

Medworth Energy from Waste Combined Heat and Power Facility



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Environmental Statement Chapter 17: Major Accidents and Disasters

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17. Major Accidents & Disasters

17.1 Introduction

- 17.1.1 This chapter presents a description of the potential major accidents and disasters (MA&D) and the embedded measures which ensure the effects arising from the Proposed Development will not be significant.
- 17.1.2 The chapter should be read in conjunction with the description of the development provided in **Chapter 3 Description of Proposed Development (Volume 6.2)** and with respect to relevant parts of other chapters including **Chapter 11: Biodiversity** and **Chapter 12: Hydrology** (both **Volume 6.2**), where common Receptors have been considered and where there is an overlap or relationship between the assessment of effects. A list of terms and abbreviations can be found in **Chapter 1 Introduction, Appendix 1F Terms and Abbreviations (Volume 6.4)**.
- 17.1.3 The Scoping Report set out the potential major accidents and disasters which may be relevant to the Proposed Development, and determined there will not be any significant effects arising from MA&D. In its **Scoping Opinion (Volume 6.5)**, the Planning Inspectorate (PINS) stated that *'The Inspectorate agrees that the measures described in the Scoping Report can be sufficient in addressing any likely significant effects.'* This position was clarified at a meeting with PINS on 04 June 2021 at which it was confirmed that the topic could be scoped out.
- 17.1.4 Therefore, no further assessment of effects has been undertaken for the ES which, instead, has been developed to address specific detailed comments raised in relation to the securing of embedded environmental measures and minor points relating to the methodology used in the assessment applied for scoping. As a consequence, the format of this chapter may differ from other ES aspect chapters that have been scoped in for assessment. This chapter contains:
- A description of Stakeholder comments and proposed responses;
 - A description of the potential MA&D effects which were agreed as not significant and therefore scoped out in the Scoping Opinion; and
 - Details of the embedded environmental measures and how they will be secured.
- 17.1.5 The description of effects has been updated from that which was presented at the Scoping Stage and Statutory Consultation (PEIR). This update incorporates further detailed information, to include the further development of the proposals for the Proposed Development (which is described in **Chapter 3 Description of the Proposed Development (Volume 6.2)**) and which is now available. It further demonstrates that the Applicant will ensure that there will be no significant effects arising from Major Accidents and Disasters. The embedded environmental measures are fundamentally the same as presented at PEIR, including the supplementary details to further demonstrate that there will be no likely significant effects arising from major accidents or disasters and how this outcome will be secured.



- 17.1.6 There is no discussion of legislation, policy, or technical guidance, as the topic is scoped out and does not require any further assessment. Reference can, however, be made to Chapter 15 of the Scoping Report to understand those items of relevance.
- 17.1.7 However, it is noted that the Overarching National Policy Statement for Energy (EN-1) at paragraph 4.10.3, the new Draft Overarching National Policy Statement for Energy (EN-1)¹ at paragraph 4.11.5 and the National Planning Policy Framework (NPPF)² at paragraph 188 make clear that when making a decision on an application, there should be consideration of whether the proposed development is 'an acceptable use of land', and that other regulatory regimes such as the Environmental Permitting Regulations should be assumed to 'operate effectively' reducing risk and that planning authorities should not seek to duplicate those processes.
- 17.1.8 A major accident has been defined for the purposes of this report as an occurrence resulting from an uncontrolled event caused by a man-made activity or asset leading to serious damage to Receptors. The term 'disaster' is used to describe a natural occurrence leading to serious damage to Receptors. In both cases, the effects could be either immediate or delayed.

17.2 Consultation and stakeholder engagement

- 17.2.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Chapter 4 Approach to the EIA (Volume 6.2)**.
- 17.2.2 A summary of the relevant responses received in the EIA Scoping Opinion in relation to MA&D and confirmation of how these have been considered within the assessment to date is presented in **Table 17.1 Summary of EIA Scoping Opinion responses for MA&D**.

Table 17.1 Summary of EIA Scoping Opinion responses for MA&D

Consultee	Issue raised	Response
PINS	The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development.	A description of non-significant effects arising from MA&D has been included in Section 17.3 .
	The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards.	The assessment undertaken at Scoping to support scoping out MA&D implicitly accounted for Annex G of PINS Advice Note 11.

¹ BEIS, Draft Overarching National Policy Statement for Energy (EN-1), September 2021

² MHCLG, National Planning Policy Framework, July 2021



Consultee	Issue raised	Response
	<p>The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage, or the environment.</p>	<p>This is specifically included within the description in Section 17.4 and is embedded within our approach.</p>
PINS	<p>Any measures that will be employed to prevent and control significant effects should be presented in the ES.</p>	<p>These are addressed in Section 17.4 and 17.6.</p>
	<p>Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.</p>	<p>For clarity, the Proposed Development is not a COMAH Establishment or a Nuclear Licensed site such that the two European Directives referenced are not applicable.</p> <p>The description of mitigation measures includes the Integrated Management System which is the mechanism through which the Proposed Development will comply with the Health and Safety at Work etc. Act 1974 and associated applicable regulation.</p>
PINS	<p>The Scoping Report considers that the effects of the Proposed Development with regards to major accidents and disasters are not expected to be significant. This is on the basis that existing measures are in place through legislation and/or best practice.</p> <p>The Inspectorate agrees that the measures described in the Scoping Report can be sufficient in addressing any likely significant effects. The ES should provide details of these measures and how these would be secured.</p>	<p>This ES presents an expanded description of environmental measures (which were presented during the Statutory Consultation as part of the PEIR). The mechanisms for securing the measures, where relevant, have been described in Section 17.6 of this Chapter.</p>
PINS	<p>The ES should explain their reasoning behind the use of a 1km study area regarding impacts from major accidents or disasters. The study area should be established according to the extent of the impacts and the potential for likely significant effects rather than pre-determined distances.</p>	<p>A 1km Study Area was initially used to identify Receptors which could potentially be impacted by MA&D from consideration of the Proposed Development and its hazard characteristics/extents, this was anticipated to encompass any reasonably foreseeable</p>



Consultee	Issue raised	Response
		<p>major accident hazards. If likely significant events were identified at Scoping, then review and refinement of the study area would have taken place and further assessment undertaken. It is noted that this is aligned to the EA guidance for Fire Prevention Plans.</p> <p>As the assessment at scoping determined there would not be any significant effects, no further assessment and therefore refinement of the study area has been necessary.</p>
PINS	<p>Table 15.A1 states that there are no residential Receptors within the Red Line Boundary (RLB). This differs from what is shown in Figure 1.1 Red Line Boundary. There are also sections of the Table which have not been populated. Any comparable table provided within the ES should be updated to address these errors.</p>	<p>This table has been revised in Table 17.4.</p>
Cambridgeshire County Council	<p>Table 15.1: Policy CS34 Protecting surrounding uses of the adopted Cambridgeshire and Peterborough Minerals and Waste Core Strategy should be taken into account, as this requires that there would significant harm to the environment, human health or safety, land uses, and amenity.</p>	<p>The policy has been reviewed and the chapter demonstrates that there will be no significant effects arising from major accidents and disasters on the matters referenced in the policy. Other chapters including Chapter 7: Noise, Chapter 8: Air Quality, Chapter 9: LVIA, Chapter 15: Socio-economics, Tourism, Recreation and Land Use and Chapter 16: Health (all Volume 6.2) consider the potential for significant effects on matters of relevance.</p>
Cambridgeshire County Council	<p>The Health and Safety Executive will regulate safe operation from the site. On receipt of the EIA/ES, consultation with the HSE will be required.</p>	<p>The Health and Safety Executive are a statutory consultee to the Proposed Development and this application has been developed in consideration of Annex G of Planning Advice Note 11.</p>
Fenland District Council	<p>The Health and Safety Executive will regulate safe operation from the site. On receipt of the EIA, consultation with the HSE will be required.</p>	<p>The Health and Safety Executive are a statutory consultee to the Proposed Development and this application has been developed in consideration of Annex G of Planning Advice Note 11.</p>
HSE	<p>Will the proposed development fall within any of HSE's consultation distances?</p> <p>According to HSE's records there is one major accident site and two major accident hazard pipelines within the indicated red line boundary for this nationally significant infrastructure project; as illustrated in, Figure 1.1 'Red</p>	<p>The sites identified by the HSE have been considered in the development of the Proposed Development to date.</p> <p>The Energy from Waste (EfW) Combined Heat and Power (CHP) Facility does not lie within any Land Use Planning Consultation zones as shown on the HSE Planning Advice Web App. The site identified by the HSE (Ref: H4444) is on the south side of Weasenham</p>



Consultee	Issue raised	Response
	<p>Line Boundary' as part of the document 'MW Environment Ltd Medworth Energy from Waste Combined Heat and Power Facility EIA Scoping Report EIA Scoping report December 2019'.</p> <p>Major accident hazard site HSE ref H4444; operated by H L HUTCHINSON LTD.</p> <p>Major accident hazard pipelines: HSE ref 7463, operated by National Grid PLC; 4 Lings Lynn Comp / Wisbech Nene West. HSE ref 7458, operated by National Grid PLC; 2 Lings Lynn Comp/ Wisbech Nene West.</p> <p>HSE's Land Use Planning advice would be dependent on the location of areas where people may be present. When we are consulted by the Applicant with further information under Section 42 of the Planning Act 2008, we can provide full advice.</p>	<p>Lane and does not have any Land Use Planning restrictions shown on the HSE Planning Advice WebApp. There is a site with Land Use Planning restrictions (presumably holding Hazardous Substance Consent) on the North side of Weasenham Lane. It is shown as Pike Textiles and has an Outer Zone only, the EfW CHP Facility is not within this consultation zone.</p> <p>The Grid Connection crosses or is in close proximity to several gas pipelines. Any impacts during either construction or operation are addressed in the summary of non-significant effects (Table 17.5). These effects will be suitably managed in conjunction with the pipeline operator to ensure they are not significant by the mitigation described in Section 17.4 of this chapter.</p> <p>HSE stated that they would not advise against the Proposed Development in their response to the S42 consultation.</p>
HSE	<p>Consideration of risk assessments Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role on NSIPs is summarised in the following Advice Note 11 An Annex on. The Planning Inspectorate's website - Annex G - The Health and Safety Executive. This document includes consideration of risk assessments on page 3.</p>	<p>Annex G states that HSE is primarily concerned with whether the Proposed Development will be regulated as a Major Hazards facility or could be affected by one. The Proposed Development will not be subject to the COMAH regulations or require Hazardous Substance Consent and also will not be within the consultation distances of any COMAH Establishments or Major Accident Hazard Pipelines.</p> <p>In line with Annex G of Planning Advice Note 11, the Applicant will manage workplace hazards in line with the Health and Safety at Work etc. Act 1974 and associated regulations as described in Section 17.4. The assessment of (non-significant) effects is a qualitative risk assessment which demonstrates that the risk can be reduced to a tolerable level. HSE define a tolerable level of risk as <i>'a willingness by society as a whole to live with a risk so as to secure certain benefits in the confidence that the risk is one that is worth taking and that it is being properly controlled. However, it does not imply that the risk will be acceptable to everyone, i.e. that everyone would agree without reservation to take the risk or have it imposed on them.'</i>¹⁶</p>



Consultee	Issue raised	Response
Middle Level Commissioners	<p>(viii) Chapter 12 Major Accidents and Disasters (pages 193-205).</p> <p>Comment - There are several issues which give the Boards concern these primarily relate to adverse impacts on their systems including pollution and contamination during and following an "incident". However, these concerns relate to any urban development regardless of its use.</p> <p>It is considered that issues relating to surface water disposal and flood risk can be mitigated against during the design process and will, presumably, be detailed within any FRA/ Drainage Strategy submitted in support of an application.</p>	<p>These issues are addressed in the ES Chapter 12: Hydrology (Volume 6.2) and Appendix 12A Flood Risk Assessment (Volume 6.4).</p>
Public Health England	<p>PHE would expect the applicant to consider the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations: both in terms of their applicability to the development itself, and the development's potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.</p>	<p>Neither of these Regulations are applicable to the Proposed Development due to the low inventories of dangerous substances which may be stored or used at the Proposed Development.</p> <p>No sites under the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009 have been identified in the Study Areas of the Proposed Development.</p> <p>There is one COMAH site within 1km of the Energy from Waste Combined Heat and Power (EfW CHP) Facility. This was identified in Figure 15.1 of the Scoping Report and was not considered to lead to any significant effects as the Proposed Development is wholly outside the HSE applied consultation distances for this site.</p>

17.2.3

A summary of the relevant responses received to the PEIR at statutory consultation, together with any subsequent discussions held in relation to MA&D and confirmation of how these have been considered within the assessment to date is presented in **Table 17.2 Summary of PEIR responses for MA&D together with any subsequent engagement.**



Table 17.2 Summary of PEIR responses for MA&D together with any subsequent engagement

Consultee	Issue raised	Response
HSE	Hazardous Substances Consent would be required to store or use any of the Named Hazardous Substances or Categories of Substances at or above the controlled quantities set out in Schedule 1 of these Regulations. Further information on HSC should be sought from the relevant Hazardous Substances Authority.	The Proposed Development will not require Hazardous Substances Consent due to the low inventories of any hazardous substances which may be stored or used at the Proposed Development.
HSE	HSE would not advise against the current proposal.	This is noted as HSE acceptance that the Proposed Development complies with the HSE Approach to Land Use Planning.
Cambridgeshire County Council	As stated in paragraph 17.1.4 of Chapter 17: Major Accidents and Disasters in response to the Scoping Opinion request submitted to the Planning Inspectorate, PINS confirmed that the measures described in the Scoping Report can be sufficient in addressing any likely significant effects in respect of major accidents and disasters. The County Council would reiterate that the Applicant should continue to ensure that the Environmental Statement can adequately demonstrate that there will be no significant effects arising from major accidents and disasters upon the environment, human health and safety, land uses and the amenity of any surrounding uses within Cambridgeshire and that the Health and Safety Executive should continue to regulate the safe operations at the site.	This chapter provides a description of the potential major accidents and disaster scenarios in Section 17.3 , and the measures which ensure the effects (risk) are not significant, are described in Section 17.4 and 17.6 . As described above, the HSE has been consulted at Scoping and as part of the Statutory Consultation. The consultation feedback and the standing guidance (Planning Advice Note 11 – Annex G) have been taken into account. The HSE will regulate workplace health and safety for the site, during construction and operation, as is their statutory duty.
Kings Lynn and West Norfolk Borough Council	Major Accidents and Disasters Does this consider access to water in the event of an emergency situation? Has this been fully considered?	Access to water in the event of an emergency has been considered by the Applicant in the design of the EfW CHP Facility. Section 17.4 describes the design standards proposed and includes the requirement for a suitable volume of firewater to be stored (based upon a risk assessment of the final design). The good practice design standards such as NFPA 850 include a minimum water supply volume. The EfW CHP Facility will be operated under a Fire Prevention Plan which will be submitted to the Environment Agency for approval.

17.3 Description of scoped out effects

- 17.3.1 This section presents the potential MA&D which were identified at the Scoping Stage. These potential major accidents and disasters were considered to have no likely significant effects on the basis of the environmental measures which are embedded within the design of the Proposed Development.
- 17.3.2 The scoping out of these effects was agreed by PINS in their Scoping Opinion, subject to the measures identified in the Scoping Report being secured. The relevant measures are described in **Section 17.4**. The information presented here is for information only and does not represent further assessment.

Non-significant effects identified

- 17.3.3 The following potential MA&D effects were identified in the Scoping Report and are described in more detail below. These items have been updated for the ES. For clarity, the seven elements of the Proposed Development have been divided into two Study Areas, based upon the nature and extent of potential major accidents:
- Study Area 1 encompasses the EfW CHP Facility, Access Improvements, Temporary Construction Compound, and the Water Connections; and
 - Study Area 2 encompasses the Grid Connection, (including Walsoken Substation) and the CHP Connection.
- 17.3.4 **Table 17.3 Non-significant MA&D effects** describes the potential MA&D identified and whether they are associated with the elements of the Proposed Development in Study Area 1 or Study Area 2, and the phase of the Proposed Development.

Table 17.3 Non-significant MA&D effects

Effect	Study Area 1 (EfW CHP Facility, Access Improvements, Temporary Construction Compound, and the Water Connections)	Study Area 2 (Grid Connection, Walsoken Substation and the CHP Connection)
Occupational Health and Safety	Construction and Operation	Operation only ³
Major Accidents involving High Voltage Electricity	Operation only ³	Operation only
Major Accidents involving the EfW CHP process	Operation only ³	Operation only ³
Major Accidents involving fire	Operation only ³	Operation only ³

³ Construction covered in 'Major Accidents and Disasters during construction'

Effect	Study Area 1 (EfW CHP Facility, Access Improvements, Temporary Construction Compound, and the Water Connections)	Study Area 2 (Grid Connection, Walsoken Substation and the CHP Connection)
Major accidents or disasters leading to structural hazards	Operation only ³	Operation only ³
Major accidents or disasters involving the spill of chemicals or waste materials	Operation only ³	N/A
Major accidents or disasters during construction	Construction only	Construction only.
External accidents affecting the site population within the Order limits	Construction and operation	Construction only.
Natural disasters affecting the site population within the Order limits	Operation only ³	N/A
Acts of terrorism affecting the site population within the Order limits	Construction and operation	N/A

Receptors identified in the Study Area

- 17.3.5 The Scoping Report used two Study Areas to screen for potential Receptors based upon the nature of the potential accidents. The buffer distances are the same at ES as for Scoping, however, as the Order limits have changed, the absolute Study Area for each has reduced. The areas are:
- Study Area 1 - 1km around the EfW CHP Facility, Access Improvements, Temporary Construction Compound, and the Water Connections; and
 - Study Area 2 – a 500m buffer around the Grid Connection Corridor, Walsoken Substation and CHP Connection Corridor.
- 17.3.6 As described in the Scoping Report, professional judgement suggests that a 1km buffer from the EfW CHP Facility Site is considered conservative for harm to Receptors arising from these incidents which include a major fire, structural collapse, accidents involving HV electricity or release of stored waste materials. Professional judgement also suggests that a 500m buffer around the potential route of the Grid Connection, Walsoken Substation and CHP Connection is considered appropriate for harm to Receptors arising from incidents during construction or operation.
- 17.3.7 All identified effects were within this area. The Receptors identified within the Study Areas are provided in **Table 17.4 MA&D Receptors within Study Area**. This table has been updated following the refinement of the Order limits. Whilst the Receptors have been updated to reflect the Order limits, this has not changed the findings of the assessment undertaken at Scoping. This has led to several Receptors being



removed from the table due to the refinement to the Grid Connection which has reduced the area included within the buffer zones. This is not considered to be an issue as they are no longer within the Study Area and therefore not considered to be subject to any effects arising from Major Accidents and Disasters, which means there cannot be any Likely significant effects.

Table 17.4 MA&D Receptors within Study Area

Receptor Type	Receptor	Receptor Detail	Study Area 1	Study Area 2
Population and Human Health	On site workforce	There will be an initial construction workforce on the EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection and Grid Connection including Walsoken Substation during the construction phase. This will then transition to a permanent operational workforce only at the EfW CHP Facility Site during the operational phase. This workforce will be supplemented by contractors and delivery drivers.	Order limits	Order limits
	Public Surrounding Area	<p>- North east of the EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection, the area is built-up extending more than 1km from the Order limits boundary. The immediate area is mainly industrial, however there are some houses and schools located within 1km of the Order limits. There are no hospitals within 1km of the Order limits. To the south and west the area mainly consists of fields with no designated sites identified.</p> <p>The area surrounding the Grid Connection including Walsoken Substation is predominantly rural, with fields and some residential and commercial buildings.</p> <p>The closest hospital is North Cambridgeshire Hospital which is located approximately 2km to the north of the EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection, and 2.2km to the west of the Grid Connection.</p>	Buffer zone	Buffer zone

Receptor Type	Receptor	Receptor Detail	Study Area 1	Study Area 2
		Other potentially vulnerable public Receptors are listed below where they are within the Study Areas.		
	The Conifers Care home	Care home located on North Brink, PE13 1LL – north west of EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection.	Buffer zone	Buffer zone
	Langley Lodge Residential Home	Assisted living residence located on Queens Road, PE13 2PE – north of the Order limits.	-	Buffer zone
	Somers Court	Care home located on Somers Road, PE13 2RA – north of the Order limits.	-	Buffer zone
	The Helping Hands Group	Adult day care centre located on Algores Way, PE13 2RN – north east of the Order limits.	Buffer zone	Buffer zone
	Cambian Wisbech School	School unit on Anglia Way – approximately 200m north east from the EfW CHP Facility Site	Buffer zone	Buffer zone
	J Jones	Preschool on New Drove, PE13 2RZ – north east of EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection and north of Grid Connection including Walsoken Substation.	Buffer zone	Buffer zone
	The County School	School on Coalwharf Road, PE13 1JL – north of Order limits.	-	Buffer zone
	Thomas Clarkson Academy	School on Corporation Road, PE13 2SE – north east of EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection and west of Grid Connection including Walsoken Substation.	Buffer zone	-
	Unity Academy	School located on Algores Way, PE13 2TQ – north east of EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection and north west of Grid Connection including Walsoken Substation.	Buffer zone	Buffer zone

Receptor Type	Receptor	Receptor Detail	Study Area 1	Study Area 2
	Trinity School	School located on Algores Way, PE13 2TQ – north east of EfW CHP Facility Site, Access Improvements, Temporary Construction Compound and Water Connections, CHP Connection and north west of Grid Connection including Walsoken Substation.	Buffer zone	Buffer zone
	Wisbech Grammar School	School on Chapel Road, PE13 1RH – north of the Order limits.	-	Buffer zone
Other designated land/water	National Historic Landscape Characterisation (NHLC)	There are some areas of NHLC within the Study Area including orchards, fields or horticulture.	Buffer zone	Buffer zone
Scarce Habitat	Priority habitats	There are some Priority Habitats found within 1 kilometre of the Order limits, including Coastal and floodplain grazing marsh, deciduous woodland, and traditional orchards. Most of the scarce habitat inventories are located southwest of the Order limits, with the largest individual inventory having an approximate area of 10 hectares. See Chapter 11: Biodiversity (Volume 6.2) for more detail.	Buffer zone	-
Widespread Habitat - Non-Designated Water	Local watercourses	There are a number of ditches, watercourses, and bodies of water within the buffer zones. See Chapter 12: Hydrology (Volume 6.2) for more detail.	Buffer zone	Order limits
Particular species	No particular populations of endangered or scarce species have been identified within the Study Areas. Further information is available in Chapter 11: Biodiversity (Volume 6.2) .			
Fresh and estuarine water habitats	River Nene	Nene Reference: Environment Agency Catchment Planning database.	Lower Buffer zone	Buffer zone
Soil and sediment	Ground surrounding the Proposed Development	The EfW CHP Facility Site will be predominantly hardstanding but is underlain by soil. There are areas of unmade ground in the surrounding area including on road verges. Land surrounding the Grid Connection includes highways.		

Receptor Type	Receptor	Receptor Detail	Study Area 1	Study Area 2
Nationally historic buildings	Listed Buildings (Grade I)	14 North Brink, Wisbech, Fenland, Cambridgeshire. North of the Order limits.	-	Buffer zone
		Peckover House, Wisbech, Fenland, Cambridgeshire. North of Order limits.	-	Buffer zone
		19 North Brink Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
	Listed Buildings (Grade II*)	The Castle Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		6 the Crescent Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		Clarkson Memorial Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		Octavia Hill Birthplace Museum, 1 South Brink Place, and 7 and 8 South Brink Wisbech, Fenland, Cambridgeshire, North of Order limits boundary.	-	Buffer zone
		15 South Brink Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		12 North Brink Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		Stable to Northwest of Peckover House Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		8 and 9 Old Market Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		32 Old Market Wisbech, Fenland, Cambridgeshire, North of Order limits.	-	Buffer zone
		Listed Buildings (Grade II)	Additionally, there are a number of Grade II listed buildings within the buffer zones of the Order limits.	

Receptor Type	Receptor	Receptor Detail	Study Area 1	Study Area 2
Designated Sites Nationally Important	–	None identified		
Designated Sites Internationally Important	–	None identified		
Groundwater bodies		None identified		

17.3.8 The Grid Connection passes near to residential areas. The Grid Connection passes north of a residential area situated south of Wisbech near the crossing of Elm High Road and the A47. The Grid Connection passes by houses on Broadend Road to the east of Wisbech, and a small number of houses to the north-east edge of Wisbech are within the buffer zone. A number of small and mostly isolated houses in the vicinity of the A47 are within the buffer zone.

17.3.9 The CHP Connection passes alongside residential areas north of Weasenham Lane, Wisbech, with areas of southern Wisbech within its buffer zone.

Emergency Response

17.3.10 The Applicant will apply good practice in design and operation and provide appropriate mitigation to reduce the risk of a major accident or disaster occurring at the site to extremely low. Nevertheless, the Applicant will liaise with the emergency services to ensure that appropriate emergency response arrangements are in place to limit effects in the unlikely event of a major accident or disaster.

Summary of non-significant effects

17.3.11 A summary of the results of the assessment of the MA&Ds is provided in **Table 17.5 Summary of significance of effects**.

17.3.12 The summary rationale has been updated from that which was presented at the Scoping Stage and Statutory Consultation (PEIR). This update includes further detailed information which is now available and further demonstrates the Applicant will ensure that there will be no significant effects arising from Major Accidents and Disasters. Some items which no longer form part of the development have been removed, in the evolution of the Proposed Development and the choices made to remove certain items are described in **Chapter 2 Alternatives (Volume 6.2)**. No new potential MA&Ds have been identified.



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Environmental Statement Chapter 17: Major Accidents and Disasters

Table 17.5 Summary of significance of effects

Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
Occupational Health and Safety	Onsite workforce	Construction and Operation	All elements (EfW CHP Facility, CHP Connection, Temporary Construction Compound, Access Improvements and Water Connections. Grid Connection including Walsoken Substation)	Not significant	<p>In this assessment, occupational accidents are defined as work-related accidents that could affect only one or two workers carrying out the task, and the effects of which do not extend to Receptors within the wider environment. Under UK Health and Safety legislation⁴, employers are required to manage the risk to their employees and others who could be affected by their activities and ensure that the risk is reduced to As Low As Reasonably Practicable (ALARP). The ALARP principle requires compliance with good practice as a minimum.</p> <p>The EfW CHP Facility will be designed with consideration of the potential occupational health and safety hazards. These will be mitigated through application of the hierarchy of controls: i.e. hazards will be designed out or minimised where practicable, and appropriate measures to prevent and mitigate residual risks implemented.</p> <p>During the operational phase of the Proposed Development, systems to ensure compliance with all relevant UK Health and Safety legislation will be implemented. Compliance will be managed through an Integrated Management System (IMS), which will require risk assessments and preventative measures be put in place. The IMS will be based on the approach used at the MVV's existing facilities, tailored to suit the Proposed Development. The IMS for the Proposed Development will achieve certification to ISO 9001, ISO 14001, and ISO 45001 during the first 18 months of operation such has been achieved at other sites owned by MVV. A QHSE Manager will be appointed for the EfW CHP Facility to ensure compliance with health and safety legislation and relevant IMS procedures.</p>

⁴ *Health and Safety at Work etc. Act 1974. And The Management of Health and Safety at Work Regulations 1999.*



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
					<p>This will be supported by regular audits to ensure adherence to IMS procedures.</p> <p>The Applicant intends to provide space within the administration building at the EfW CHP Facility Site for pre-booked site visits. It is intended that, when the EfW CHP Facility is operational, there will be tours for visitors, including school children. The hazard and risk assessment processes described above take account of the presence of these visitors and planned visitor routes. Technical and administrative measures will be in place to ensure the risk to visitors is ALARP. Such visitors will be accompanied at all times, and the Applicant will ensure that they comply with onsite health and safety requirements. The emergency arrangements will incorporate specific provision for visitors, tailored to the size and nature of the visitor groups, including evacuation and muster. A Personal Emergency Evacuation Plan is prepared for those with disabilities.</p> <p>During the construction phase, occupational health and safety will be managed to comply with the requirements of the Construction (Design and Management) Regulations 2015. Major accidents which could occur during construction are considered in this table.</p> <p>These occupational accidents include:</p> <ul style="list-style-type: none">• Machinery safety;• Falls from height;• Operation of vehicles; and• Electrical safety. <p>Some specific examples of how these will be appropriately managed are given below.</p> <p>Electrical hazards will be managed in line with the Electricity at Work</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
Major accidents involving High Voltage electricity	Onsite workforce Public – Surrounding Area	Operation ³	EfW CHP Facility, Grid Connection including Walsoken Substation.	Not significant	<p>Regulations 1989. These regulations require that hazards are designed out where practicable, and suitable controls are put in place to manage the risk where they are not. They require that adequate space, insulation, isolation, and capacity is designed into the system and that any person undertaking work on the system is competent to do so. The IMS will include strict controls and safe systems of work for operation and maintenance of the high voltage assets on the EfW CHP Facility Site which implement the requirements of the regulations.</p> <p>Machinery hazards typically only affect the workers using them but can lead to serious or occasionally, fatal injuries to those workers. These hazards do not impact the surrounding Receptors and are not generally considered major accidents. They will be managed through safe systems of work implemented through the IMS, as well as a thorough review and risk assessment of the machinery in line with the requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998. In particular, PUWER requires that machinery is suitable for its intended use, is properly maintained and that as far as reasonably practicable contact with parts of the machinery that could cause injury is prevented by effective measures, such as guards and interlocks.</p> <p>HV electricity has the potential to cause fire, explosion, or serious/fatal injuries to people in the event of an accident. The effects of accidents are generally localised, typically only affecting one or two of people who are typically working on the system, but with potential to affect the public if in proximity.</p> <p>The EfW CHP Facility will provide electricity at 132kV to the national grid via an underground electrical cable. This will provide a connection to a UK Power Networks (UKPN) substation at Walsoken via the Applicants own substation at Walsoken. For clarity, the</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
Major accidents involving the EfW CHP process	Onsite workforce, Public Surrounding Area	Operation only ³	EfW Facility, CHP Connection	Not significant	<p>Applicants substation at Walsoken will be owned and operated by the Applicant but it will be on land owned by UKPN. The final design has been developed in consultation with UKPN. The Grid Connection will be owned and operated by the Applicant. It will be designed and built to the relevant Energy Networks Association standards.</p> <p>HV supplies are widespread across the country and necessary to maintain the electrical grid and are not considered to cause a significant effect due to the application of industry good practice. These are taken into account during the route selection, design, construction and operation of the Grid Connection and Walsoken Substation. These are described in the relevant row of Table 17.6.</p> <p>The EfW process involves the combustion of solid waste in order to generate heat and power. Combustion utilises a support and pilot fuel, in addition to the main self-sustaining combustion process.</p> <p>MVV has undertaken a risk assessment on a similar facility and identified the following process major hazards:</p> <ul style="list-style-type: none"> • Fire in reception hall; • Explosion associated with combustion equipment; and • Overpressure in the combustion system. <p>Process hazards such as fire in the reception hall, or an explosion in the combustion system which could lead to serious or fatal injuries to several workers on the EfW CHP Facility. In the event of a fire, there would be a potential for people offsite to be exposed to low levels of pollutants from smoke and could suffer short term ill health effects. This would be managed by the emergency response, advising people to remain indoors as a precaution.</p> <p>As part of the design process, the Applicant will systematically</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
					<p>identify potential major hazards associated with the specific process and keep them under review as the design progresses. This will include a number of studies including a Hazard and Operability (HAZOP) study (compliant with IEC 61882) and will also review the adequacy of mitigation measures such as escape routes, secondary containment, and fire suppression. The IMS will include procedures for ensuring that the effectiveness of these measures is maintained.</p> <p>Process hazards will be designed out where possible in accordance with good practice applying the hierarchy of controls principles which prioritise inherently safe design over control and mitigated measures. However, some of these hazards are an intrinsic part of a combustion process and therefore, as part of the design process, safety and environmental major accident hazards will be identified and assessed during the design process to ensure that adequate technical and administrative measures are in place to reduce the risk to As Low As Reasonably Practicable (ALARP). Specific design mitigation measures will be applied as appropriate including water misting and deluge, inert gas blanketing, fire and gas detectors or overfill alarms.</p> <p>In order to comply with the requirements of the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR), the Applicant will carry out an assessment of locations where flammable atmospheres could be present, either by design or in event of a deviation from normal operation and ensure that sufficient mitigation is in place. Mitigation could include, minimising quantities of flammable materials, optimisation of operating conditions (e.g. flow rate/pressures), containment, inert gas blanketing, and controls over ignition sources including use of ATEX rated equipment.</p>
Major Accidents involving fire	Onsite workforce	Operation only ³	EfW Facility,	CHP Not significant	Fire is a recognised hazard within the waste industry. Fires in the



Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
	Public Surrounding Area	–	Walsoken Substation		<p>EfW process are covered above (Major accidents involving the EfW process). Fires in the buildings and in the storage bunkers are covered in this section. The company has undertaken a risk assessment on similar facilities and identified locations where fires could occur and the likely extent of the consequences. A similar assessment will be undertaken during the design process described above (Major Accidents involving the EfW process), which is likely to be post-consent. It is expected that fires will be contained on the EfW CHP Facility Site, but smoke could affect the surrounding workplaces. Segregation and separation will be built into the design and layout, and because of this, the potential for a fire to spread to a neighbouring site is not considered significant.</p> <p>As the site will be permitted under the Environmental Permitting Regulations 2016, a Fire Prevention Plan (FPP) has been drafted for the approval of the Environment Agency (EA), who are the primary regulator of the site environmental permit. The FPP covers all topics related to fire risk, including prevention, detection and suppression. An Outline Fire Prevention Plan (Volume 7.10) is included with this application</p> <p>The Proposed Development will be designed and built to meet industry best practice for fire safety and provided with extensive fire protection and detection systems. This will account for the best practice measures given in ACE Technical Risks Engineering Information Bulletin Guidance Document and designed in accordance with NFPA 850.</p> <p>The design of the EfW CHP Facility will include measures such as infra-red fire detection systems in the waste bunker, with associated deluge, inert gas suppression systems in the electrical rooms and fire detection and suppression systems in all necessary locations e.g. the tipping hall and the turbine hall. The provision of these systems will consider the level of protection and risk required through</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
Major accidents or disasters leading to structural hazards	Onsite workforce)	Operation only ³	EfW Facility, CHP Connection, Walsoken Substation	Not significant	<p>the process risk assessment described above.</p> <p>The fire ring main will be provided with a large firewater storage tank, ring main serving the EfW CHP Facility Site with a firewater pump (and a diesel back up) to ensure that firewater can be delivered when needed. There will be suitable containment available onsite (in line with CIRIA C736) to allow contaminated firewater to be retained and either discharged to sewer or disposed via tanker removal as appropriate.</p> <p>The monitoring and maintenance of measures to prevent and mitigate fire hazards in operation will be through the IMS, which will be compliant with the requirements of the Regulatory Reform (Fire Safety) Order 2005 ensuring that the Applicant maintains an up-to date fire risk assessment. The IMS will cover both safe systems of work but also detailed emergency response procedures to manage the risk of fire to ALARP. The layout design will allow for access by the emergency services.</p> <p>There will be a variety of structures which together form the Proposed Development. This includes pipe racking and bridging for the CHP Connection, and a cabin associated with the Walsoken Substation. The most significant will be on the EfW CHP Facility Site includes a main building for the EfW process and chimneys of up to 90m in height. In the event of a structural collapse, nearby people and buildings could be impacted. The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel including civil and structural engineers. The design and design loads will take into account the ground conditions, the effect of extreme weather, and climate change.</p> <p>Robust design will be ensured through compliance with good practice in structural design, including with the Eurocodes and any relevant BSI PDs. The IMS will include appropriate systems of</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale	
Major accidents or disasters involving the spill of chemicals or waste materials	Onsite workforce Waterbodies environment and surrounding ground (as identified in Table 17.4)	Operation only ³	EfW Facility	CHP	Not significant	<p>inspection and maintenance to ensure continued structural integrity. The Proposed Development will have to comply with the Building Regulations 2010, in particular, Part A which relates to structures. This will be ensured through building control processes.</p> <p>This will ensure appropriate design of the facilities and a reduction of the risk of structural hazards during operation such as building collapse to low levels, which are considered to be ALARP.</p> <p>The Proposed Development will be designed in accordance with industry good practice to ensure that the primary containment is sufficiently sized and designed to a recognised standard, and there is adequate secondary and tertiary containment to minimise the risk of any potential spillage of hazardous materials. Where substances may also pose a hazard to the health of workers, suitable equipment for handling substances and personal protective equipment will be provided. Any flammable substances will have preventative and protective measures applied in accordance with the requirements of the IMS and in line with the fire scenario described above.</p> <p>As a requirement of being a permitted Site under the Environmental Permitting (England and Wales) Regulations 2016, an accident management plan will be maintained, which requires risk assessment of all potential releases. This risk assessment will cover all spillages including those which have the potential to cause a major accident, whether to people or the environment, and suitable prevention and mitigation measures will be put in place.</p> <p>The drainage system on the EfW CHP Facility Site will be designed to ensure that any potential spills can be captured onsite and retained for treatment or disposal, this includes designing for firewater in accordance with industry standards such as CIRIA 736. The Applicant has prepared an Outline Drainage Strategy (Volume 6.4) to accompany the application.</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
Major accidents or disasters during construction	Onsite workforce	Construction only	All elements (EfW CHP Facility, CHP Connection, Temporary Construction Compound, Access Improvements and Water Connections. Grid Connection including Walsoken Substation)	Not significant	<p>Any construction activities carry a risk of accident which could cause serious harm to the construction workforce including plant movement, collapse of temporary structures, dropped objects or falls from height. Any effects arising from disasters during the construction process will be identified and dealt with through appropriate risk assessment and mitigation (applying the hierarchy of controls) as required to comply with UK health and safety legislation⁵ and environmental legislation. For clarity, the hierarchy of controls refers to a principle of risk management, where more effective control measures such as elimination or substitution should be prioritised over mitigation measures such as PPE. The Outline CEMP (Construction Environmental Management Plan, Volume 7.12) will require a risk assessment of construction activities (including any necessary earthworks or demolition activities) and this assessment should cover and mitigate where necessary the potential impact of all major accidents or disasters including those affecting non-human Receptors. This assessment will implement a Catastrophic Risk Analysis as recommended by HSE for construction projects in their research report undertaken by CIRIA⁶.</p> <p>The route of the Grid Connection, CHP Connection, Water Connections, and Access Improvements has been informed by statutory, and informal, consultation with UKPN, National Highways, local highways authorities and Network Rail where relevant. Relevant local authorities and utilities providers such as National Grid were also consulted in order to ensure that any pipelines or other hazardous sites along the route, such as those identified in the Scoping Opinion by the HSE and in the Scoping Report are avoided entirely or crossed safely in accordance with industry standards.</p>

⁵ Health and Safety at Work etc. Act 1974. And The Management of Health and Safety at Work Regulations 1999.

⁶ HSE, 2011. RR834: Preventing catastrophic events in construction



Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
					<p>HSE confirmed in its response to Statutory Consultation that the Proposed Development was not within the consultation zones of any major accident hazard site or major accident pipeline.</p> <p>Potential major accidents arising from construction activity, include a spill from temporary fuel storage tanks, collapse of excavations, fire during construction, accidents involving vehicles/plant, accidents during testing/commissioning or the collapse of a crane/piling rig. While most of these accidents would affect at most, one or two workers, a structural collapse or fire during construction could affect more workers but are unlikely to affect members of the public as the construction activities will be segregated. Materials such as fuel oil are not expected to be held onsite in volumes that could lead to a major accident which affects Receptors other than the construction workforce. All of the construction works will be managed and comply with the final Construction Environment Management Plan and relevant regulations such as the Construction (Design and Management) Regulations 2015 (CDM).</p> <p>Under the CDM Regulations, all structures must be designed so that they can be built and maintained safely, the designer must also 'design out' hazards where possible by applying the hierarchy of controls and produce a designers risk assessment to inform the construction contractors. The construction process must be managed to take account of the risks to people affected by the work, including the public. These include measures to manage fire risk, electrical hazards, and structural integrity (including excavations) throughout the construction process. This must be documented in a CDM Construction Phase Plan. This ensures that the risk of such effects occurring is extremely low and will be reduced to ALARP. This process will be managed by the contractor under the supervision of the Applicant.</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale	
External accidents affecting the site population within the Order limits	Onsite workforce	Operation and Construction	EfW Facility	CHP	Not significant	<p>There are some industrial activities in the vicinity of the EfW CHP Facility, an accident at one of these facilities is not likely to extend significantly beyond the boundaries of these facilities unless a significant inventory of dangerous substances are present.</p> <p>As part of the Statutory Consultation, the HSE confirmed that the EfW CHP Facility Site is outside the consultation distances for any sites with Hazardous Substances Consent, Licensed Explosives Site or Major Accident Hazard Pipelines. This means that it is extremely unlikely that an accident on one of these sites could lead to a major accident at the EfW CHP Facility, either by directly impacting people or by initiating a domino accident. The HSE has confirmed that they would not advise against the Proposed Development.</p> <p>The hazard of construction activities initiating a loss of containment from a major hazard pipeline is considered in the row above. It is possible that an incident unrelated to construction could impact construction workers, but the likelihood is extremely low, particularly when the measures described are considered.</p>
Natural disasters affecting the site population within the Order limits	Onsite workforce	Operation only ³	EfW Facility	CHP	Not significant	<p>Effects on structures such as wind and ground conditions are covered in the Major Accidents involving Structural Collapse above. The potential for natural disasters to impact the availability of safety critical personnel and safe operation of the EfW CHP Facility will be addressed in the IMS.</p> <p>In the baseline, the only potential disaster identified was a lightning strike leading to fire or structural collapse on the EfW CHP Facility Site (note that flooding is covered separately within the Flood Risk Assessment (Volume 6.4) appended to Chapter 12: Hydrology (Volume 6.2)). The potential consequences of a lightning strike are likely to be restricted to the site and may affect one or two workers. The Proposed Development will be provided with adequate lightning</p>



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Major accident/ disaster and summary of predicted effects	Receptor	Project Phase	Project Elements	Significance of effect	Summary rationale
					protection compliant with BS EN 62305 (BSI, 2011) to ensure the risk from lightning is reduced further and is considered to be reduced to ALARP.
Acts of terrorism affecting the site population within the Order limits	Onsite workforce (construction and operation)	Operation and Construction	All elements (EfW CHP Facility, CHP Connection, Temporary Construction Compound, Access Improvements and Water Connections. Grid Connection including Walsoken Substation)	Not significant	<p>Terrorism is the act of inflicting violence as a means of inflicting terror for political reasons. At the time of writing (April 2022), MI5 rates the current UK-wide threat level as substantial which means an attack in the UK is considered “likely”⁷. The National Risk Register lists several types of terrorism or malicious acts which include attacks on publicly accessible locations places, attacks on transport systems, cyberattacks, Chemical, Biological, Radiological or Nuclear (CBRN) attack or attacks on critical national infrastructure⁸. The development is not a transport network, nor is it considered to be a crowded place as there is unlikely to be members of the public regularly present or large gatherings of people. The development will constitute a theoretical target for cyber or CBRN attack but in comparison to previous terrorist activity, the development is considered to represent a “low value” and low priority target as there will be secured access and a lower population than other targets such as pedestrian areas, concert venues or transport hubs.</p> <p>Finally, the Centre for the Protection of National Infrastructure (CPNI) sets the definition of Critical National Infrastructure (CNI) which can be summarised as <i>those critical elements of infrastructure... the loss or compromise of which... could result in significant loss of life or casualties ... and/or Significant impact on national security, national defence, or the functioning of the state</i>. The Proposed Development including the Walsoken DNO Substation is not considered to be CNI. The potential effects from terrorism are not considered significant.</p>

⁷ MI5 Threat Levels. Available online and accessed on 27 January 2022.

⁸ Cabinet Office National Risk Register (2020).

Cumulative effects

- 17.3.13 Major Accidents and Disasters are by their nature extremely unlikely events, it is extremely unlikely therefore that two unrelated accidents or disasters could occur in the same time period or affecting the same Receptors.
- 17.3.14 A significant effect in this assessment would be an increase in total (aggregated) risk to any receptor to an intolerable level.
- 17.3.15 There are no anticipated significant effects arising from the Proposed Development. As the same HSE restrictions apply to all workplaces, this would limit the exposure of Receptors to significant (intolerable) risk from other industrial processes. Additionally, if significantly exposed to risk from the Proposed Development, then their exposure to risk from other sources is considered to be low, (because workers can only be employed at one location). Any exposure to risk from sources other than the Proposed Development is not considered likely to make their total risk exposure significant (intolerable) when considered cumulatively. Therefore, the total level of risk posed to any specific Receptor is anticipated to be below the boundary of intolerability (assuming third parties comply with their legal obligations). As such, there is no anticipated potential for cumulative effects arising from major accidents and disasters.
- 17.3.16 Regardless, the HSE state in their decision-making methodology⁹ (Appendix 3, Paragraph 6) that duty-holders are not normally required to consider risk which are outside of their control. This is based upon a UK regulatory framework which ensures that aggregated risk is managed through the general duties placed upon all industrial activities, rather than a location specific aggregation.

17.4 Embedded environmental measures

- 17.4.1 A range of environmental measures have been embedded into the Proposed Development. **Table 17.6 Summary of the embedded measures and how these influence the MA&D assessment** outlines how these embedded measures will influence the MA&D assessment. The relevant measures have an ID number which refers to **Table 17.7 Summary of environmental measures to be implemented – relating to MA&D**.

⁹ (Reducing Risks Protecting People (R2P2), HSE, 2001)



Table 17.6 Summary of the embedded environmental measures and how these influence the MA&D assessment

Potential Major Accident or Disaster	Changes and effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
Occupational Health and Safety	No significant effects	All elements (EfW CHP Facility, CHP Connection, Temporary Construction Compound, Access Improvements and Water Connections. Grid Connection including Walsoken Substation)	ID1	<p>An Integrated Management System (IMS) will be implemented to ensure compliance with all UK Health and Safety, and Environmental legislation. The IMS will be based on the approach used at the Applicant's existing facilities, tailored to suit the Proposed Development. This IMS will achieve certification to ISO 9001, ISO 14001, ISO 50001 and ISO 45001 during the first eighteen months of operation such has been achieved at other sites owned by MVV.</p> <p>The IMS will be developed to include risk assessment processes, safe systems of work, management of visitors, emergency response procedures and compliance with other requirements (such as PUWER and the Electricity at Work Regulations). The IMS processes will ensure that the risk is reduced to ALARP for Occupational Accidents. The IMS will implement the Applicant's UK Safety, Quality, Wellbeing, Energy, Environment, Community and Health (SQWEECH) policy. A QHSE Manager will be appointed for the Proposed Development to ensure compliance with health and safety legislation and relevant IMS procedures. This will be supported by regular audits to ensure adherence to IMS procedures.</p> <p>These measures ensure there will be no significant effects.</p>
Major accidents involving High Voltage electricity	No significant effects	EfW CHP Facility, Grid Connection including Walsoken Substation	ID2, ID6, ID8, ID15	<p>The design, route and design standard of the Grid Connection has been informed through consultation with UKPN as statutory consultee and as relevant undertakers. The Grid Connection will be operated by the Applicant.</p> <p>The detailed design, and design standard of the HV cable will be in compliance with the Energy Networks Association relevant technical standards. This includes the design of any crossings or work required in the vicinity of existing pipelines and utilities.</p> <p>The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel. The design will comply with good practice in design including compliance with the Eurocodes and any relevant BSI PDs. The Grid Connection will be owned and operated by the Applicant. This will include the Walsoken Substation on UKPN land.</p>



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Potential Major Accident or Disaster	Changes or effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
				<p>HV supplies are widespread across the country and necessary to maintain the electrical grid, which clearly do not have significant effects on the public.</p> <p>These measures ensure there will be no significant effects.</p>
<p>Major accidents involving the EfW CHP process</p>	No significant effects	EfW CHP Facility, CHP Connection	ID1, ID3, ID6, ID8, ID18	<p>The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel. The design will comply with good practice in design including compliance with the Eurocodes and any relevant BSI PDs.</p> <p>The Applicant will systematically identify potential major hazards during the design process. This will include a number of studies including a Hazard and Operability (HAZOP) study (compliant with IEC 61882) and will also review the adequacy of mitigation measures such as escape routes, secondary containment, and fire suppression. The design process will apply the hierarchy of controls which prioritises inherently safe design over control and mitigation measures.</p> <p>The IMS will include appropriate systems of inspection and maintenance to ensure continued structural integrity and process control. The IMS will include emergency response procedures to respond and mitigate any reasonably foreseeable major accident hazards.</p> <p>The Applicant will comply with the requirements of the <i>Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR)</i> and this will support management of fire/explosion risk through a systematic identification and mitigation of potential hazards.</p> <p>These measures ensure there will be no significant effects.</p>
<p>Major Accidents involving fire</p>	No significant effects	EfW CHP Facility, Walsoken Substation	ID1, ID4, ID5, ID6, ID7, ID8, ID9	<p>The EfW CHP Facility buildings and storage systems will be designed and built to meet industry best practice for fire safety and provided with extensive fire protection and detection systems. This will account for the best practice measures given in ACE Technical Risks Engineering Information Bulletin Guidance Document and designed in accordance with NFPA 850. The EfW CHP Facility site will be provided with a fire ring main and firewater storage tank in line with the design standards proposed.</p>



Potential Major Accident or Disaster	Changes or effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
Major accidents or disasters leading to structural hazards	No significant effects	EfW Facility, Connection, CHP Substation	ID1, ID6, ID7, ID8, ID9	<p>Segregation and separation will be built into the design and layout, and because of this the potential for a fire to spread to a neighbouring site is not considered significant.</p> <p>The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel. The design will comply with good practice in design including compliance with the Eurocodes and any relevant BSI PDs. The Proposed Development will comply with the Building Regulations 2010 (as amended).</p> <p>The Proposed Development will be operated in accordance with an Environment Agency approved Fire Prevention Plan (as a requirement of the Environmental Permit).</p> <p>The monitoring and maintenance of measures to prevent and mitigate fire hazards in operation will be through the IMS, which will be compliant with the requirements of the Regulatory Reform (Fire Safety) Order 2005 ensuring that a Fire Risk Assessment will be undertaken during the design process and maintained throughout the lifecycle. The IMS will cover both safe systems of work but also detailed emergency response procedures to minimise the risk of fire to ALARP.</p> <p>The risk arising from spent firewater is described in the row below titled 'Major accidents or disasters involving the spill of chemicals or waste materials'.</p> <p>These measures ensure there will be no significant effects.</p>
				<p>The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel including civil and structural engineers.</p> <p>The design will account for the expected ground conditions and design loads, the effects of extreme weather and climate change.</p> <p>The design will comply with good practice in structural design including compliance with the Eurocodes and any relevant BSI PDs.</p> <p>The IMS will include appropriate systems of inspection and maintenance to ensure continued structural integrity.</p>



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Potential Major Accident or Disaster	Changes and effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
				<p>The Proposed Development will comply with the <i>Building Regulations 2010</i>.</p> <p>These measures ensure there will be no significant effects.</p>
Major accidents or disasters involving the spill of chemicals or waste materials	No significant effects	EfW Facility	CHP ID1, ID3, ID5, ID6, ID7, ID8, ID10, ID11, ID12	<p>The Proposed Development will be designed in accordance with industry good practice to ensure that primary containment is sufficiently sized and to a recognised standard, and that there is adequate secondary and tertiary containment to minimise the risk of any potential spillage of hazardous materials. Where substances may also pose a hazard to the health of workers, suitable equipment for handling substances and personal protective equipment will be provided. Any flammable substances will have preventative and protective measures applied in accordance with the requirements of the IMS and in line with the fire scenario described above.</p> <p>The Applicant will systematically identify potential major hazards during the design process. This will include a number of studies including a Hazard and Operability (HAZOP) study (compliant with IEC 61882) and will also review the adequacy of mitigation measures such as escape routes, secondary containment, and fire suppression. The design process will apply the hierarchy of controls which prioritises inherently safe design over control and mitigation measures.</p> <p>Where substances may also pose a hazard to the health of workers, suitable equipment for handling substances and personal protective equipment will be provided. An accident management plan will be maintained, including risk assessment and appropriate risk management of all potential releases.</p> <p>The Proposed Development will be operated in accordance with an Environment Agency approved Fire Prevention Plan (as a requirement of the Environmental Permit), which includes requirements for managing firewater run-off.</p> <p>The Emergency Response procedures developed under the IMS will incorporate the Fire Prevention Plan and Accident Management Plan.</p>



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Potential Major Accident or Disaster	Changes or effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
				<p>The EfW CHP Facility and drainage systems will be designed in accordance with industry good practice to ensure that there is adequate secondary and tertiary containment including firewater retention in line with CIRIA C736. The Applicant has prepared an Outline Drainage Strategy (Volume 6.4) to accompany the application.</p> <p>These measures ensure there will be no significant effects.</p>
Major accidents or disasters during construction	No significant effects	All elements (EfW CHP Facility, CHP Connection, Grid Connection, Walsoken Substation, Temporary Construction Compound, Access Improvements and Water Connections)	ID13, ID14, ID15	<p>All activities will be risk assessed and the hierarchy of controls applied to reduce any reasonably foreseeable risks to ALARP. This risk assessment will consider HSE Research Report 834 on Catastrophic Risk in Construction.</p> <p>All construction activities will comply with the CDM Regulations and relevant industry good practice.</p> <p>The route of the Grid Connection has been finalised following consultation with UKPN, National Highways, local highway authorities and HSE. Appropriate local authorities and/or HSE were consulted to ensure all hazardous sites and utilities have been identified and will be consulted to ensure that any crossings or work required in the vicinity of pipelines is undertaken safely prior to work commencing.</p> <p>These measures ensure there will be no significant effects.</p>
External accidents affecting the site population within the Order limits	No significant effects	EfW CHP Facility	ID16	<p>The EfW CHP Facility Site is outside the consultation distances for any sites with Hazardous Substances Consent, Licensed Explosives Site or Major Accident Hazard Pipelines. The HSE has confirmed that they would not advise against the Proposed Development. This embedded facet of the design ensures no significant effects from external major accidents.</p>
Natural disasters affecting the	No significant effects	EfW CHP Facility	ID1, ID17	<p>Lightning protection designed to BS EN 62305 reduces the risk to ALARP. This measure ensures there will be no significant effects.</p> <p>Measures affecting the FRA are described in Chapter 12 Hydrology (Volume 6.2).</p>



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Potential Major Accident or Disaster	Changes and effects	Project Element	Relevant Measures	Embedded measures and influence on assessment
site population within the Order limits				<p>The potential for natural disasters to impact the availability of safety critical personnel and safe operation of the EfW CHP Facility will be addressed in the IMS.</p> <p>These measures ensure there will be no significant effects.</p>
Acts of terrorism affecting the site population within the Order limits	No significant effects	All elements (EfW CHP Facility, CHP Connection, Temporary Construction Compound, Access Improvements and Water Connections. Grid Connection including Walsoken Substation)	N/A	The fundamental nature of the Proposed Development is considered to be low risk. No specific embedded measures.

Note: Where specific legislation, regulations, design standards or approaches are mentioned in the embedded measures, it is intended that this should be interpreted to mean 'to an equivalent or better standard'. If a new design standard (or set of regulations) is published between the application and the finalisation of design, the DCO should not preclude improvements in the design.

17.5 Consideration of optional additional mitigation or compensation

- 17.5.1 No additional mitigation measures are proposed at this stage to further reduce the MA&D effects that are identified in this chapter of the Environmental Statement. This is because all relevant and implementable measures have been embedded into the development proposals and are assessed above in this chapter. These measures are considered to be effective and deliverable and ensure there will be no significant effects arising from Major Accidents and Disasters of the Proposed Development.
- 17.5.2 However, in line with UK Health and Safety regulatory requirements, the risk assessments will be regularly reviewed throughout the Proposed Development’s lifecycle with the objective of continuous improvement.

17.6 Implementation of environmental measures

- 17.6.1 **Table 17.7 Summary of environmental measures to be implemented – relating to MA&D** describes the environmental measures within the Proposed Development and the means by which they will be secured.

Table 17.7 Summary of environmental measures to be implemented – relating to MA&D

ID	Environmental Measure	Responsibility for Implementation	How measure is secured	ES section reference
1	<p>An Integrated Management System (IMS) will be implemented to ensure compliance with all UK Health and Safety, and Environmental legislation. The IMS will be based on the approach used at MVV’s existing facilities, tailored to suit the Proposed Development. This IMS will achieve certification to ISO 9001, ISO 14001, ISO 50001 and ISO 45001 during the first eighteen months of operation such has been achieved at other sites owned by MVV.</p> <p>The IMS will be developed to include risk assessment processes, inspection/maintenance, safe systems of work, management of visitors, emergency response procedures and compliance with all legal or other requirements (such as PUWER, LOLER, DSEAR, RR(FS)O, Electricity at Work and the Management of Health and Safety at Work Regulations). The objective of the IMS will be to ensure that any safety or environmental risks are reduced to ALARP. The IMS will implement the Applicant’s UK SQWEECH policy. A QHSE Manager will be appointed for the Proposed Development to ensure</p>	The Applicant	Environmental Permit	Table 17.6

ID	Environmental Measure	Responsibility for Implementation	How measure is secured	ES section reference
	compliance with health and safety legislation and relevant IMS procedures. This will be supported by regular audits to ensure adherence to IMS procedures.			
2	<p>The design, route and design standard of the Grid Connection has been informed through consultation with UKPN as statutory consultee and as relevant undertakers.</p> <p>The detailed design and design standard of the HV cable will be in compliance with the Energy Networks Association relevant technical standards.</p>	The Applicant	Embedded into the design	Table 17.6
3	<p>The Applicant will systematically identify all potential safety and environmental major hazards during the design process. This will include a number of studies including a Hazard and Operability (HAZOP) study (compliant with IEC 61882) and will also review the adequacy of mitigation measures such as segregation for fire risk escape routes, secondary & tertiary containment and fire suppression.</p>	The Applicant	Environmental Permit	Table 17.6
4	<p>The Proposed Development will be designed and built to meet industry best practice for fire safety of buildings and storage systems, which is given as NFPA 850 and the ACE Technical Risks Engineering Information Bulletin Guidance Document.</p>	The Applicant	Embedded into the design	Table 17.6
5	<p>The Proposed Development will be operated in accordance with an Environment Agency approved Fire Prevention Plan (as a requirement of the Environmental Permit).</p>	The Applicant	Environmental Permit	Table 17.6
6	<p>The design of the Proposed Development will be undertaken by suitably qualified and experienced personnel including civil and structural engineers.</p>	The Applicant	CDM	Table 17.6
7	<p>The design of the Proposed Development will account for the expected ground conditions and design loads, accounting for the effects of climate change.</p>	The Applicant	Embedded into the design	Table 17.6
8	<p>The design of the Proposed Development will comply with good practice in design including compliance with the Eurocodes and any relevant BSI PDs.</p>	The Applicant	Embedded into the design	Table 17.6

ID	Environmental Measure	Responsibility for Implementation	How measure is secured	ES section reference
9	The Proposed Development will comply with the <i>Building Regulations 2010 (as amended)</i> .	The Applicant	Regulatory Requirement	Table 17.6
10	The EfW CHP Facility and its drainage systems will be designed in accordance with industry good practice to ensure that there is adequate secondary and tertiary containment including firewater retention in line with CIRIA C736	The Applicant	DCO Requirement	Table 17.6
11	Where substances may also pose a hazard to the health of workers, suitable equipment for handling substances and personal protective equipment will be provided.	The Applicant	Regulatory Requirement	Table 17.6
12	An accident management plan will be maintained, including risk assessment of all potential releases.	The Applicant	Environmental Permit	Table 17.6
13	All construction activities will be risk assessed with consideration of major accidents and disasters and the hierarchy of controls applied to reduce any reasonably foreseeable risk to ALARP. This risk assessment will consider HSE Research Report 834 on Catastrophic risk in construction.	The Applicant	DCO Requirement Outline CEMP (Volume 7.12)	Table 17.6
14	All construction activities will comply with the <i>Construction (Design and Management) Regulations 2015</i> .	The Applicant	Regulatory Requirement: CDM	Table 17.6
15	The HSE or appropriate utility companies and/or local authorities and utilities have been and will continue to be consulted (as needed) to ensure that any crossings or work required in the vicinity of pipelines will be undertaken safely.	The Applicant	DCO Requirement Outline CEMP (Volume 7.12)	Table 17.6
16	The design, location and layout of the Proposed Development complies with HSE's approach to Land Use Planning.	The Applicant	Embedded in the design	Table 17.6
17	Lightning protection designed to BS EN 62305 reduces the risk to ALARP.	The Applicant	Embedded in the design	Table 17.6
18	The Proposed Development will comply with <i>The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) (as amended)</i> .	The Applicant	Regulatory Requirement	Table 17.6

17.7 Conclusion

- 17.7.1 This chapter presents the relevant environmental measures, and detail on how they will be secured in the DCO to ensure that there will be no significant effects arising from Major Accidents and Disasters associated with the Proposed Development.

