

Cottam Solar Project

Preliminary Environmental Information Report: Chapter 19: Waste

Prepared by: Lanpro
June 2022



Contents

19	WASTE	3
19.1	INTRODUCTION	3
19.2	CONSULTATION	3
19.3	POLICY CONTEXT	4
19.4	ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA	6
19.5	BASELINE CONDITIONS	6
19.6	ASSESSMENT OF POTENTIAL EFFECTS	6
19.7	IN-COMBINATIONS EFFECTS	10
19.8	CUMULATIVE EFFECTS	10
19.9	MITIGATION MEASURES	10
19.10	RESIDUAL EFFECTS	11

Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.

Preliminary Environmental Information Report: Chapter 19: Waste

Prepared by:

Name: Jane Crichton

Title: Associate Director

Approved by:

Signature:



Name: Ian Douglass

Title: Director

Date: June 2022

Revision: 03

19 Waste

19.1 Introduction

- 19.1.1 This chapter of the PEIR considers the likely waste streams arising from the Scheme and any likely significant effects during the construction, operation and decommissioning phases.
- 19.1.2 The chapter describes the methodology, the existing baseline scenario and the nature of change. It identifies the effects upon receptors arising as a result of the Scheme and the significance associated with the identified effects based on the sensitivity of those receptors to change and magnitude of any change that will likely occur.
- 19.1.3 The chapter presents as much information as is possible at this stage in the Scheme's development. Where information is not yet available, the chapter sets out how it will be dealt with in the ES at the DCO application stage.

19.2 Consultation

- 19.2.1 An EIA Scoping Report was submitted to The Planning Inspectorate (PINs) in January 2022 with the scoping opinion received in March 2022. Table 19.1 provides a summary of the waste related comments made by Ins and relevant stakeholders and the responses to these in this PEIR.

Table 19.1 Summary of Consultation Responses

Consultee	Summary of Response	How response has been addressed	Reference to further information
The Planning Inspectorate	The Applicant proposes to scope out the whole aspect. The Inspectorate does not agree to scope waste out as the potential remains for significant effects to occur both from the Proposed Development alone and cumulatively with other developments during construction and decommissioning. The ES should include an assessment of waste impacts where	A waste chapter has been prepared for the PEIR and will form part of the ES.	Please refer to the whole of chapter 19.

	significant effects are likely to occur and include and outline what measures, if any, are in place to ensure that panels and any associated components are able to be diverted from the waste chain.		
Nottinghamshire County Council	Advised there are no existing waste facilities within the vicinity of the site whereby the proposed development could cause an issue in terms of safeguarding existing management facilities (as per Policy WCS10 of the Waste Local Plan).	Consideration of the location of existing waste facilities	Section 19.5

19.3 Policy Context

19.3.1 The Waste Framework Directive¹ provides the framework for the management of waste across the EU. The Waste (England and Wales) Regulations 2011 (as amended)² transposed the Waste Framework Directive into domestic law in England and Wales.³ The framework requires waste prevention programmes and waste management plans that apply the waste hierarchy. The waste hierarchy is shown below in Figure 19.1.

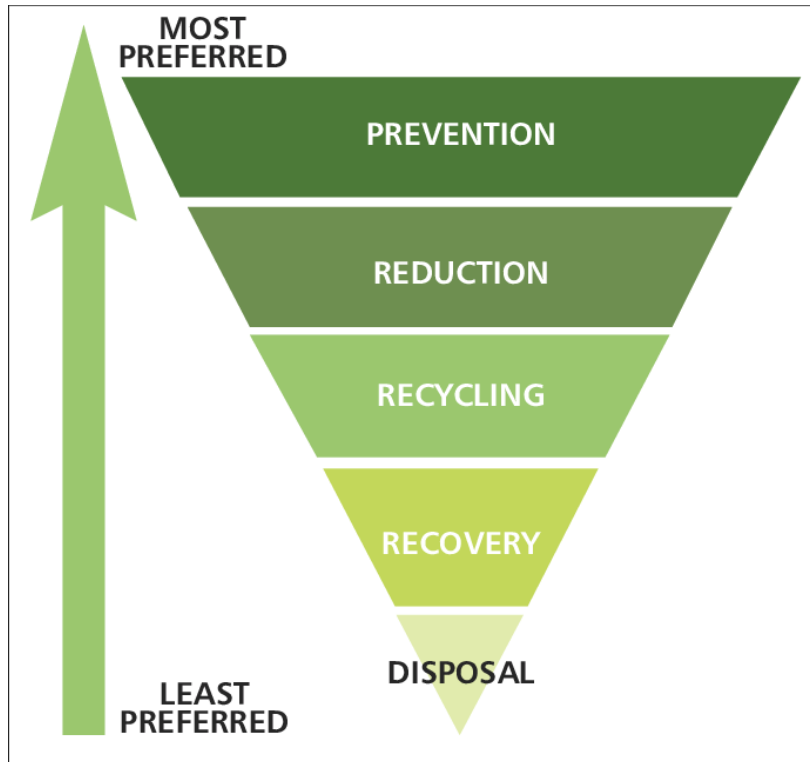
19.3.2 The hierarchy will be applied throughout the lifetime of the Scheme during construction, operation and decommissioning.

¹ Directive 2008/98/EC on waste (as amended) (Waste Framework Directive).

² The Waste (England and Wales) Regulations 2011 (as amended).

³ On 31 December 2020 the UK exited the "implementation period" provided for by the European Union (Withdrawal) Act 2018 (Withdrawal Act 2018). Sections 2-3 of the Withdrawal Act 2018, as amended, provide that direct EU legislation, and EU-derived domestic legislation, continue to have effect in domestic law after that date. In summary, the interpretation of any retained EU law is to be the same as it was before that date, subject to the necessary amendments set out in the Waste (Miscellaneous Amendments) (EU Exit) (No. 2) Regulations 2019

Figure 19.1 Waste Hierarchy



- 19.3.3 *Overarching National Policy Statement for Energy (EN-1)* sets out in Section 5.15 Resource and Waste Management the strategy that should be taken regarding reducing the amount of waste where possible and trying to use at a resource. Paragraph 5.15.6 states that “*The applicant should set out the arrangements that are proposed for managing waste produced and prepare a Site Waste Management Plan. The arrangement described and Management Plan should include information on the proposed waste receiver and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.*”
- 19.3.4 It goes on to further state that applicants should seek to minimise the volume of waste produced and the volume of waste sent to disposal. Construction best practices should be utilised in relation to storing of materials in an adequate and protected place on site to prevent waste.
- 19.3.5 *Lincolnshire Minerals and Waste Local Plan (June 2016)* sets out the key principles of waste management in the County up to 2031. The policies in the Local Plan focus on the provision of waste facilities.

19.3.6 *Nottinghamshire Waste Local Plan (2002) and Waste Core Strategy (2013)*. The Local Plan has saved policies with it partly replaced by the Core Strategy. The Core Strategy sets out the approach to waste management in Nottinghamshire. The Council are working on preparing a new Local Plan which will replace both of these documents.

19.4 Assessment Methodology and Significance Criteria

19.4.1 Waste streams and quantities arising from the Scheme will be estimated based on industry standards, activities and material requirements during the construction, operation and decommissioning phases. The processing of these quantities has been considered in the assessment to identify whether any significant effects from the generation of waste are anticipated. These activities are considered in relation to the Waste Hierarchy.

19.4.2 The quantities of construction waste arisings cannot be estimated at this stage, as these will be based on a number of factors that include construction methodologies and the nature of the materials used. In the PEIR a qualitative description on the waste is provided. Further information will be presented in the ES supporting the DCO application, which will be based on details such as the number of panels to be used in the Scheme.

19.5 Baseline Conditions

19.5.1 The appropriate waste carriers and landfill sites will be determined by the appointed contractor at the pre-construction phase. The closest current authorised landfill sites which are located in proximity to the Scheme are in Gainsborough landfill, Whisby landfill and North Hykeham landfill. There are no existing waste facilities located in Nottinghamshire within the vicinity of the Scheme.

19.6 Assessment of Potential Effects

19.6.1 A description of the potential waste streams and a qualitative estimate of volumes is presented in his chapter. In addition to this, the CEMP, will set out how waste will be managed on-site, and opportunities to recycle waste will be explored.

Construction

19.6.2 The main construction activities associated with the Scheme are as follows:

- Piling of steel frame mounting systems in rows across the Sites;
- Mounting of the solar panels onto the frame system;
- Digging of trenches for laying of underground electrical cables;

- Creation of concrete foundation/bases as required for structures such as substations;
- Creation of access tracks within the Sites;
- Installation of mesh and timber post fencing and palisade fencing; and
- Installation of CCTV camera poles.

19.6.3 The majority of the construction equipment will be delivered to site for assembly, installation and connection. The types of waste streams associated with the removal of waste material during construction are summarised below in Table 19.2.

19.6.4 A qualitative estimate on the volume of waste materials is made in Table 19.2 given the information that is known at this stage.

Table 19.2 Estimated waste associated with construction and decommissioning

Waste	Destination	Estimated Volume
Paint	Authorised recycling or landfill	Limited
Solvents	Authorised recycling or landfill	Limited
Chemical cans and containers	Authorised recycling or landfill	Limited
Cardboard	Authorised recycling or landfill	Moderate - anticipated to be from packaging
Wood	Authorised recycling or landfill	Moderate - anticipated to be from packaging
Plastic	Authorised recycling or landfill	Moderate - anticipated to be from packaging
Metals	Authorised recycling	Limited

19.6.5 All waste transported offsite will be taken to the appropriately licensed sites for the relevant materials. The operators receiving any waste materials resulting from the Scheme will be subject to their own consenting procedures which are applicable at the time of the construction stage.

19.6.6 Where any of the equipment that is removed from the Sites still have an ongoing lifespan, the equipment will be removed and reused in their current form. Where there is no ongoing lifespan, they will be taken from Sites and then disposed of at a suitable waste recycling centre.

19.6.7 Any reusable waste materials that are generated as part of the Scheme such as soil which is excavated from trenches, roads, compound areas and foundations will be re-used wherever possible.

19.6.8 There may be a requirement to remove some soils from the Scheme for treatment or disposal, if it is found to be contaminated and cannot be treated on site. Any toxic and hazardous material will also be required to be dealt with by an authorised carrier and by a suitably qualified contractor as necessary. With the use of appropriate control measures, no significant effects are anticipated at this stage.

19.6.9 An assessment on the capacity of waste management infrastructure in the vicinity of the Scheme will be undertaken ahead of the DCO application submission. The likely anticipated waste stream quantities will be included to determine the likely effects caused on the receptors. At this stage with the information that is available, and the comments provided by statutory stakeholders that a waste capacity issue is not anticipated, the potential for a moderate effect during construction has been identified.

Operation

19.6.10 During the operational phase of the Scheme the Sites will be unmanned with personnel monitoring the site remotely. Waste arising during the operation phase is expected to be substantially less than during the construction and decommissioning phase and could include the following:

- Welfare facility waste;
- Waste metals;
- Equipment that requires replacing;
- Waste associated with maintenance; and
- General waste (paper, cardboard, wood etc).

19.6.11 A full description of waste arising during the operational phase will be provided in the ES. During the operational phase of the Scheme, waste arisings are expected to be minimal and as they will be considered to be commercial waste this will be managed by appropriately permitted carriers and facilities in line with the appropriate environmental permits and requirements. It is assumed that the local waste infrastructure has the capacity for this. As such it is anticipated at this time, that it will have a negligible effect

Decommissioning

19.6.12 The decommissioning of the Scheme will include the removal of all equipment, except the underground cables connecting the Sites to the grid connection point, and the reinstatement of the land returned to the landowners. Further details can be found within the Decommissioning Statement which can be found at **Appendix 4.4**.

19.6.13 The main decommissioning wastes associated with the Scheme are expected to be as follows:

- Solar panels and their associated mounting structures;
- Breaking up of concrete foundation/bases;
- Rubble from any access tracks within the Sites;
- Electrical equipment including batteries, cables and inverters;
- Welfare facility waste; and
- Waste metals and wood.

19.6.14 The types of waste streams associated with the removal of waste material during construction and decommissioning is summarised below in Table 19.3. A qualitative estimate on the volume of waste materials is made in Table 19.3 given the information that is known at this stage.

Table 19.2 Estimated waste associated with decommissioning

Waste	Destination	Estimated Volumes
Solar PV equipment	Authorised recycling or landfill	Significant
Electrical equipment	Authorised recycling or landfill	Significant
Energy Storage	Authorised recycling or landfill	Moderate
Metal	Authorised recycling or landfill	Significant
Concrete	Authorised recycling or landfill	Moderate
Rubble	Authorised recycling or landfill	Moderate

19.6.15 Standard good practice for waste management will be implemented during decommissioning. As noted previously, the contractor will seek to reduce waste and reuse any of the decommissioned items as far as possible to reduce the waste going to landfill.

19.6.16 Prior to decommissioning, opportunities to minimise waste as far as possible will be explored. Possibilities to re-use or recycle materials will be explored before resorting to landfill options. There is a new industry emerging for recycling solar panels. This will be explored, in addition to any resale of any operational panels. Further details will be provided in the ES that is submitted with the DCO application.

19.6.17 Any hazardous materials that need to be removed from the Scheme during decommissioning suitably qualified contractors will be appointed to decommission

and remove any items as necessary. The type of hazardous materials that may form part of the Scheme include lithium-ion batteries and transformer oil.

- 19.6.18 An assessment on the capacity of waste management infrastructure in the vicinity of the Scheme will be undertaken ahead of the DCO application submission. The likely anticipated waste stream quantities will be included to determine the likely effects caused on the receptors. At the decommissioning stage the Scheme will produce additional waste than at the construction phase due to the equipment that will need to be removed. At this stage with the information that is available, and the unknowns around the process and level of recycling processes which will be available at the time of decommissioning a major moderate effect is anticipated

19.7 In-combinations Effects

- 19.7.1 The in-combination effects of waste generated from the Scheme will be fully assessed in the ES and likely to consist of:
- Potential combined effects of waste on traffic;
 - Potential combined effects of all four of the generating stations, substation and energy storage being constructed at the same time and the traffic generation; and
 - Potential combined effects of waste on human health.

19.8 Cumulative Effects

- 19.8.1 A long list of cumulative developments is provided in **Appendix 2.2** of the PEIR. This list will be refined in due course through consultation with statutory consultees and will be presented and assessed in the ES. It is assumed that each of the sites considered as part of the cumulative projects will deal with their waste streams in line with the waste hierarchy.
- 19.8.2 Within the ES consideration will be given to the West Burton Solar Project and Gate Burton, being the closest of the potential cumulative schemes. Consideration will be given to them being constructed and decommissioned at the same time. The capacity of the recycling and landfill sites in the vicinity will be considered along with the proposed waste stream quantities and the significance of the effects on the receptors.

19.9 Mitigation Measures

- 19.9.1 The Scheme will seek to minimise and design out waste streams where possible. Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed in line with

the waste hierarchy and detailed through the CEMP. A draft CEMP is included within the PEIR at **Appendix 4.3**.

- 19.9.2 The CEMP will be secured through a DCO Requirement, prior to the commencement of construction and decommissioning phases. A Decommissioning Statement has been prepared as part of the PEIR in **Appendix 4.4** and an Outline Decommissioning Plan will be submitted with the DCO application.

19.10 Residual Effects

- 19.10.1 At this stage of the EIA, residual effects have not been fully assessed. A full assessment will be included in the ES that is submitted with the DCO application.
- 19.10.2 Based on the information currently available, it is anticipated that through the use of mitigation measures as suggested above (e.g use of suitably qualified contractors, recycling and reuse waste wherever possible) that there will not be any significant residual effects.