5. Approach to Assessment

5.1 Introduction

5.1.1 As set out in **ES Chapter 1: Introduction**, EIA is a process through which the likely significant environmental effects of a development proposal can be identified and, where possible, adverse effects avoided or mitigated.

5.1.2 The overall aim of this ES is to provide an objective and systematic account of the likely significant environmental effects of the Proposed Development and to assess the ability of the site and surrounding area, including receptors such as people, flora and fauna, to accept those effects.

5.1.3 This chapter describes the overarching methodology adopted for the EIA.

5.2 EIA Screening

5.2.1 The EIA Regulations set out the types of development that must always be subject to an EIA (Schedule 1 development) and other development that will only require assessment if it is likely to give rise to significant environmental effects (Schedule 2 development).

5.2.2 Schedule 1 Part 10 of the EIA Regulations includes waste disposal installations for the incineration or chemical treatment (as defined in Annex I to Directive 2008/98/EC under heading D9) of non-hazardous waste with a capacity exceeding 100 tonnes per day.

5.2.3 The capacity of the Proposed Development exceeds this threshold; therefore it qualifies as EIA development. A formal Screening Opinion was therefore not requested and the decision was taken by the Applicant to undertake an EIA.

5.3 EIA Scoping

5.3.1 On 5 April 2022, a request for a formal EIA Scoping Opinion of BCP Council was submitted on behalf of the Applicant (see **ES Appendix 5.1**). The request outlined the Proposed Development at that time and set out the potential environmental issues to be assessed. An EIA Scoping Opinion was received from BCP Council 14 October 2022 (PREA/22/00049) (see **ES Appendix 5.2**). This confirmed the required scope of the EIA. The Applicant's response to the comments received through the EIA Scoping Opinion is set out in **ES Appendix 5.3** and summarised in the sections below.

5.3.2 In line with the Planning Practice Guidance (PPG), a proportionate approach has been taken with regards to the scope of the ES to ensure focus is given to environmental factors likely to be significantly affected by the Proposed Development (Paragraph: 035 Reference ID: 4-035-20170728 of the PPG).

Technical scope

5.3.3 The following technical assessment work has been undertaken:

- identification of the Proposed Development's site boundary;
- identification of the key characteristics of the Proposed Development and the establishment of the environmental baseline through a series of desk and site studies;

- identification of where there were gaps in the baseline and the further survey work required to address this;
- undertaking of required further survey work;
- consideration of the potential sources and nature of environmental effects through assessment against the established environmental baseline; and
- definition of the assessment methodologies to be used in each Study Area.

5.3.4 Part 1, Regulation 4(2) of the EIA Regulations states that '*the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors:*

a) population and human health;

b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(a) and Directive 2009/147/EC(b);

c) land, soil, water, air and climate;

d) material assets, cultural heritage and the landscape; and

e) *the interaction between the factors referred to in sub-paragraphs (a) to (d).*'

Topics Scoped into the EIA

5.3.5 **Table 5-1** provides a list of the topics that have been scoped into the EIA.

5.3.6 The factors referred to in Regulation 4(2) of the EIA Regulations are addressed as appropriate within these environmental topics.

Table 5-1 Environmental Topics Considered in the EIA

Environmental Topic	ES Chapter
Air Quality	6
Climate Change and Greenhouse Gases	7
Ecology and Nature Conservation	8
Geology, Hydrogeology and Ground Conditions	9
Historic Environment	10
Hydrology	11
Landscape and Visual	12
Noise and Vibration	13
Population and Health	14
Traffic and Transport	15

5.3.7 A series of baseline studies have been undertaken to establish the baseline environment for these topic areas. The baseline and assessment work undertaken as part of preparing this ES is set out within the relevant technical chapters and their technical appendices.

Topics Scoped Out of the EIA

5.3.8 The following topics are scoped out of the EIA on the basis of no likelihood of significant effects:

- Waste;
- Major Accidents and Disasters; and
- Agricultural Land and Soils.

Waste

5.3.9 The Proposed Development is a waste management project, which is being progressed to address existing waste management issues in BCP, Dorset and surrounding areas. Waste is therefore inherent to the Proposed Development and as such has been thoroughly assessed within each technical chapter of the ES. Consequently, a separate assessment chapter on waste is not included in the ES.

5.3.10 In order to address waste management at the construction phase, a Site Waste and Materials Management Plan (SWMMP) will be prepared and approved by the relevant authority.

5.3.11 Some solid residues will be generated as a result of the EfW process. These would be transported offsite and managed in an appropriately licenced waste facility.

Major Accidents and Disasters

5.3.12 When considering the likely vulnerability of a development to major accidents or disasters there are three key criteria, derived from best practice and guidance set out in 'Major Accidents and Disasters in EIA: A Primer', published by the Institute of Environmental Management and Assessment (IEMA, September 2020), to be considered, as set out below:

- Is the development a source of hazard that could result in a major accident and/or disaster?
- Does the development interact with any external sources of hazard?
- If an external man-made or natural hazard occurred, would the presence of the development increase the risk of significant environmental effect(s) to an environmental receptor occurring?

5.3.13 The Proposed Development's location within the UK is such that natural disasters are not considered to represent a likely risk. For example, 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. Furthermore, the topography of the Proposed Development's location is not considered to be sufficiently steep such that a major mass movement disaster could arise.

5.3.14 The Proposed Development will be designed in line with all relevant health and safety legislation and good practice guidance to ensure safe working conditions during construction and operation. These measures will include adequate safety lighting on the chimney, safe design of the internal roads for vehicle and pedestrian movement, security

measures such as CCTV, lighting and fencing, and an acoustic and visual fire and emergency alarm system.

5.3.15 During the operational phase, the EfW CHP Facility will employ a Quality, Health, Safety and Environment Manager (QHSE) to ensure the facility is run safely according to all health and safety legislation.

5.3.16 Policy 20 (Airfield Safeguarding Areas) of the BCP and Dorset Waste Plan, requires the need to demonstrate that the Proposed Development will not give rise to new or increased hazards to aviation. An assessment of the Proposed Development's compliance with safeguarding for Bournemouth Airport has been undertaken and concludes that there will be no conflict between the EfW CHP Facility and the safe operation of the airport. This forms Appendix 2 to the **Planning Statement**.

5.3.17 Accordingly, it is not considered that there are likely to be significant effects, therefore, the ES does not include an assessment on Major Accidents and Disasters.

Agricultural Land and Soils

5.3.18 Soil is an important component of the ecosystem and also has a role as a store of carbon. Its functions can be impaired or lost as a result of development if it is not managed properly. The inherent quality of soil, as distinct to its agricultural value, is recognised in the Government's 'Soil Strategy for England - Safeguarding our Soils' which seeks to encourage the sustainable management of soil resources. Appropriate management of soil resources during construction can help with the re-establishment of soil functions following their storage or movement.

5.3.19 The EIA Scoping Opinion (**ES Appendix 5.2**) from BCP Council identified '*Parts of the development would cross agricultural land. Natural England have advised that an Agricultural Land Classification may be required, if not already available, and an assessment on how agricultural land would be disturbed or lost'*.

5.3.20 As described in in **ES Chapter 2: Site and Local Context**, the EfW CHP Facility Site is previously developed and does not comprise agricultural land. The CHP Connection and DNC Corridor and POC are not located on previously developed land, however the land covered by this element of the Proposed Development is a mixture of scrub, woodland and grassland used for dog walking and it is therefore not in agricultural production. TCC1 is located at the Canford Arena Site, an area previously used for open-air events and storage, which is not in agricultural use. TCC2 is located in a small area of grassland adjacent to Canford Heath, which is not in agricultural use.

5.3.21 Annex 2 of the National Planning Policy Framework (NPPF) defines Best and Most Versatile (BMV) agricultural land as *"Land in Grades 1, 2, and 3a of the agricultural land classification"*. The land does not fall within these classifications, therefore, the Proposed Development will not have any implications on the availability of BMV agricultural land.

5.3.22 Due to the existing non-agricultural land use of the CRP and that of neighbouring land, and the site allocation in the Waste Plan, there will be no potential impacts and effects, such as detrimentally affecting the viability of farming operations, utilising the Proposed Development's location or increasing the likelihood of trespass on agricultural land.

5.3.23 Based on the above, agricultural land and soils has been scoped out of the EIA as a topic in their own right. However, wider aspects of ground conditions and contamination are scoped into the EIA and presented within **Chapter 9: Geology, Hydrogeology and Ground Conditions**.

Geographic Scope

5.3.24 The geographic scope of the EIA includes the physical extent of the Proposed Development; displayed as the Red Line Boundary on **Figure 1.1**. Additionally, the assessment boundary (Study Areas) for individual topic chapters may exceed beyond the Red Line Boundary where necessary for the scope of the assessment. Where identified and relevant, such impacts have been assessed as part of the EIA and are set out and explained in each of the topic chapters.

5.3.25 The geographical extent of the EIA also considers the potential implications of related and un-related development activities and any other land required for development specific infrastructure (e.g., offsite highways improvements) outside the Red Line Boundary.

Temporal Scope

5.3.26 The full detailed phasing of the Proposed Development will be confirmed following grant of planning consent. However, for the purposes of the EIA an illustrative phasing has been used. Should consent be granted in 2023, it is assumed that:

- Construction to commence in Q1 2024;
- Construction period to last for 36 months; and
- Completion and start of operational phase 2027.

5.3.27 The EIA considers impacts arising from both construction and operational phases of the Proposed Development. Whilst elements of the Proposed Development will be redeveloped, replaced and renewed over time, the Proposed Development is designed to have an operational lifespan of approximately 40 years. However it should be noted that it is common for such developments to be operational for longer periods. The decommissioning process is expected to last for one year and would be in accordance with an agreed Decommissioning Plan. The environmental effects associated with the decommissioning phase would be of a similar level to the construction phase, albeit for a lesser duration.

Cumulative Scope

5.3.28 The Planning Practice Guidance: Environmental Impact Assessment (Planning Paragraph: 024 Reference ID: 4-024-20170728: Revision date: 28 07 2017) states the following in relation to the assessment of cumulative effects:

'Each application (or request for a screening opinion) should be considered on its own merits. There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development.'

5.3.29 Schedule 4 of the EIA Regulations requires that the cumulative effects of the Proposed Development should be included within the ES. Usually cumulative effects are considered in three categories - incremental, accumulative and cumulative:

5.3.30 Incremental effects relate to small changes over time by numerous developments potentially giving rise to significant impact. These are incorporated into the baseline and each assessment describes whether the Proposed Development would cause a significant effect or cause another incremental change.

5.3.31 Interactive effects relate to multiple effects from a single development, which may give rise to a potentially significant impact upon a Receptor.

5.3.32 Cumulative effects relate to multiple developments giving rise to significant effects at a Receptor. For example, a number of projects in proximity to each other may give rise to significant landscape and ecological effects cumulatively.

5.3.33 The potential cumulative effects of the Proposed Development, in association with other committed developments both during the construction phase and following completion, are included where relevant as required by the EIA Regulations.

5.3.34 The assessment of interactive effects aims to identify potential impacts on receptors arising from multiple effects. An analysis has been undertaken into specific Receptors or Receptor Groups to identify any predicted residual effects across all of the assessments within this ES. Where one Receptor or Receptor Group are predicted to experience multiple effects, consideration has been given to the interaction of these effects and whether significant interactive effects are likely to arise as a result. Further details are presented in the technical chapters (**ES Chapters 6 – 15**) and within **ES Chapter 16: Assessment Summary and Mitigation Implementation**.

5.3.35 Assessments of likely cumulative effects is contained within the relevant technical chapters of the ES.

5.3.36 **Table 5-2** and **Figure 5.1** show existing or approved schemes that produce an uplift of more than 1,000 sqm of mixed-use floor space or over 80 residential units. A 5km threshold has been applied on the basis that beyond this distance significant cumulative effects are not considered to be likely, therefore primary consideration has been given to schemes within this radius. However, consideration has also been given to committed schemes beyond this radius where the size or nature of the scheme could result in cumulative effects on a wider geographical scale. Schemes below the threshold, but near the Proposed Development, have also been considered.

5.3.37 These committed schemes form the basis for the assessment of potential cumulative effects alongside high level consideration of related offsite infrastructure provision (highways and drainage) so far as is reasonable taking into account the availability of information at the time of assessment.

Table 5-2 Cumulative developments considered in the EIA

Map ref.	Site Name	Address	Application ref.	Units	Distance (m)	Details
1	**Magna Road, Bournemouth**	Magna Business Park, Land south of Magna Road, Bournemouth, Dorset, BH11 9NB	APP/21/01186/F	3	99	Industrial Unit
2	**Wheelers Lane, Bournemouth**	Land off Neville Gardens, Wheelers Lane, Bournemouth, Dorset, BH11 9UL	APP/21/00620/F	45	372	45 Houses
3	**Arena Way, Wimborne**	Energy Site Control Centre, Arena Way, Wimborne, Dorset, BH21 3BW	APP/21/00400/F	N/A	399	Solar Farm
4	**Vantage Way, Poole**	Fulcrum Business Park, Vantage Way, Poole, Dorset, BH12 4NU	APP/20/00252/F	1	1581	Light Industrial & Office/Warehouse

Map ref.	Site Name	Address	Application ref.	Units	Distance (m)	Details
5	**Vantage Way, Poole**	Unit 1, The Fulcrum Centre, Vantage Way, Poole, Dorset, BH12 4NU	APP/20/00418/F	3	1631	Office/Light Industry/Storage
6	**Mannings Heath Road, Poole**	14 and land adjacent, Mannings Heath Road, Poole, Dorset, BH12 4NQ	APP/21/00309/F	10	2111	10 Industrial/Warehouse Units
7	**Leigh Road, Wimborne**	Land South of Leigh Road, Wimborne, Dorset, BH21 2DA	3/21/1566/RM	174	2312	174 Houses
8	**Leigh Road, Wimborne**	Park Farm, Leigh Road, Wimborne, Dorset, BH21 2DA	3/21/0840/FUL	75	2494	63 Houses & 12 Flats
9	**Station Terrace, Wimborne**	Wimborne Market, Station Terrace, Wimborne, Dorset, BH21	3/21/1556/FUL	101	3080	66 Sheltered Flats/32 Bungalows/9 Houses
10	**Hillbourne Site**	Kitchener Crescent, Poole, Dorset, BH17 7HX	APP/21/00748/F	110	3454	81 Houses & 29 Sheltered Flats
11	**81 Sopers Lane, Poole**	81 Sopers Lane, Poole, Dorset, BH17 7EN	APP/21/00497/F	3	3779	Industrial/Warehouse/Office
12	**Cobham Road, Wimborne**	North Peartree Business Centre, Ferndown Industrial Estate, Vulcan Way, Wimborne, Dorset, BH21 7PT	3/21/0674/OUT	26	3928	26 Industrial Units
13	**23 Whittle Road, Wimborne**	Whittle Power, Land on 23 Whittle Road, Ferndown Industrial Estate, Wimborne, Dorset, BH21 7RP	3/20/1945/FUL	N/A	4173	Energy Facility
14	**15 Whittle Road, Wimborne**	15 Whittle Road, Ferndown Industrial Estate, Wimborne, Dorset, BH21 7RL	3/21/0740/FUL	2	4249	2 Starter Industrial Units
15	**35 Cobham Road, Wimborne**	35 Cobham Road, Ferndown Industrial Estate, Wimborne, Dorset, BH21 7PF	3/20/0880/FUL	2	4525	Warehouse & Office
16	**Chapel Lane**	Eco Sustainable Solutions Ltd, Chapel Lane, Parley Christchurch, BH23 6BG	8/21/0207/FUL	N/A	6267	Energy Recovery Facility

NOTE: –The assessment of cumulative effects in **ES Chapter 15: Traffic and Transport** is based upon the committed schemes identified for the **Transport Assessment (TA) Appendix 15.1** through the pre-application process to ensure consistency with the agreed transport modelling.

5.3.38 Unless stated otherwise within a technical chapter, the EIA is based upon the following scenarios:

- Baseline/Future Baseline;
- Baseline/Future Baseline + Proposed Development; and

- Baseline/Future Baseline + Proposed Development + Committed Development.

5.4 EIA Methodology

5.4.1 The assessments presented in the ES consider the potential for significant environmental impacts to affect the baseline conditions as a direct/indirect result of the Proposed Development.

5.4.2 A description of the aspects of the environment likely to be significantly affected by the Proposed Development is a requirement of the EIA Regulations. The baseline conditions are defined as the current state of the environment (within Schedule 4, Section 3 of the EIA Regulations) and how it may develop in the future in the absence of the proposals and with certain committed developments included. In order to forecast potential future effects it is necessary to make predictions. To ensure that predictions are as accurate as possible, a description of the methods used to assess the effects of the Proposed Development is also required by the EIA Regulations.

5.4.3 Unless specifically stated otherwise, the assessments have been undertaken in accordance with best practice guidelines published by the relevant professional bodies. Each technical chapter in this report provides full details of the baseline and assessment methodology employed for that topic area alongside terminology used in the context of that technical discipline.

5.4.4 Where there is no topic specific guidance available, a generic framework of assessment criteria and terminology has been developed to enable the prediction of potential effects and their subsequent presentation. The development of this framework has drawn upon the extensive experience of Savills and the project team of undertaking EIA.

Assessment parameters

5.4.5 In order for the significant environmental effects of the Proposed Development to be identified and assessed, it is necessary to clearly identify all the components of the Proposed Development.

5.4.6 As the planning application is in full detail, the EIA assesses the detailed designs for the Proposed Development.

5.4.7 The full list of assessment drawings is contained in **ES Chapter 3: Description of the Proposed Development**.

Generic Assessment Framework

5.4.8 Each technical chapter of the ES details the methodology used for its assessment. Unless otherwise specified in the specific technical chapter, the ES generally follows the generic assessment framework detailed below.

Receptor Sensitivity and Impact Magnitude

5.4.9 'Receptors' are those aspects of the environment sensitive to changes in baseline conditions. The sensitivity of a particular receptor depends upon the extent to which it is susceptible to such changes.

5.4.10 'Impact magnitude' is determined by predicting the scale of any potential change in the baseline conditions. Where possible, magnitude is quantified, however where this is not possible, a fully defined qualitative assessment is undertaken. The assessment of

magnitude is carried out taking account of any inherent design mitigation in the proposal that forms part of the development description.

Table 5-3 Receptor Sensitivity

Sensitivity of Receptor	Typical Description
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Table 5-4 Magnitude of Impact and Typical Descriptions

Magnitude of Impact		Typical Description
Major	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
No Change		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Effect Significance

5.4.11 As shown in **Table 5-5**, the effect significance is determined by combining the predicted magnitude of impact with the assigned sensitivity of the Receptor. Where two terms are given (e.g., Slight-Neutral) the effect significance is on the boundary between the two assessed effects.

Table 5-5 Effect Significance

	Magnitude of Impact (degree of change)					
Environmental value (Sensitivity)		No Change	Negligible	Minor	Moderate	Major
	Very High	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or Moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

Table 5-6 Definition of Significance

Significance	**Definition**
Very Large	Effects at this level are material in the decision-making process.
Large	Effects at this level are likely to be material in the decision-making process.
Moderate	Effects at this level may be material to the decision-making process but less likely so, than Large or Very Large effects'.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

5.4.12 As required by EIA Regulation 6, the likely significant effects of the Proposed Development are described as:

- Adverse or beneficial;
- Direct or indirect;
- Temporary or permanent;
- Reversible or irreversible; and
- Cumulative.

5.4.13 Adverse effects are undesirable and result from negative impacts. Beneficial effects are desirable and result from positive impacts.

5.4.14 Each effect will have a source originating from the Proposed Development, a pathway and a receptor. Effects which operate in this direct way are regarded as direct effects. Effects on other Receptors via subsequent pathways are regarded as indirect effects.

5.4.15 The definition of the level of significance at which a significant impact arises will be provided within the topic method section of each chapter of this ES. Unless stated otherwise, effects of moderate significance or above are considered to be significant in EIA terms.

Initial and Residual Effects

5.4.16 The EIA process enables the likely significant effects of a proposed development to be identified so that, where possible, adverse effects predicted to arise as a result of the proposal can be avoided or mitigated through the adoption of suitable measures. Additionally, enhancement measures can be incorporated to maximise the beneficial effects of the development. The adoption of mitigation and enhancement measures results in initial and residual effects. These can be defined as:

- Initial Effects: Effects occurring as a result of the Proposed Development prior to the adoption of any additional mitigation or enhancement measures; and
- Residual Effects: Effects occurring as a result of the Proposed Development taking into account the adoption of identified additional mitigation or enhancement measures.

5.4.17 Additional mitigation and enhancement is defined as a measure that is additional to the Proposed Development as initially proposed. Measures that design out significant effects that form an inherent part of the Proposed Development as proposed, known as inherent mitigation, are considered in the initial impact, for example, many environmental constraints, such as flood risk, must be designed out of a project for it to be viable and it would be impractical to consider the Proposed Development without such measures in place.

Technical Chapter Structure

5.4.18 Each technical specialist has prepared their technical chapter to comprise of:

- Methodology used, including assumptions and limitations;
- Baseline analysis;
- Prediction of potential impacts;
- Mitigation and/or enhancements proposed; and
- Evaluation of residual impacts.

5.4.19 Where appropriate and necessary, detailed information or baseline studies are presented in the appendices of the ES (Volume 2) and referred to as relevant within the specific chapter.

5.5 Limitations and Assumptions

5.5.1 The following key assumptions have been made in preparing the ES:

- each of the baseline reviews were based on information readily available at the time of the assessment, the published documents referenced and the site visits undertaken;
- all legislative requirements will be met. Therefore, any standard guidance which is provided to ensure minimum legal compliance is not considered to constitute mitigation in the EIA. The assessment of effects prior to the adoption of mitigation measures will assume that all legislative requirements will be met;
- the assessment of effects prior to the adoption of mitigation measures will assume that the Proposed Development will be constructed in accordance with industry standard techniques. Such techniques will therefore not be considered as mitigation;
- where further assumptions have been made for individual topic assessments these have been identified within the relevant topic chapters; and
- any limitations or uncertainties associated with impact prediction or the sensitivity of receptors due to the absence of data or other factors will give rise to uncertainty in the assessment. Any such limitations have been referred to in the relevant technical chapters of the ES.