

Land to the West of Hatfield

Environmental Statement Addendum – Risk of Major Accidents and/or Disasters

Arlington Business Parks GP Limited

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CONTENTS

1.	Introduction	1
2.	Risk of Major Accidents/Disasters	2
	Context	
	What is a Civil Emergency?	
	What is a Risk of Civil Emergency?	
3.	Conclusion	- 22

1. Introduction

This Addendum has been prepared in respect of the current outline planning application (Council reference 6/2018/2768/OUTLINE) which seeks consent for:

"Large-scale mixed-use development including 1,100 new homes and supporting infrastructure including a primary school, local centre and open space."

As the Planning Department is aware, there was not an opportunity to scope the contents of the Environment Statement (ES) in advance of the submission of the application. In this regard and is often the case for an application of this type, the subject of the risk of any major accident and/or disaster could not be addressed at that stage and as such was considered to be absent from the submitted ES in TEP's Review dated March 2019 undertaken on behalf of the Council. Consequently, this addendum addresses TEP's comments on page 44 of that Review document.

For completeness, the technical disciplines that have been included as part of the ES – original or updated – and/or addendum notes and therefore less focussed upon in this specific addendum are as follows:

- Air Quality
- Ground Conditions and Contamination
- Noise and Vibration
- Socio-Economics
- Landscape and Visual Impact Assessment
- Transport
- Water Resources, Flood Risk and Drainage
- Ecology
- Human Health Technical Note.

2. RISK OF MAJOR ACCIDENTS/DISASTERS

CONTEXT

In the absence of recognised guidance on this subject in the context of EIA, a range of sources providing guidance related to the topic have been reviewed including:

- Cabinet Office National Risk Register of Civil Emergencies 2017 Edition¹;
- UK Government Emergency Response & Recovery Guidance (October 2013)²;
 and
- International Federation of Red Cross & Red Crescent Societies Disaster and Crisis Management Guidance³.

A disaster can be defined as "a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins"³.

An accident can be defined as "an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury"⁴.

The EIA Regulations 2017 state that the following should be provided within the ES in relation to this topic:

"a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned."

The National Risk Register of Civil Emergencies (NRR)¹ is the unclassified version of the National Risk Assessment (NRA), a classified assessment of the risks of civil emergencies facing the UK over the next five years. The NRR provides an overview of the main types of civil emergencies that could affect the UK. It also sets out the definition of an emergency as it appears in the Civil Contingencies Act 2004, and shows, within the risk matrices, how these emergencies compare in terms of likelihood, and the scale and extent of the consequences.

WHAT IS A CIVIL EMERGENCY?

The NRR states that the Civil Contingencies Act 2004 (the Act) describes an emergency as:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/644968/UK_National_Risk_Register_2017_ndf

² Cabinet Office, 2013. Emergency Response and Recovery. https://www.gov.uk/guidance/emergency-response-and-recovery

³ The International Federation of Red Cross and Red Crescent Societies, 2017. Disaster and Crisis Management. http://www.ifrc.org/en/what-we-do/disaster-management/

^{4 &}lt;a href="https://en.oxforddictionaries.com/definition/accident">https://en.oxforddictionaries.com/definition/accident

- "an event or situation which threatens serious damage to human welfare in a place in the United Kingdom
- an event or situation which threatens serious damage to the environment of a place in the United Kingdom
- war, or terrorism, which threatens serious damage to the security of the United Kingdom."

WHAT IS A RISK OF CIVIL EMERGENCY?

Every two years the UK Government produces a classified assessment of the risks of civil emergencies facing people in the UK – the NRA. In both the NRA and NRR, how serious the risk of an emergency is depends both on the likelihood of it happening over the next five years and on the consequences or impacts that people will feel if it does. When identifying risks for the NRA and NRR, a 'reasonable worst case' is chosen which represents a challenging manifestation of the scenario after highly implausible scenarios are excluded.

The following two matrices shown in **Figure 1** and **Figure 2** represent the key risks of civil emergencies in the NRA, as identified in the 2015 edition for the following five years. As the proposed development's life span is significantly greater than five years, a comprehensive list of potential major disasters and accidents has been reviewed in the context of the potential for climate change to exacerbate their likelihood and severity, their inclusion (or exclusion) from the NRR, their relevance to the proposed development, and whether mitigation is already in place within appropriate legislation or national procedures.

In such instances, those major disasters and/or accidents are 'scoped out' of further assessment. The major disasters that can be scoped out are provided in Table 1, alongside explanatory reasoning.

Malicious Attack Risks

Low Medium-Low Medium Medium-High High

Relative plausibility of occurring in the next five years

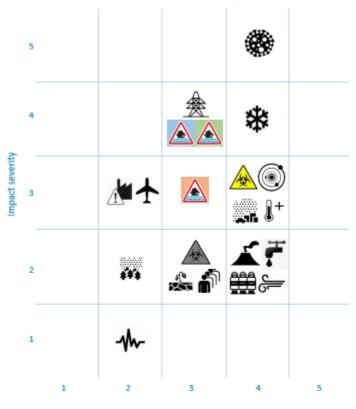
Figure 1



Source: Cabinet Office, 2017: NRR

Figure 2

Hazards, Diseases, Accidents and Societal Risks



Likelihood of occurring in the next five years



Source: Cabinet Office, 2017: NRR

Table 1

Major Disasters and Accidents to be 'Scoped Out' of Further Assessment

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Severe	<u>Tropical storms, hurricanes,</u>	According to the NRR, storms and gales are
Weather:	typhoons and cyclones are a large-	anticipated to have between a 1 in 20 and 1 in
Storms	scale closed circulation system in	2 likelihood of occurring in the next five years.
	the atmosphere which combines	The most significant storms in recent decades
	low pressure and strong winds that	were those of 16 October 1987 and 25 January
	rotate counter-clockwise in the	1990; the first of which brought down an
	northern hemisphere and	estimated 15 million trees in the south-east of
	clockwise in the southern	England. By contrast, the 1990 storm was
	hemisphere. Potential to cause	more extensive and had higher peak wind
	extensive damage.	speeds. The net effect was a much higher
		death toll but less damage to trees and
		property.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
	A winter storm emerges from an extra-tropical cyclone, a synoptic scale low pressure system that occurs in the middle latitudes of the Earth and is connected to fronts and horizontal gradients in temperature and dew point. A winter storm is associated with high wind speeds, gusts, thunderstorms, rain and often storm surges. A severe storm or thunderstorm is the result of convection and condensation in the lower atmosphere and the accompanying formation of a cumulonimbus cloud. A severe storm usually comes along with high winds, heavy precipitation (rain, sleet, hail), thunder and lightning. A hail storm is a type of storm that is characterised by hail as the dominant part of its precipitation. The size of the hailstones can vary between pea size (6mm) and softball size (112mm) and therefore cause considerable damage. Lightning is an atmospheric discharge of electricity, which typically occurs during thunderstorms, and sometimes during volcanic eruptions or dust storms.	More recently, on 28 October 2013, a severe storm, which the media named the 'St Jude's Day' storm, travelled across southern England. The timing of the storm meant that trees were still in full leaf and vulnerable to strong winds. The path of the storm was also significant – strong gusts of 70 to 80 mph are rare in southern England, making these areas more vulnerable to the impacts of severe weather. Falling trees were the main cause of disruption, contributing to widespread transport disruption and power outages, with more than 660,000 homes left without power. Four people also died as a result of falling trees. Under the proposed development, new site users would be brought to the site that could potentially be affected by any storm occurring in the area.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
	Tornadoes are rotating columns of air (vortex) that emerge out of the base of a cumulonimbus cloud and have contact to the Earth's surface. Typically, a tornado forms during a severe convective storm in socalled supercells and is often visible as a funnel-shaped cloud. Tornadoes are usually short-lived, lasting on average no more than 10 minutes. They can generate wind speeds above 400 km/h and are considered the most destructive weather phenomenon. The intensity of tornadoes is assessed using the Enhanced Fujita Scale. Other names for this weather phenomenon are twister, waterspout. Local windstorm refers to strong winds caused by regional atmospheric phenomena which are typical for a certain area. These can be katabatic winds, foehn winds etc. A sandstorm/dust storm typically occurs in arid or semi-arid regions if high wind speeds cause the transportation of small particles like sand or fine clastic sediment by saltation and/or suspension.	The proposed development will be required to meet building regulations, and will be assessed in the context of different wind strengths and directions to ensure that the proposed buildings will be capable of withstanding storms and that the surrounding pedestrian environment meets both pedestrian safety and comfort criteria. The Met Office also operates a national severe weather warning service to inform the public and emergency responders of forthcoming severe or hazardous weather which would have the potential to cause loss of life or widespread disruption. The 999 emergency response procedure is also in place to allow any site users whose health may be affected by such an event (e.g. through trips and falls) to request an ambulance or other emergency assistance. On this basis, it is considered that suitable mitigation is already in place in regards to the safety of future site users, such that further assessment of potential risks would be unnecessary. In addition, the proposed buildings on site will not be tall buildings (typically 2-3 storeys with some 4) and therefore strong winds related to storms will not be taken into account within the scope of the ES. It is not necessary or logical to consider weather events not familiar to the UK e.g. sandstorms, which are typical to arid or semi-arid areas.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
	A <u>snowstorm</u> refers to a storm, usually in the winter season, where large amounts of snow fall. If it's a severe snowstorm that meets certain criteria, such as strong winds, blowing snow and low or falling temperatures, it's called blizzard.	
Epidemics, pandemics and emerging infectious disease	An unusual increase in the number of cases of an infectious disease which already exists in a certain region or population. It can also refer to the appearance of a significant number of cases of an infectious disease in a region or population that is usually free from that disease. Potential to cause widespread loss of life.	The uses included under the proposed development would result in new residents and other site users visiting the site who could contribute to the spread of an infectious disease, should such a disease be brought onto site. However, the hospital and healthcare facilities in the local area will be familiar with addressing the challenges around managing potential infectious disease outbreaks. Such an event is also governed by NHS policy regarding the prevention of the spread of infectious diseases (as provided with the NHS England Emergency Preparedness, Resilience and Response Framework ⁵). On this basis, it is considered that suitable mitigation is already in place, such that further assessment of potential risks within the EIA would be a reiteration and hence unnecessary. For this reason, this disaster/accident type is proposed to be scoped out of further consideration.

⁵ https://www.england.nhs.uk/wp-content/uploads/2015/11/eprr-framework.pdf

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Animal disease	Animal diseases threaten the UK for two main reasons: firstly, because of the potential for some diseases to spread from animals to humans and cause illness or fatalities; and secondly, because they affect the animals on which we rely for food, trade, or to maintain the ecosystem. Diseases which spread from animals to humans are called 'zoonotic diseases'.	It is considered that the proposed development is not of a nature such that it would result in a significant likely risk of animal disease affecting humans, animals, crops and/or materials. This disaster/accident type is therefore not considered relevant to the scheme and is proposed to be scoped out of further consideration as a result.
Earthquakes	A tremor of the surface of the Earth, sometimes severe and devastating, which results from shock waves generated by the movement of rock masses deep within the Earth, particularly near boundaries of tectonic plates. Potential to damage property and cause loss of life.	The UK is not generally associated with earthquakes; however, between 20 and 30 earthquakes are felt by people each year, and several hundred quakes of a lower magnitude are recorded by seismometers. Most of these are very small and cause no damage ⁶ . It is considered that the likelihood of an earthquake with a magnitude sufficient to cause damage to buildings and/or loss of life occurring and impacting the site is extremely low. On this basis, this disaster/accident type is proposed to be scoped out of further consideration.
Mass Movement	The downward movement of soil, rock, debris, snow and/or ice controlled by gravity. This includes landslides, rockfalls, subsidence, dry or wet mass movements and avalanches. Potential to damage property and cause loss of life.	The topography of the site is not considered to be sufficiently steep such that a major mass movement disaster could arise. This disaster/accident type is therefore proposed to be scoped out of further consideration.

 $^{^{6}\ \}underline{\text{http://www.bgs.ac.uk/discoveringGeology/hazards/earthquakes/UK.html}}$

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Tsunamis	A series of waves caused by a rapid displacement of a body of water (e.g. ocean, lake). The waves are characterised by a very long wavelength and their amplitude is much smaller offshore. The impact in coastal areas can be very destructive as the waves advance inland and can extend over thousands of kilometres.	Under the proposals, new residents and site users would be brought to the site that could potentially be affected by any disaster/accident occurring at the site. Given the in-land location of the site and the fact that the NRR does not list tsunamis as a recognised risk, this disaster/accident type is proposed to be scoped out of further consideration.
Volcanic Eruptions	The occurrence of a violent discharge of volcanic material from a volcano or volcanic vent. Potential to damage property and cause loss of life.	Should explosive volcanic eruption styles, emitting mainly ash, coincide with unfavourable weather conditions, they can result in significant ash reaching the UK. In April 2010, the relatively small magnitude explosive eruption of the Eyjafjallajökull volcano in Iceland coincided with northwesterly winds and high pressure, resulting in airspace closures over much of the UK and Northern Europe for six days. Effusive volcanic eruption styles emitting volcanic gases can potentially cause visible pollution across the UK and Northern Europe, and historically, such events have coincided with mass crop failure and thousands of excess deaths.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
		Effusive volcanic eruptions have between a 1 in 200 to 1 in 20 likelihood of occurring in the next five years with the likelihood significantly higher for explosive volcanic eruptions ranging from 1 in 20 to 1 in 2 of occurring over the next five years. The implications of this are: disruption to aviation; public health and environmental impacts; and economic impacts. However, such impacts are not specific to the nature of the proposals or the location of the application site. On this basis, this disaster/accident type is proposed to be scoped out of further consideration.
Drought	A period of dryness especially when prolonged; specifically, one that causes extensive damage to crops or prevents their successful growth.	Drought is currently considered to have a 1 in 200 to 1 in 20 likelihood of occurring over the next five years in the UK. Climate change may increase the risk of droughts but not necessarily lead to a more frequent use of restrictions on water. Planning for periodic restrictions on non-essential water use is an integral part of water companies resource management. Over the past 40 years, England has experienced five long-duration drought events and two short-duration events. During the 2010–12 drought, despite some of parts of south-east and eastern England recording their lowest 18-month rainfall in at least 100 years, its impact extended only as far as the inconvenience for 20 million domestic customers of a temporary hosepipe ban. The environment and agriculture sectors were also temporarily affected by this drought.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
		Given the uses proposed, particularly the residential elements, the proposed development will result in a long-term demand for water. It is intended that the designs will respond to these requirements with a considered strategy to reduce water consumption, which would also include a consideration of climate change. However, it is not considered that the potential effects of drought would be of particular detriment to the proposed development, nor that the proposed development would result in an increase in the risk of drought conditions at the site or in the surrounding area, or in a substantial increased demand for potable water that could not be managed through the design development. This disaster/accident type will therefore not be considered within the EIA but it could be responded to within a Sustainability Strategy, as appropriate.
Extreme Temperature (Low Temperature, Heavy Snow, Heatwaves)	A heat wave is a prolonged period of excessively hot and sometimes also humid weather relative to normal climate patterns of a certain region. A cold wave can be both a prolonged period of excessively cold weather and the sudden invasion of very cold air over a large area. Along with frost it can cause damage to agriculture, infrastructure, property.	Low Temperatures and Heavy Snow There have been a number of recorded occasions of snow covering large areas of the country for over a week. The winter of 2009–10 saw a prolonged spell of cold weather that lasted for approximately a month. During this time, snowfalls of up to 40cm were recorded in parts of north-west England and south and east Scotland. Many other areas experienced snow cover of 10cm or more throughout this period. In Northern Ireland in February 2001, strong north-easterly winds and heavy snow caused travel disruption for up to five days and brought down power lines. Heatwaves

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
		The Met Office uses a range of threshold temperatures, varying by region, to define a heatwave. High temperatures were widespread during August 1990, reaching a record 37.1°C in one part of England. In August 2003, the UK experienced heatwave conditions lasting 10 days and resulting in 2,000 excess deaths. During this heatwave, a record maximum temperature of 38.5°C was recorded at Faversham in Kent. In July 2006, similar conditions occurred, breaking records and resulting in the warmest month on record in the UK. According to the NRR, the likelihood of either heatwaves or extreme low temperatures with heavy snow occurring over the next five years is considered to range from 1 in 20 to 1 in 2. The consequences of such an event may include: • an increased number of admissions to hospital and consultations with GPs, and additional demands placed on the emergency services; • fatalities, particularly among the vulnerable and elderly; for example, in the case of heatwaves, an estimated 75 extra deaths per week for each degree of increase in temperature; • disruption to travel and logistics, due to deterioration of the road, runway surfaces and vehicle breakdowns; • loss of/interruption to supply of essential goods and services and disruption to transport and communications networks; and

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
		depending on the nature of the severe weather, economic impact and environmental damage. The proposed development will result in new site users being brought to the site that could potentially be affected by prolonged periods of excessive hot or cold weather should they arise. The proposed development will be built to the latest Building Regulations requirements and with consideration of potential temperature highs and lows as part of their typical operation to ensure appropriate thermal comfort. This will include an allowance for climate change. It is therefore considered that an appropriate climate can be maintained within the proposed buildings. Cold Weather Alerts and a Heat Health Watch Service are currently provided by Public Health England. The purpose of these services is to provide health advice for the public and healthcare workers in England, according to levels of heat forecast/measured by the Met Office. The 999 emergency response procedure is also in place to allow any site users whose health may be affected by such an event to request an ambulance or other emergency assistance. On this basis, it is considered that suitable mitigation is already in place, such that further assessment of potential risks would be unnecessary. This type of major disaster will therefore not be included within the EIA.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Wildfires	Wildfire describes an uncontrolled burning fire that occurs in a wild area, which can cause loss of life and damage to forestry, agriculture, infrastructure and buildings.	Given the site's land does not contain dense vegetation, this disaster/accident type is not considered relevant to this scheme and is proposed to be scoped out of further consideration as a result.
Tidal Waves	A tidal wave/storm surge is the rise of the water level in the sea, an estuary or lake as result of strong wind driving the seawater towards the coast. This so-called wind setup is superimposed on the normal astronomical tide. The mean high water level can be exceeded by five and more metres. The areas threatened by storm surges are coastal lowlands.	Under the proposals, new residents and site users would be brought to the site that could potentially be affected by any disaster/accident occurring in the vicinity. Given that the site is approximately 400m from the coastline it is considered unlikely that a tidal wave/storm surge hitting the nearest coastline would result in significant damage to property or loss of life at the application site. On this basis, this disaster/accident type is proposed to be scoped out of further consideration.
Industrial Accidents	Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Accident Release Occurring during the production, transportation or handling of hazardous chemical substances Explosions	Whilst the proposed development will have a number of construction processes on site during the construction phase, these will be covered by an appropriate Construction and Environmental Management Plan to prevent accidental release of contaminants or other pollution. The NRR states that the current legislation that seeks to prevent and mitigate the effects of major accidents involving dangerous substances is the Control of Major Accident Hazard Regulations 1999 (COMAH) under which major hazard sites are regulated and inspected in accordance with the regulations. The proposed development would not fall under the requirements of the COMAH Regulations.

MAJOR DISASTER / ACCIDENT		DEAGG: WA
ТҮРЕ	DEFINITION & CHARACTERISTICS Disasters will only be classified as	REASONING Given that the proposals do not include the
	Disasters will only be classified as explosions when the explosions is the actual disaster. If the explosion is the cause of another disaster, the event will be classified as the resulting disaster. Chemical Explosion Violent destruction caused by explosion of combustible material, nearly always of chemical origin. Nuclear Explosion/Radiation Accidental release of radiation occurring in civil facilities, exceeding the internationally established safety levels. Mine Explosion Accidents which occur when natural gas or coal dust reacts with the air. Pollution Degradation of one or more aspects in the environment by noxious industrial, chemical or biological wastes, from debris or	Given that the proposals do not include the provision of any industrial land uses and the surrounding area is dominated with residential and commercial properties, risks associated with industrial accidents are not considered relevant to the proposals. Therefore, this disaster/accident type is not considered relevant to this scheme and is proposed to be scoped out of further consideration as a result.
	man-made products and from mismanagement of natural and environmental resources.	

MAJOR DISASTER /		
ACCIDENT		
TYPE	DEFINITION & CHARACTERISTICS	REASONING
	Acid Rain	
	A washout of an excessive	
	concentration of acidic compounds	
	in the atmosphere, resulting from	
	chemical pollutants such as sulphur	
	and nitrogen compounds. When	
	deposited these increase the	
	acidity of the soil and water	
	causing agricultural and ecological	
	damage.	
	<u>Chemical Pollution</u>	
	A sudden pollution of water or air	
	near industrial areas, leading to	
	internal body disorders with	
	permanent damage of the skin.	
	Atmosphere Pollution	
	Contamination of the atmosphere	
	by large quantities of gases, solids	
	and radiation produced by the	
	burning of natural and artificial	
	fuels, chemicals and other	
	industrial processes and nuclear	
	explosions.	

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Electricity, Gas, Water Supply or Sewerage System Failure	Failure of electricity, gas, water supply or sewerage system infrastructure can arise for a variety of reasons. Power failures can result from faults at power stations, damage to electric transmission lines, substations or other parts of the distribution system, a short circuit, or the overloading of electricity mains. Gas, water supply and sewerage system failures generally occur due to damage to key elements of the systems infrastructure, such as water mains, sewers and storage facilities.	With regard to electricity, gas, water supply or sewerage system failures, the utilities design for the proposed development will be considered and progressed. In consultation with all the respective utilities providers, existing and future capacity/demand will be considered, and appropriate measures implemented to ensure that the proposed development is sufficiently serviced. In addition to this, a consideration of resilience to potential systems failure will also be incorporated as appropriate. The utilities providers already have in place procedures to allow users to report a failure in supply of a particular utility so that repairs and continuation of supply can be enabled. For this reason, this disaster/accident type is proposed to be scoped out of further consideration.
Urban Fire	Urban fires describe an uncontrolled burning fire that occurs within an urban area. These fires can cause damage to buildings and vegetation and cause loss of life.	Under the proposals, new residents and site users would be brought to the site that could be affected by an urban fire should it occur. Although, the proposed development will be designed in accordance with the latest Building Regulations requirements, as well as the requirements of relevant fire safety guidance. In addition, procedures are already in place to allow site users to report a fire to the emergency services, who will attend site and act to resolve the incident. As such, it is considered that suitable mitigation is already in place for these types of accident/disaster, such that further assessment of potential risks would be unnecessary and on this basis, they have also been scoped out of the EIA.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Terrorist Incidents	The calculated use of violence (or the threat of violence) against civilians in order to attain goals that are political or religious or ideological in nature. Loss of life and/or destruction of property/infrastructure can result.	Under the proposals, new residents and site users would be brought to the site that could be affected by a terrorist incident should one occur at the site. Although, neither the location of the site, nor the uses proposed would suggest that the development would be subject to a heightened risk of terrorist attack or public disorder. Procedures are already in place to allow site users to report such an event to the police/emergency services, who would attend site and act to resolve the incident. On this basis, it is considered that suitable mitigation is already in place, such that further assessment of potential risks within the EIA would be a reiteration and hence unnecessary and inappropriate given the terminology used within the Directive. For this reason, this disaster/accident type is proposed to be scoped out of further consideration.
Famine/Food Insecurity	Food-security emergencies are complex disasters with multiple root causes. Severe drought and/or conflict can produce an acute food emergency, whereas chronic food insecurity is often a reflection of poverty, a worsening debt crisis, the economic effects at household level of the HIV/AIDS pandemic or mismanagement or abuse of water resources. In such cases, food can be both unavailable (insufficient production) and inaccessible (distribution problems, beyond consumers' purchasing power).	The new site users brought to the site under the proposals would lead to a long-term food demand. However, the number of new site users and the site area would be negligible in the context of the surrounding area and wider region. On this basis, it is considered that famine/food insecurity can be scoped out of further consideration.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Displaced Populations	Displaced populations leave their homes in groups, usually due to a sudden impact, such as an earthquake or a flood, threat or conflict. There is usually an intention to return home. Migration and displacement are interlinked, but must be distinguished. Displaced populations – either across borders such as refugee influxes, or within a country because of disasters or armed conflict – usually need relief operations combined with efforts aiming at collective and lasting solutions. Migration on the other hand usually involves more individual social assistance, legal protection and personal support. The responsibility for refugees and all displaced populations primarily rests with the host government. It is the mandate of the United Nations High Commissioner for Refugees to protect and assist refugees. The World Food Programme has a mandate to provide emergency food relief, although it may require assistance with supplies and distribution.	Given the nature of the proposals and the location of the site, this disaster/accident type is not considered relevant to this scheme and is proposed to be scoped out of further consideration as a result.

MAJOR DISASTER / ACCIDENT TYPE	DEFINITION & CHARACTERISTICS	REASONING
Complex Emergencies	Some disasters can result from several different hazards or, more often, to a complex combination of both natural and man-made causes and different causes of vulnerability. Food insecurity, epidemics, conflicts and displaced populations are examples. Complex emergencies are typically characterised by: • extensive violence and loss of life; • displacements of populations; • widespread damage to societies and economies; • the need for large-scale, multi-faceted humanitarian assistance; • the hindrance or prevention of humanitarian assistance by political and military constraints; and • significant security risks for humanitarian relief workers in some areas.	Given the nature of the proposals and the location of the site, this disaster/accident type is not considered relevant to this scheme and is proposed to be scoped out of further consideration as a result.

3. CONCLUSION

This addendum has considered the risk of major accidents and/or disasters where those technical disciplines are not contained elsewhere within the ES and/or subsequent addendums *etc*. That is not to state that those covered in chapters are likely to result in such a risk but rather that the technical matter has been considered further within the relative and reasonable context. It is concluded that there is no such risk of any such major accident and/or disaster that will be as a result of these proposals following all other applicable regulations.

Triptych PD

December 2020