AD sites.</u>	Site only	No Serious Damage	Short term	Not a MA&D	The loss of utilities is unlikely to result in serious damage as defined for the purposes of this assessment.	N/A	N/A	Not significant	
C43	Loss or failure of water supply	MDS/ AD	Damage to water supply network from other developments or meteorological conditions impacting on service provision for proposed development.	On site: Construction equipment and activity	On site: Disruption to construction activity and the operation of AD sites. Limited ability for an emergency response plan to be implemented, if reliant on water supply, and delay to emergency response. Limited ability to implement and effective safety and environmental management systems	Site only	Major	Long term	Category C	CoCP - sets out requirements for emergency preparedness. 24/7 on-site emergency response provision. <b>Main development site design</b> - includes water resource storage area for the provision of on-site water supply.	Remote	TIFALARP	Not significant	CoCP CSMP
C44	Loss or failure of telecommunications	MDS/ AD	Damage to electricity transmission or telecommunications networks from other developments or meteorological conditions impacting on service provision for proposed development.	On site: Construction activity	On site: Interruption of communications and services which may lead to other MA&D risks; Limited ability of an emergency response plan to be implemented and delay to emergency response Limited ability to implement effective safety, security and environmental management systems	Site only	Catastrophic	Very long term or Permanent	Category D	CoCP - sets out requirements for emergency preparedness. 24/7 on-site emergency response provision.	Extremely Remote	TIFALARP	Not significant	CoCP CSMP
C45	Food supply contamination	MDS/ AD	Pollution incident Large radiation releases from nuclear matter	On site: Construction personnel	On site: Risk of injury to construction personnel.	Site only	Severe	Long term	Category B	<b>Section 106</b> - Sizewell Health will provide first aid on site. 24/7 on-site emergency response provision	Remote	Tolerable	Not significant	
C46	Local fuel supply failure	MDS/ AD	Risk of disruption to construction activities associated with availability of construction workforce	On site: Construction personnel	On site: Disruption to construction processes dependent on fuel supply; Limit the ability to implement and effective safety, security and environmental management systems Limited ability for an emergency response plan to be implemented, if reliant on fuel supply, and delay to emergency response.	Site only	Severe	Medium term	Category A	CoCP - sets out requirements for emergency preparedness. Critical services may require back up power supply or batteries. 24/7 on-site emergency response provision.	Remote	Tolerable	Not significant	
C47	Poor air quality	MDS/ AD	Off-site event resulting in the release of particulate matter and hazardous gases into the surrounding environment. Hackers Security breach of the construction site	On site: Construction personnel	On site: Risk of harm to the health of construction personnel	Site only	Severe	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment. Sizewell Health will provide first aid on site.	N/A	N/A	Not significant	
C48	Cyber-attack and digital data security	MDS/ AD	<u>Not covered under this item.</u> Could result in the failure or loss of telecommunications (covered under risk IDs C23 and C44). Unauthorised access to the site and risk of vandalism/ crime/ terrorism (covered under risk ID C36) Aircraft incidents within the construction site	On site: Construction personnel and equipment;	On site: Loss of sensitive information which can increase the likelihood of crime/ terrorism/ vandalism; Could limit the ability to implement and effective safety, security and environmental management systems	Site only	Catastrophic	Very long term or Permanent	Category D	SZC Co will implement procedures and processes for dealing with sensitive information. Contractors will be required to comply with SZC Co requirements for data security.	Extremely Remote	TIFALARP	Not significant	
C49	Aviation Crash	MDS/ AD	<u>Not covered under this item.</u> Fire and/ or explosion at the main development site or associated development sites (Covered under Risk ID C14 and C15) Fire at neighbouring site (Covered under Risk ID C33) Explosion or structural collapse at neighbouring site (Covered under Risk ID C34).	On site: Construction personnel and equipment	On site: Risk of injury to construction personnel.	Site only	Catastrophic	very long term or permanent	Category D	CoCP - sets out requirements for emergency preparedness 24/7 on-site emergency response provision	Extremely improbable	Tolerable	Not significant	
C50	Failure of financial system	MDS/AD	Failure of the financial system resulting in a reduced public services <u>Not covered under this item.</u> Impacts on the ability of an emergency response plan to be implemented (Covered under Risk ID C53)	On site: Construction personnel and equipment	On site: Limited ability of an emergency response plan to be implemented and delay to emergency response Increased response time or lack of available resources may lead to other MA&D risks	Site only	Catastrophic	Very long term or Permanent	Category D	CoCP - sets out requirements for emergency preparedness 24/7 on-site emergency response provision	Extremely improbable	Tolerable	Not significant	
C51	Radiation releases from foreign nuclear sites	MDS/ AD	Exposure of construction staff to radiation from foreign nuclear matter	On site: Construction personnel	On site: Risk of harm to the health of construction personnel	Site only	Severe	Long term	Category B	Effects are not likely to fall within the scope of the MA&D assessment. Sizewell Health will provide first aid on site.	Extremely improbable	Tolerable	Not significant	
C52	Influx of British Nationals	MDS/ AD	Displacement of construction staff in local accommodation resulting in disruption to construction activity	On site: Construction activity	No pathway to create a MA&D	Site only	No Serious Damage	Medium term	Not a MA&D	There is no pathway to create a MA&D.	N/A	N/A	Not significant	
<b>Construction of the proposed development/ operation of temporary associated developments impacting on the vulnerability of a receptor to a MA&amp;D hazard</b>														
C53	Impacts on the ability of an emergency response plan to be implemented	MDS/ AD	Access for emergency services to construction site being restricted Construction works impeding or obstructing the response of emergency services for another site. Delivery of Abnormal Indivisible Loads (AIL) restricting the response of emergency services	On site: Construction personnel and equipment Off-site: General Public Agricultural Land Sensitive environmental receptors	On-site/ off-site Full or partial obstruction to the operation of emergency services, leading to a slow response time and increased number of deaths/ injuries or spread of contamination for risk events described for construction.	Construction traffic routes (HGV and AIL routes)	Catastrophic	Very long term or Permanent	Category D	<b>S 106</b> - preparation of a Construction Travel Management Plan (CTMP) to set out arrangements for the management, monitoring and review of Sizewell C construction traffic and AILs (e.g. notifications of AILs to be provided to Highways England, SCC and police). <b>Main development site design:</b> Multiple emergency access routes provided to the main development site.	Extremely remote	TIFALARP	Not significant	
<b>OPERATION</b>														
<b>Vulnerability of the proposed development (main development and permanent associated developments) to natural disasters during operation</b>														
O1	Flooding from rivers, surface water, groundwater reservoirs and sewers	MDS/ AD	Flooding of the site and properties downstream Run-off from site <u>Not covered under this item.</u> Release of contaminants into the environment, resulting in a major pollution incident due to run-off from the site (see Risk ID O14 and O17); Disruption to utilities (Covered under risk IDs O18-21 and IDs O34-O37). Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Sensitive environmental receptors on site Operational personnel Sizewell C infrastructure Off-site: General public Properties Agricultural land Sensitive environmental receptors (ecological and heritage receptors)	On site: Damage to Sizewell C infrastructure and risk of injury to operational personnel due to flooding; Off-site: Damage to and evacuation of affected properties due to flooding; Damage to crops; Physical damage to sensitive environmental receptors;	Relevant catchment area modelled in the Flood Risk Assessment (FRA)	Major	Medium term	Category B	<b>Main development site design</b> - The main platform level has been set above the 1 in 1,000-year fluvial flood event with climate change allowance up to the theoretical maximum site lifetime of 2190. Discharge of surface water drainage and treated effluent to the sea in compliance with an operational water discharge activity permit, with sufficient capacity to attenuate flows to maintain safe operation, access and no flooding of safety classified buildings. Furthermore buildings on the main platform would be built with a flood resistant design. Maintenance and cleaning schedule would be implemented for the management of the drainage system. Cut off wall will remain in place during operation which will mitigate the risk of groundwater flooding and any underground structures would be designed to be flood resistant. <b>Nuclear Site Licence (NSL)</b> - In compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken. <b>Generic Design Assessment (GDA)</b> - safety measures embedded within design through the GDA process. <b>Associated developments design</b> - Two village bypass final finished ground levels have been set to be above the fluvial flood levels during a 1 in 100-year with an allowance for climate change. Similarly, the proposed development will not be at risk of surface water flooding due to the highway drainage design. There is very limited risk of flooding of Sizewell link road, and highway improvements sites. <b>Flood risk emergency plan</b> - to identify safe access and escape routes, demonstrate free and safe movement of people during a design flood and set out the potential for evacuation before a more extreme event.	Remote	Tolerable	Not significant	Outline Drainage Strategy FRA

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Post-mitigation					
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence	Proposed mitigation	Likelihood	Tolerability	Significance of Risk	Sources of information	
02	Coastal flooding	MDS	Coastal flooding as a result of a storm event or tsunami or breach of flood defences resulting in the flooding of the main platform and surrounding areas  <u>Not covered under this item:</u> Release of contaminants into the environment, resulting in a major pollution incident due to run-off from the site (see Risk ID O14 and O17); Disruption to utilities (Covered under risk IDs O18-21 and IDs O34-O37). Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Operational personnel Sizewell C infrastructure  Off site: Properties General public Agricultural land Sensitive environmental receptors (ecological and heritage receptors)	On site: Collapse and subsidence of ground can lead to damage to equipment and death or injury;  Off-site: Damage to property and risk of injury to general public; Physical damage to sensitive environmental receptors;	Relevant catchment area modelled in the Flood Risk Assessment (FRA)	Catastrophic	very long term or permanent	Category D	<b>Main development site design</b> - measures embedded within design: - a raised platform to a level of 7.3m AOD, which has been set above the still water level for 1 in 1,000-year return period events for the theoretical maximum lifetime of the proposed development with an allowance for sea level rise with climate change. - The new coastal flood defence crest level would be 10.2m AOD with adaptive design to potentially raise the defence up to 14.2m AOD in the future to minimise the risk of overtopping in the later stages of the proposed development's lifetime, if required. The crest height has been set above the still water level for 1 in 10,000 year return period events over the lifetime of the proposed development with an allowance for sea level rise with climate change. - An adaptive design for the SSSI crossing to enable future raising from 7.3m AOD to 10.5m AOD to reduce the risk of overtopping.  <b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  <b>GDA</b> - safety measures embedded within design through the GDA process.	Extremely remote	TIFALARP	Not significant	FRA	
03	Storms and Gales	MDS/ AD	Strong winds resulting in the potential movement of debris across the site.  <u>Not covered under this item:</u> Road traffic accidents on TVRP and SI R (see risk ID O29)	On site: Operational personnel Sizewell C infrastructure	On site: Damage to Sizewell C infrastructure and risk of injury or death of operational personnel and road users;	Site only	Severe	Very long or permanent	Category C	<b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  <b>GDA</b> - safety measures embedded within design through the GDA process	Extremely improbable	Tolerable	Not significant		
04	Drought	MDS/ AD	Prolonged periods of dry weather creating hard and dry surfaces across the site.  Potential creation of dust from site due to dry weather  <u>Not covered under this item:</u> Heat exhaustion of personnel (considered under risk ID O5); Wildfires (considered under risk ID O12)	On site: Operational personnel and equipment  Off-site: Properties General public Agricultural land Sensitive environmental receptors	On site: Soiling of equipment;  Off-site: Dust deposition on properties, agricultural land, and sensitive environmental sites;	500m radius	No Serious Damage	Short term	Not a MA&D	The effects are unlikely to result in serious damage as defined for the purposes of the MA&D assessment. Effects due to dust emissions from the operation of the site and appropriate mitigation have been considered as part of the air quality assessments presented in Volumes 2 to 9 of the ES.	N/A	N/A	Not significant	Air Quality ES chapters	
05	Heatwave	MDS/ AD	Extreme heat impacting operational workers  <u>Not covered under this item:</u> Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Operational personnel	On site: Heat exhaustion of operational personnel;	Site only	Severe	Short Term	Not a MA&D	The effects are unlikely to fall within the scope of the MA&D assessment.	N/A	N/A	Not significant		
06	Cold and snow	MDS/ AD	Extreme cold weather resulting in snow and ice on site  <u>Not covered under this item:</u> Utilities freezing on-site - see disruption to utilities (Covered under risk IDs O18-21 and IDs O34-O37). Icy surfaces resulting in traffic accidents - see Risk ID O29 Melting snow and ice washing pollutants and contaminants into surrounding areas - see Risk ID O14 and O17 Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Operational personnel	On site: Risk to the health of operational personnel due to freezing temperatures;	Site only	Severe	Medium term	Category A	<b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  <b>GDA</b> - safety measures embedded within design through the GDA process	Remote	Tolerable	Not significant		
07	Lightning and Electrical Storms	MDS/ AD	Risk of cloud-to-ground lightning striking within site during operation and maintenance activities  <u>Not covered under this item:</u> Fire at the main development site (considered under risk IDs O14). Loss of electricity (considered under risk IDs O18) Loss of telecommunications (considered under risk IDs O21)	On site: Operational personnel	On site: Damage to Sizewell C infrastructure and risk of injury or death of operational personnel.	Site only	Major	Very long or permanent	Category D	<b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  <b>GDA</b> - safety measures embedded within design through the GDA process	Extremely improbable	Tolerable	Not significant		
08	Reduced visibility, e.g. due to volcanic ash, dust, sand or fog	MDS/ AD	Volcanic eruptions overseas can produce ash clouds which may reach the UK and impact on the construction site. Reduced visibility due to weather.  <u>Not covered under this item:</u> Traffic accidents - see risk ID O29	On site: Operational personnel	On site: Deposition of ashes and sand on site.  Reduced visibility limiting operational activities.	Site only	No Serious Damage	Short term	Not a MA&D	The effects are unlikely to result in serious damage as defined for the purposes of this assessment.	N/A	N/A	Not significant		
09	Ground instability hazards, e.g. landslides, ground collapse and sinkholes	MDS/ AD	Unstable ground conditions, landslides, sinkholes following heavy rainfall.  Risks associated with existing ground conditions (e.g. ground instability) get mitigated during the construction of the proposed development. Therefore during operation, no hazard source - receptor pathway remains.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Geology and Land Quality chapters
010	Seismic hazards such as earthquakes or tremors	MDS/ AD	Earthquakes, tremors resulting in physical damage  <u>Not covered under this item:</u> Traffic accidents - see risk ID O29 Damage to equipment/ structures resulting in a nuclear incident (see risk ID O14)	On site: Operational personnel Sizewell C infrastructure  Off-site: General public Properties Agricultural land Sensitive environmental receptors (ecology and heritage sites)	On site: Collapse and subsidence of ground can lead to damage to equipment and risk of injury or death to operational personnel;  Off-site: Damage to property and risk of injury to general public; Physical damage to sensitive environmental receptors.	500m	Catastrophic	very long term or permanent	Category D	Data collated by British Geological Survey and Musson and Sargeant (2007) demonstrate that the seismic hazard of the UK is considered to be very low.  <b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken. Seismic qualification of safety critical structures.  <b>GDA</b> - safety measures embedded within design through the GDA process	Extremely improbable	Tolerable	Not significant		
011	Space weather (e.g. geomagnetic storms, radiation storms and solar flares)	MDS/ AD	Disruption of telecommunications  <u>Not covered under this item:</u> Loss of telecommunication (covered under risk ID O21 and O37) Loss of electricity transmission network (covered under risk IDs O18 and O34) Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Operational personnel Sizewell C infrastructure	On site: Increase in exposure to radiation resulting in illness	Site only	No Serious Damage	Short term	Not a MA&D	In line with Public Health England guidance, a significant space weather event may cause people on the ground to receive an unusual radiation dose, however it would be far too small to produce an observable health effect	N/A	N/A	Not significant	Cabinet Office (2015) Space weather preparedness strategy. Available at: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/449593/BIS-15-457-space-weather-preparedness-strategy.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/449593/BIS-15-457-space-weather-preparedness-strategy.pdf</a> PHE (2014) Space weather and radiation. Available at: <a href="https://www.gov.uk/guidance/space-weather-and-radiation">https://www.gov.uk/guidance/space-weather-and-radiation</a>	
012	Wildfires	MDS/ AD	Wildfire spreading onto the construction site  <u>Not covered under this item:</u> Emergency response activities could result in impacts on sensitive receptors off-site (covered under risk ID O22)	On site: Operation personnel Sizewell C infrastructure  Off site: Properties General public Agricultural land Sensitive environmental receptors (ecological and heritage sites)	On site: Damage to buildings and equipment and risk of injury or death of operational personnel; Indirect effects on human health, property, heritage assets and wildlife due to smoke and ash deposition.  Off-site: Fire spreading from site to a neighbouring site resulting in damage to property and risk of injury or death to the general public; Physical damage to sensitive environmental receptors; Indirect effects on human health, property, heritage assets and wildlife due to smoke and ash deposition.	500m	Catastrophic	very long term or permanent	Category D	<b>NSL</b> - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  <b>GDA</b> - safety measures embedded within design through the GDA process	Extremely remote	TIFALARP	Not significant		
013	Extreme humidity conditions (high and low);	MDS/ AD	Periods of high and low humidity impacting the site  <u>Not covered under this item:</u> Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Operational personnel	On site: Risk of illness for operational personnel.	Site only	Severe	Short Term	Not a MA&D	The effects are unlikely to fall within the scope of the MA&D assessment.	N/A	N/A	Not significant	N/A	
<b>Vulnerability of the operation of the proposed development to major accidents from on-site sources and the potential major accidents resulting from its operation</b>															

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Proposed mitigation	Post-mitigation			Sources of information	
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence		Likelihood	Tolerability	Significance of Risk		
O14	Civil nuclear incident or major accident at Sizewell C	MDS	Nuclear incident Internal Missiles, explosions, Fire and flooding Internal Explosions Internal Fire Internal Flooding Internal Electromagnetic Interference (EMI) / Radiofrequency Interference (RFI) Accidental aircraft crash Malfunctioning of equipment Major leaks and spillages Radiography	On-site: Sizewell C workers  Off-site: General public Agricultural land Sensitive environmental receptors (ecological, heritage sites, groundwater, surface water, marine receptors)	On-site: Risk of injury or death to workers  Off-site: Risk of injury or death to general public Contamination of sensitive environmental receptors	Separate regulatory processes are in place to assess and control the safety of UK EPRM reactors for the operation of the Sizewell C nuclear power station, a detailed risk assessment is therefore not presented as part of the EIA. These hazards would be assessed in detail as part of the Nuclear Site Licensing requirements. For example, as part of Nuclear Site Licensing Regime, NNB GenCo (SZC) will need to ensure the safe operation of the Sizewell C Project and protection of the workers, public and environment. This includes providing the Office for Nuclear Regulation with a robust Safety Case demonstrating that all hazards associated with the development or that may impact the development are well understood and adequate arrangements are in place to reduce these risks to an acceptable level. In addition, it requires appropriate emergency plans and arrangements to be established and agreed with the local authority, for the range of accidents and incidents that could occur. These processes will ensure that risks relating to Nuclear Safety are reduced to TIFALARP.  Furthermore the assessment of risks associated with the use and storage of					GDA - Nuclear safety principles established as part of the Generic Design Assessment process and subsequent detailed safety assessment process.  NSL - Compliance with the requirements of Nuclear Site Licence  REPPPIR - On-site and off-site emergency arrangements in compliance with REPPPIR  COMAH and HSC - Compliance with the requirements of operational environmental permits, COMAH consent and Hazardous Substances Consent  Environmental permits - discharges will be made in compliance with the requirements of the water discharge activity, combustion activity and radioactive substances regulations permits.	TIFALARP, Not significant		Radiological Considerations ES Chapter	
O15	Marine Navigation	MDS	Risk of collision, disruption to activities and vessel grounding	On-site/ off-site Operational personnel and equipment Commercial and fishing vessels Sensitive environmental receptors in the marine environment	On-site/ off-site Loss of life or injury Contamination of the marine environment	An assessment of the marine navigation risks is presented in Volume 2, Chapter 24. The assessment concludes that the all marine navigation risks are considered not significant.					Main development site design - Intake/outfall structures will be marked with buoys or beacons. Offshore pilings for the BLF will be marked with buoys. During AIL deliveries, a temporary safety zone or minimum safe passing distances will apply, thereby restricting access to beachfront recreational and fishing activities in immediate area. A delivery and logistics plan will be developed for AIL deliveries. Cooling water intake/outfall headwork positions will be marked on Admiralty charts. Details of the cooling water intake/outfall headwork positions will be included in fishermen's awareness charts issued by Kingfisher. Notice to Mariners to identify presence of infrastructure	TIFALARP, Not significant		Marine Navigation chapter and Navigational Risk Assessment	
O16	Ground instability and Unexploded Ordnance	MDS/ AD	Collapse of ground during maintenance activities  Disturbance of unidentified UXO within the site  Risks associated with existing ground conditions (e.g. ground instability) get mitigated during the construction of the proposed development. Therefore during operation, no hazard source or receptor pathway remains.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
O17	Major leaks and spillages at two village bypass and Sizewell link road resulting in contamination or release of hazardous substances	AD	Leaks and spillages from road traffic accidents;  Contaminated run-off from site;	On-site: Sensitive environmental receptors on site Operational personnel Sizewell C infrastructure  Off-site: General public Properties Agricultural land Sensitive environmental receptors (ecological, heritage, groundwater and surface water receptors)	On-site: Risk of contact with hazardous substances to workforce and general public  Off-site: Risk of contact with hazardous substances by general public; Contamination of sensitive environmental receptors and agricultural land.	500m	Severe	Long term	Category B	Outline Drainage Strategy - measures embedded within the drainage design for pollution prevention and control.	Remote	Tolerable	Not significant	Outline Drainage Strategy	
O18	Loss or failure of electricity transmission	MDS/ AD	Damage to electricity transmission network from meteorological conditions or due to flooding impacting the site  <u>Not covered under this item:</u> Disruption of utilities can lead to an interruption of communications (covered under risk ID O21 and O37) and services which may increase other MA&D risk Malfunctioning of equipment resulting in an accident (see risk ID O14)	On-site: Operation of Sizewell C  Off-site: Properties served by such utilities	On-site: Failure of equipment reliant on mains power. Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response. Limited ability to implement an effective safety, security and environmental management systems  Off-site: Disruption to properties Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response.	2km	Severe	Medium term	Category A	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPPIR - On-site and off-site emergency arrangements in compliance with REPPPIR	Remote	Tolerable	Not significant		
O19	Loss or failure of gas supply	MDS	Damage to gas supply network from meteorological conditions.	On-site: Operation of Sizewell C	On-site: Failure of back up CHP plant	Site only	No Serious Damage	Short term	Not a MA&D	The loss of gas supply is unlikely to result in serious damage as defined for the purposes of this assessment	N/A	N/A	Not significant		
O20	Loss or failure of water supply	MDS/ AD	Damage to water supply network from meteorological conditions.	On-site: Operation of Sizewell C	On-site: Disruption to operation Limited ability for an emergency response plan to be implemented, if reliant on water supply, and delay to emergency response. Limited ability to implement and effective safety and environmental management systems	Site only	Major	Long term	Category C	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPPIR - On-site and off-site emergency arrangements in compliance with REPPPIR	Remote	TIFALARP	Not significant		
O21	Loss or failure of telecommunications	MDS/ AD	Cyber Attack  Damage to electricity transmission or telecommunications networks from meteorological conditions.	On-site: Operation of Sizewell C	On-site: Interruption of communications and services which may lead to other MA&D risks; Limited ability of an emergency response plan to be implemented and delay to emergency response Limited ability to implement effective safety, security and environmental management systems	Site only	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPPIR - On-site and off-site emergency arrangements in compliance with REPPPIR	Extremely Remote	TIFALARP	Not significant		
O22	Emergency response activities implemented on the main development site impacting on sensitive receptors	MDS/ AD	Water from fire extinguishing draining into environmentally sensitive areas and/ or controlled waters	Off-site: Sensitive environmental receptors (surface water, groundwater, marine); Agricultural land	Off-site: Contamination and pollution of identified sensitive environmental receptors	500m	Severe	Medium term	Category B	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process	Remote	Tolerable	Not significant		
O23	Absent or deficient safety/ environmental management systems (e.g. inadequate planning, resource provision, procedures)	MDS/ AD	Increased risk of MA&D hazards described within this register.	On-site: Operational personnel  Off-site: General public agricultural land Sensitive environmental receptors (ecological and heritage sites, groundwater, surface water and marine receptors)	As described within this register for all hazards relevant to the operation phase.	As determined under REPPPIR	Catastrophic	very long term or permanent	Category D	NSL - Procedures and processes are required and are routinely audited by both internal and external regulators under the Nuclear Site Licence (LC17)	Extremely remote	TIFALARP	Not significant		
O24	Absent or deficient security provision (e.g. inadequate planning, resource provision, procedures)	MDS/ AD	Increased risk of vandalism/ crime/ terrorism	On-site: Operational personnel  Off-site: General public	On-site: Risk of long term injury or death of operational personnel Damage to Sizewell C infrastructure  Off-site: Risk of long term injury or death of members of the public	As determined under REPPPIR	Catastrophic	very long term or permanent	Category D	NSL - Procedures and processes are required and are routinely audited by both internal and external regulators under the Nuclear Site Licence (LC17)	Extremely remote	TIFALARP	Not significant		
<b>Vulnerability of the Proposed Development to major accidents from off-site sources</b>															
O25	Civil nuclear incident at Sizewell B	MDS	Civil nuclear incident at Sizewell B impacting Sizewell C	On-site: Operational personnel and Sizewell C infrastructure	On-site: Risk of injury or death to construction workers and damage to equipment/ site	Separate regulatory processes are in place to assess and control the safety of UK EPRM reactors for the operation of the Sizewell C nuclear power station, including in the event of an incident at the neighbouring Sizewell B site. A detailed risk assessment is therefore not presented as part of the EIA. These hazards would be assessed in detail as part of the Nuclear Site Licensing requirements. For example, as part of Nuclear Site Licensing Regime, NNB GenCo (SZC) will need to ensure the safe operation of the Sizewell C Project and protection of the workers, public and environment. This includes providing the Office for Nuclear Regulation with a robust Safety Case demonstrating that all hazards associated with the development or that may impact the development are well understood and adequate arrangements are in place to reduce these risks to an acceptable level. In addition, it requires appropriate emergency plans and arrangements to be established and agreed with the local authority, for the range of accidents and incidents that could occur. These processes will ensure that risks relating to Nuclear Safety are reduced to TIFALARP.				GDA - Nuclear safety principles established as part of the Generic Design Assessment process  NSL - Compliance with the requirements of Nuclear Site Licence  REPPPIR - On-site and off-site emergency arrangements in compliance with REPPPIR	Extremely remote	TIFALARP	Not significant		

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation				Proposed mitigation	Post-mitigation			Sources of information
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration	Category of Consequence		Likelihood	Tolerability	Significance of Risk	
026	Fire at a neighbouring site	MDS/ AD	Fire at a neighbouring site impacting on the operation of the proposed development  <u>Not covered under this item:</u> Potential to result in fire on site (covered under risk ID O14) Impeded access to site, limiting the ability to implement emergency response activities (covered under risk ID O45) Malfunctioning of equipment resulting in an accident (see risk ID O14).	On site: Operational personnel	On site: Indirect effects on human health and equipment due to smoke and ash deposition.	Site only	Severe	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment.	N/A	N/A	N/A	
027	Explosion and structural collapse at neighbouring sites	MDS/ AD	Explosion and structural collapse at a neighbouring site impacting on the operation of the proposed development  <u>Not covered under this item:</u> Impeded access to site, limiting the ability to implement emergency response activities (covered under risk ID O45) Malfunctioning of equipment resulting in an accident (see risk ID O14).	On site: Operational personnel	On site: Falling debris or collapse of infrastructure within the neighbouring area resulting in damage to equipment and risk of injury of personnel;	Site only	Major	Long term	Category C	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.	Extremely remote	Tolerable	Not significant	
028	Contamination or release of hazardous substances by off-site sources;	MDS/ AD	Contamination or release of hazardous substances from off-site sources impacting on the operation of the proposed development	On site: Operational personnel	On site: Risk of contact with hazardous substances to operational personnel	Site only	No Serious Damage	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment.	N/A	N/A	N/A	
029	Impacts on road safety caused by the operational traffic of the proposed development	MDS/ AD	Increase in road traffic and changes to junction layouts  Traffic accident on the wider network involving the carriage of high consequence dangerous goods associated with Sizewell C	On-site/ Off-site Motorised and non-motorised users of the road network	On site/ Off-site Death or injury of road users or operational personnel Damage to properties; Risk of contact with hazardous substances by general public; Contamination of sensitive environmental receptors and agricultural land.	Area modelled within the Transport Assessment	Major	very long term or permanent	Category D	Highways have been designed in accordance with the Design Manual for Roads and Bridges and other relevant design standards. Compliance with legislative requirements for the carriage of dangerous goods.  See risk ID O17 for pollution prevention.	Extremely remote	TIFALARP	Not significant	Transport Assessment
030	Vandalism/crime/terrorism leading to increased risk to the safety of members of public and site workers	MDS/ AD	Criminal damage/ vandalism; Theft; Terrorist acts; Unauthorised vehicles accessing the construction site; Direct Vehicle Impact; Ionising radiation risk radiation exposure from stolen goods.	On site: Operational personnel Off-site: General public	On site: Death or risk of injury to operational personnel Damage to Sizewell C infrastructure  Off-site: Death or risk of injury to members of the general public	As determined under REPPiR	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, security arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - security measures embedded within design through the GDA process	Extremely remote	TIFALARP	Not significant	
031	Civil unrest or protest	MDS/ AD	Members of the public protesting;  Operational staff industrial action  <u>Not covered under this item:</u> Criminal damage or vandalism - see risk ID O30.	On site: Operational personnel and Sizewell C infrastructure	On site: Disruption to operation and potential damage to Sizewell C infrastructure.	Site only	No Serious Damage	Short term	Not a MA&D	No effects resulting in serious damage as defined for the purposes of this assessment are considered likely to occur as a result of civil unrest or protest.	N/A	N/A	Not significant	
032	Outbreak of disease (emerging infectious disease or pandemic influenza)	MDS/ AD	Disease outbreak impacting the movement of operational workers and materials.	On site: Operational personnel	On site: Death or risk of injury to operational personnel.	Site only	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, security arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.	Extremely remote	TIFALARP	Not significant	
033	Animal health – notifiable disease;	MDS/ AD	Disease outbreak impacting the movement of operational workers and materials.  <u>Not covered under this item:</u> Impacts on limiting emergency response activities are considered under risk ID O45	On site: Operational personnel	On site: Restricted access to site impacting on Sizewell C operations which may lead to other hazards	Area modelled within the Transport Assessment	Major	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.	Extremely remote	TIFALARP	Not significant	
034	Loss or failure of electricity transmission	MDS/ AD	Power shortage in the wider electricity transmission network.  Damage to electricity transmission network by other development or meteorological conditions impacting on the service provision for proposed development.  <u>Not covered within this item:</u> Disruption of utilities can lead to an interruption of communications (covered under risk ID O21 and O37) and services which may increase other MA&D risks; Malfunctioning of equipment resulting in an accident (see risk ID O14)	On site: Existing infrastructure Operation of Sizewell C	On site: Failure of equipment reliant on mains power. Limited ability for an emergency response plan to be implemented, if reliant on mains power, and delay to emergency response. Limited ability to implement an effective safety, security and environmental management systems	Site only	Severe	Medium term	Category A	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPiR - On-site and off-site emergency arrangements in compliance with REPPiR	Remote	Tolerable	Not significant	
035	Loss or failure of gas supply	MDS	Shortage in the wider gas supply network. Damage to gas supply network by other development or natural disaster.	On site: Operation of Sizewell C	On-site: Failure of back up CHP plant	Site only	No Serious Damage	Short term	Not a MA&D	The loss of gas supply is unlikely to result in serious damage as defined for the purposes of this assessment	N/A	N/A	Not significant	
036	Loss or failure of water supply	MDS/ AD	Shortage in the wider water supply network.  Damage to water supply network by other development or natural disaster.	On site: Operation of Sizewell C	On site: Disruption to operation Limited ability for an emergency response plan to be implemented, if reliant on water supply, and delay to emergency response. Limited ability to implement an effective safety and environmental management systems	Site only	Major	Long term	Category C	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPiR - On-site and off-site emergency arrangements in compliance with REPPiR	Remote	TIFALARP	Not significant	
037	Loss or failure of telecommunications	MDS/ AD	Power shortage in the wider electricity transmission network.  Damage to electricity transmission or telecommunications networks by other development or meteorological conditions.	On site: Operation of Sizewell C	On site: Interruption of communications and services which may lead to other MA&D risks; Limited ability of an emergency response plan to be implemented and delay to emergency response Limited ability to implement effective safety, security and environmental management systems	Site only	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  GDA - safety measures embedded within design through the GDA process  REPPiR - On-site and off-site emergency arrangements in compliance with REPPiR	Extremely Remote	TIFALARP	Not significant	
038	Food supply contamination	MDS/ AD	Pollution incident Large radiation releases from nuclear matter	On site: Operational personnel	On site: Death or risk of injury to construction personnel.	Site only	Severe	Long term	Category B	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  REPPiR - On-site and off-site emergency arrangements in compliance with REPPiR	Extremely remote	Tolerable	Not significant	
039	Local fuel supply failure	MDS/ AD	Risk of disruption to operational activities associated with travel to site and movement of materials	On site: Operational personnel and Sizewell C infrastructure	On site: Disruption to operation; May increase another MA&D risks; Could limit the ability to implement and effective safety, security and environmental management systems <u>Could limit the ability of an emergency response plan to be implemented</u>	Site only	Severe	Medium term	Category A	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  REPPiR - On-site and off-site emergency arrangements in compliance with REPPiR	Remote	Tolerable	Not significant	
040	Poor air quality	MDS/ AD	Off-site event resulting in the release of particulate matter and hazardous gases into the surrounding environment.  Hackers	On site: Operational personnel	On site: Risk of harm to health to operational personnel	Site only	Severe	Short term	Not a MA&D	Effects are not likely to fall within the scope of the MA&D assessment.	N/A	N/A	Not significant	
041	Cyber-attack and digital data security	MDS/ AD	Security breach of at the operational site  <u>Not covered under this item:</u> Could result in the failure or loss of telecommunications (covered under risk IDs O21 and O37). Unauthorised access to the site and risk of vandalism/ crime/ terrorism (covered under risk ID O30).	On site: Operational personnel and Sizewell C infrastructure	On site: Loss of sensitive information which can increase the likelihood of crime/ terrorism/ vandalism;  Could limit the ability to implement and effective safety, security and environmental management systems	Site only	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, information security arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.	Extremely remote	TIFALARP	Not significant	
042	Failure of financial system	MDS/AD	Failure of the financial system resulting in a reduced public services  <u>Not covered under this item:</u> Impacts on the ability of an emergency response plan to be implemented (Covered under Risk ID O45)	On site: Operational personnel and Sizewell C infrastructure	On site: Limited ability of an emergency response plan to be implemented and delay to emergency response Increased response time or lack of available resources may lead to other MA&D risks	Site only	Catastrophic	Very long term or Permanent	Category D		Extremely improbable	Tolerable	Not significant	
043	Radiation releases from foreign nuclear sites	MDS/ AD	Exposure of operational personnel to foreign nuclear matter	On site: Operational personnel	On site: Risk of harm to the health of construction personnel	Site only	Severe	Long term	Category B	Effects are not likely to fall within the scope of the MA&D assessment. Sizewell Health will provide first aid on site.	Extremely improbable	Tolerable	Not significant	
044	Influx of British Nationals	MDS/ AD	Displacement of operation personnel in local accommodation resulting in disruption to operation	On site: Operation of Sizewell C	No pathway to create a MA&D	Site only	No Serious Damage	Medium term	Not a MA&D	N/A	N/A	N/A	Not significant	

SIZEWELL C PROJECT- ENVIRONMENTAL STATEMENT  
 NOT PROTECTIVELY MARKED

ID	Hazard	Site	Hazard source and/ or pathway	Receptor	Reasonably foreseeable worst case consequence if event occurred (i.e. potential significant effect)	Pre-mitigation			Proposed mitigation	Post-mitigation			Sources of information	
						Maximum study area of potential impact	Worst Case Severity of Harm	Duration		Category of Consequence	Likelihood	Tolerability		Significance of Risk
<i>Operation of the proposed development impacting on the vulnerability of a receptor to a MA&amp;D hazard</i>														
O45	Limiting the ability of an emergency response plan to be implemented	MDS/ AD	Access for emergency services to site being restricted or disruption to public services Impacts on the ability of an emergency response plan to be implemented Delivery of Abnormal Indivisible Loads (AIL) restricting the response of emergency services	On site: Sizewell C workers Off-site: General public agricultural land sensitive environmental receptors	On-site/ Off-site insufficient access to emergency services, leading to a slow response time and increased number of deaths/ injuries or spread of contamination	All routes	Catastrophic	Very long term or Permanent	Category D	NSL - in compliance with the conditions of the NSL, emergency arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.  REPPIR - On-site and off-site emergency arrangements in compliance with REPPIR	Extremely remote	TIFALARP	Not significant	