



Neutral Citation Number: [2020] EWHC 1626 (TCC)

Case No: HT-2019-000149

Case No: HT-2019-000269

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
TECHNOLOGY AND CONSTRUCTION COURT (QBD)

Rolls Building
London, EC4A 1NL

Date: 25/06/2020

Before:

MRS JUSTICE O'FARRELL DBE

Between:

ENGIE FABRICOM (UK) LIMITED

Claimant

- and -

MW HIGH TECH PROJECTS UK LIMITED

Defendant

Lynne McCafferty QC (instructed by Freeths LLP) for the **Claimant**
Simon Hargreaves QC & Tom Owen (instructed by Clyde & Co LLP) for the **Defendant**

Hearing dates: 10th, 11th & 12th December 2019
Additional evidence submitted by the Defendant on 17th January 2020
Letter in response from Claimant dated 20 January 2020

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I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

“Covid-19 Protocol: This judgment was handed down by the judge remotely by circulation to the parties’ representatives by email and release to Bailii. The date and time for hand-down is deemed to be Thursday 25th June 2020 at 10:30am”

.....

Approved Judgment**Mrs Justice O’Farrell:**

1. This is the trial of consolidated claims by the claimant (“Fabricom”) against the defendant (“MW”) for £367,723.85 plus VAT to enforce two adjudication decisions.
2. The issue raised in these proceedings is whether the primary activity at an energy from waste plant is power generation or waste treatment.
3. The claims arise out of the installation of a fluidised bed gasification plant at Cleveland Street, Kingston Upon Hull (“Energy Works Hull”). MW was engaged by Energy Works (Hull) Ltd (“EWHL”) to carry out the design and manufacture of the plant. Fabricom was engaged by MW as a sub-contractor to carry out the installation of the plant (“the Sub-contract”). Disputes arose between the parties as to payments due under the Sub-contract. Those disputes were referred to adjudication and Fabricom obtained awards in its favour.
4. MW disputes the claims on the grounds that the adjudicator lacked jurisdiction. Its case is that the Sub-contract was for the installation of plant on a site where the primary activity is power generation. Section 105(2)(c) of the Housing Grants, Construction and Regeneration Act 1996 as amended (“the 1996 Act”) provides that such works are not construction operations for the purposes of the 1996 Act. Therefore, there was no statutory or contractual right to refer the disputes to adjudication.
5. Fabricom’s case is that the Sub-contract was for the installation of plant on a site where the primary activity is the disposal and thermal treatment of waste. Electricity is generated from the thermal treatment of the processed waste but that is ancillary to the main activity of waste treatment. Therefore, the works comprise the execution of construction operations within the ambit of the 1996 Act and there was a valid contractual provision for adjudication.

The plant

6. The Energy Works Hull facility is located on three adjacent parcels of land at Cleveland Street and Dalton Street, Kingston upon Hull.
7. The facility is a fluidised bed gasification facility. The gasification or incineration process uses refuse derived fuel (“RDF”) to produce steam.
8. RDF is produced from waste. The waste comprises municipal solid waste (household waste and similar waste from offices and hotels), and commercial / industrial waste (generated from facilities including manufacturing, industrial processes and service-based enterprises). Recyclable materials, such as paper, metals and plastics, are extracted from the waste and separated manually or through a materials recovery facility (“MRF”). Organics, such as food and garden waste, are extracted for treatment in an anaerobic digestion (“AD”) facility or compost plant. The non-recycled, residual waste is incinerated, buried in landfill or processed further through a MRF to remove more recyclable materials and produce RDF.
9. An accepted definition of RDF is that published by the Department for Environment, Food and Rural Affairs:

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“Refuse derived fuel (RDF) consists of residual waste that is subject to a contract with an end-user for use as a fuel in an energy from waste facility. The contract must include the end-user’s technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF.”

10. The steam produced by gasification of the RDF and combustion of the resulting syngas propels steam turbines to produce electricity for export to the National Grid. The plant is a baseload power plant, that is power is made available by the energy producer to meet power demands by consumers.
11. The operator of the plant receives income from three sources: (i) gate fees for the RDF paid by the suppliers; (ii) payments for the export of electricity to the National Grid; and (iii) various grants and subsidies. The level of the gate fees for the RDF is fixed by reference to factors such as contract duration, spot prices, quality and calorific value. The plant was awarded a Contract for Difference (“CfD”), an agreement pursuant to which a subsidy is provided for renewable energy. The plant was also awarded a grant under the European Regional Development Fund (“ERDF”) for renewable energy.

The EPC Contract

12. By a contract dated 20 November 2015 MW was engaged by EWHL as the contractor under an EPC Contract to carry out the design, manufacture, supply, installation, taking over and completion of a fluidised bed gasification power plant, capable of processing RDF produced by commercial, industrial and municipal solid waste (“the EPC Contract”).
13. A general description of the EPC Contract works is set out in paragraph 1.1 of Schedule 1:

“The Contractor shall provide a complete gasification facility receiving RDF prepared by others from waste. The scope of Works shall include all Site infrastructure, buildings, roads, services, offices, amenities, workshops, stores, plant, equipment, landscaping, security fencing and all associated amenities and facilities. This Schedule must be read in conjunction with all parts of Schedule 22.

The Site is located at Cleveland Street and Dalton Street, Hull, HU8 8AD, as more particularly defined by the areas shown on the Site drawings included in Appendix B to this Schedule 1 (Description of the Works).

The Works shall comply in every respect with the conditions attached to the Planning Consent and the Environmental Permit and any separate undertakings made within the Environmental Application, provided such undertakings do not contradict or conflict with the Environmental Permit. The contractor accepts responsibility for satisfying the Environment Agency with regard to the applicable criteria in the Environmental Permit.

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The Site Layout shown in Schedule 22E reflects the project as presented to the planning committee and was granted consent to be built.

The Contractor shall be responsible for ensuring compliance with those conditions of the Planning Consent, which are stated as being the responsibility of the Contractor as identified in the planning responsibility matrix contained in Schedule 22F...”

14. Paragraph 1.2 of Schedule 1 states:

“The Contractor shall assist the Purchaser with the interfaces with the following third parties and authorities, including but not limited to:

- (1) Environment Agency;
- (2) Planning Authority and building control department;
- (3) local electricity distribution network operator (DNO);
- (4) Low Carbon Contract Company (LCCC);
- (5) Ofgem and/or other agencies in charge of managing the Contract for Difference requirements ...”

15. Paragraph 1.3 states:

“The Works or parts thereof shall comply in all respects with all the relevant legislation including the health & safety regulations, the CDM Regulations and all relevant Environment Agency guidance as may need to be satisfied in accordance with the Environmental Permit or other express requirements of the Environment Agency specific to the Works...”

The contractor shall include in his Contract Price all design submissions, reports, adaptations, connections, calibrations and any other requirements needed for testing to satisfy the Environment Agency that the Plant complies with the requirements of the IED and its Environmental Permit.”

16. Schedule 16 sets out the performance tests and procedures required to achieve the Performance Test Certificate and the Acceptance Certificate for the plant. Paragraph 16.3 specifies the requirements for the reliability test to demonstrate that the plant is capable of sustained operation, with the specified maximum continuous rating (“MCR”), in a manner that meets the performance guarantees.

17. MCR is defined by paragraph 16.4.11 as:

“the maximum mass flow rate of steam in tonnes per hour from the final superheater delivery connection, at the guaranteed delivery conditions of pressure and temperature, which the boiler

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is capable of maintaining between plant shutdowns without use of the auxiliary burners.”

18. The provisions at paragraph 16.3 include:

“During the Reliability Test the Works shall at all times run in compliance with each of the following:

- this Contract;
- the Industrial Emission Directive;
- the Planning Consent;
- the Environmental Permit; and
- all other Applicable Regulations.”

19. The Reliability Test Criteria include demonstration that the plant is “Available”, defined in paragraph 16.3.1.1 as:

“For the purposes of the Reliability Test, the Plant shall be considered “Available” if:

- (1) the net electrical export exceeds 90% of the guaranteed net electrical export as per the Guaranteed Performance Level (Performance Acceptance Criteria) specified in Schedule 17 (Performance guarantees and damages for failure); and
- (2) the monthly average syngas GCV [Gross Calorific Value] is minimum 2.0 MJ/m³ in each month or part thereof at the reference conditions of 25⁰C and 0.1 MPa.”

20. Paragraph 16.4 provides that the tests shall demonstrate that the flue gas treatment plant operates within the emission limits specified in the Environmental Permit.

21. Paragraph 16.5 provides that the plant must meet the required Availability Guarantees.

22. Schedule 17 sets out the performance guarantees and damages for failure, including:

“The Plant shall qualify as a Recovery facility with an R1 number of 0.65 or greater, in accordance with the Waste Framework Directive, when operating at MCR.”

23. Paragraph 17.1.1 provides:

“It is recognised that for the purpose of performance acceptance testing, it is not practical to accurately assess the fuel throughput and energy content by weighing, sampling and analysis. Neither is it possible to directly measure the heat release by the use of

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the fuel. The only measurable parameter which directly relates to the heat release from the fuel is therefore the heat transferred to the boiler feedwater and delivered by the boiler as live steam.

The guarantee is therefore the heat release from the fuel, using the steam boiler as a calorimeter, and determining the heat release by the loss assessment method in accordance with BS EN 12952-15.

The heat release is determined against reference conditions dictated by the Contractor's design and stated in Schedule 16..."

24. Paragraph 17.3 of Schedule 17 sets out absolute performance guarantees, failure to meet which entitle EWHL to reject the plant, including the following:

“(5) ACT – the plant is demonstrated to the satisfaction of Ofgem and/or other agencies in charge of managing the Contract for Difference requirements that it meets the definition of Advanced Combustion Technology as defined in the Contract for Difference under the full range of firing conditions shown on the Firing Diagram and under the full range of input conditions... Compliance.

(6) Syngas GCV – minimum syngas GCV at the reference conditions of 25⁰C and 0.1 MPa, measured with Plant operating at 85% MCR and fuel NCV between 10 and 11.0 MJ/kg... 2.0[MJ/m³].

(7) Waste Framework Directive – the Plant (while operating at 100% MCR) shall meet the requirements of the Waste Framework Directive R1 and be classed as Recovery under the full range of input conditions... R1>0.65.”

25. Paragraph 17.4 identifies the economic performance of guarantees, including a minimum guaranteed net electrical export. Failure to meet those guarantees gives rise to a liability for liquidated damages.

26. Schedule 22A sets out the performance and functional specification, including the RDF specification at paragraph 1.3:

“The Contractor shall design, manufacture and deliver the Plant based on the RDF parameters described below...

The material supply to the facility will be refuse derived fuel (RDF). RDF may be derived from either municipal solid waste (MSW) or commercial and industrial waste (CIW). The Purchaser shall have an appropriate quality management system in place to ensure that the RDF is in accordance with Table 22A.2.0 – Incoming RDF Specification.”

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27. Table 22A.2.0 sets out the RDF parameters for which the plant must be designed, including percentage of non-combustible material, percentage of non-combustible ferrous and non-ferrous metal material, RDF size distribution, net calorific value (NCV) and moisture content.
28. Paragraph 1.3.3 – Mechanical Pre-treatment Plant provides:
- “The MPT plant will receive loose and baled RDF inputs as specified in clause 1.3.2 above.
- The Contractor shall design, manufacture and deliver a mechanical pre-treatment (MPT) plant to treat the incoming RDF as defined in clause 1.3.2 and Table 22A.2.0 above and to:
- reduce the size of the RDF to meet the requirements in Table 22A.2.2
 - reduce the percentage of non-combustible ferrous and non-ferrous metals, non-combustible glass and non-combustible inert materials in the incoming RDF to produce a fuel to the gasifier as defined for these parameters in Table 22A.2.2 and 22A.2.3 below.”
29. Table 22A.2.2 specifies the size range and distribution of the fuel fed to the gasifier.
30. Table 22A.2.3 specifies a net calorific value of 10-16 MJ/kg for the fuel supplied to the gasifier, provided that the fuel meets the parameters set out in Table 22A.2.0.

The Sub-contract

31. Under the Sub-contract entered into by the parties in 2017, Fabricom was engaged by MW for the installation of the gasification plant as part of the EPC Contract works.
32. The Sub-contract incorporates the general terms of the Institute of Chemical Engineers (“ICChemE”) Form of Subcontract (“the Yellow Book”), fourth edition 2013, subject to the Special Conditions, Specifications A to D and Schedules 1 to 21.
33. Paragraph 1.1 of Schedule 1 to the Sub-contract contains a description of the project:
- “The Hull Energy from Waste Project involves the delivery of a complete gasification facility receiving RDF prepared by others from waste ...
- The Works inclusive of the Subcontract Works shall comply in every respect with the conditions attached to the Planning Consent and the Environmental Permit ...”
34. Paragraph 1.3 of Schedule 1 contains a general description of the Sub-contract works:
- “The Subcontract Works shall comprise the installation of a Gasification Plant as part of the Main Contract Works. The Gasification Plant is being manufactured by Outotec USA Inc,

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and shall be delivered to site and issued to the Subcontractor for installation ...

The Subcontract Works shall include but not be limited to taking delivery, install, test and handover for commissioning all free issue materials and equipment comprising the Gasification Plant as described in the Appendix C documentation; and the provision of all necessary management, site supervision, labour, plant, crantage, welding consumables and gases ...”

35. Site is defined in the Special Conditions as:

“the areas within which the Works are to be carried out as identified on the drawing referred to in Schedule 1.”

36. Specification A describes the plant to be installed under the EPC Contract as:

“a mechanical pre-treatment plant and a gasification plant, incorporating a complete gasification, combustion, heat recovery, flue gas treatment plant and steam turbine generation set.”

37. The dispute resolution provisions of the Sub-contract include adjudication. Clause 47.1 states:

“This Clause 47 applies only to the extent (if any) required by the Construction Act 1996, as amended.”

38. Clause 47.2 states:

“... either party shall have the right to refer any dispute or difference ... as to a matter under or in connection with the Subcontract to adjudication and either party may, at any time, issue a Notice (a ‘Notice of Adjudication’) to the other stating his intention to do so. The ensuing adjudication shall be conducted in accordance with the edition of the ‘Adjudication Rules’ published by IChemE current at the time of service of the Notice of Adjudication.”

39. Clause 47.8 states:

“The decision of the adjudicator shall be binding until the dispute is finally determined by legal proceedings, by arbitration or by agreement.”

Background to the dispute

40. On 4 March 2019 EWHL served a notice of termination in respect of the EPC Contract. MW disputed the validity of the termination and that dispute is the subject of separate proceedings.

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41. A dispute arose between MW and Fabricom as to sums due under the Sub-contract in respect of interim payment application 22. On 4 March 2019 Fabricom gave notice of an intention to refer the dispute to adjudication (“Adjudication No.1”). Ms Gaynor Chambers was appointed as the adjudicator.
42. MW participated in the adjudication but subject to a jurisdictional challenge based on its case that the Sub-contract works did not fall within the meaning of construction operations for the purposes of the 1996 Act.
43. On 11 April 2019 the Adjudicator published her decision in Adjudication No.1, requiring MW to pay to Fabricom the sum of £27,062.25 plus interest and VAT, together with her fees and expenses.
44. MW failed to pay the sums determined by the Adjudicator.
45. On 29 April 2019 Fabricom commenced legal proceedings to enforce the award in Adjudication No.1 (Claim HT-2019-000149).
46. Fabricom issued an application for summary judgment. On 27 June 2019 that application came before Jonathan Acton Davis QC, sitting as a Deputy High Court Judge. On 17 July 2019 the Judge handed down judgment, reported at [2019] EWHC 1876 (TCC), giving MW leave to defend, conditional on payment into court of the total sum claimed of £41,766.30.
47. In about April 2019 a further dispute arose between the parties in respect of interim payment application 24.
48. On 24 May 2019 Fabricom gave notice of an intention to refer the dispute to adjudication (“Adjudication No.2”). Ms Gaynor Chambers was appointed as the adjudicator.
49. MW participated in the adjudication but subject to the same jurisdictional challenge, namely, that the Sub-contract works did not fall within the meaning of construction operations for the purposes of the 1996 Act.
50. On 11 July 2019 the Adjudicator published her decision in Adjudication No.2, requiring MW to pay to Fabricom the sum of £314,647.49 plus interest and VAT, together with her fees and expenses.
51. MW failed to pay the sums determined by the Adjudicator.
52. On 2 August 2019 Fabricom issued legal proceedings to enforce the award in Adjudication No.2 (Claim HT-2019-000269).
53. By a consent order dated 15 August 2019, the claims were consolidated. Pleadings were served, setting out the jurisdictional issue before the Court, and directions were given for the trial.

The issue

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54. Clause 47 of the Sub-contract provides for the parties to refer to adjudication any disputes arising at any time. However, clause 47.1 provides that the adjudication agreement applies only to the extent (if any) required by the 1996 Act.
55. Section 108 of the 1996 Act sets out the right to refer disputes to adjudication:
- “(1) A party to a construction contract has the right to refer a dispute arising under the contract for adjudication under a procedure complying with this section.
- For this purpose “dispute” includes any difference.
- (2) The contract shall include provision in writing so as to –
- (a) enable a party to give notice at any time of his intention to refer a dispute to adjudication ...
- (3) the contract shall provide in writing that the decision of the adjudicator is binding until the dispute is finally determined by legal proceedings, by arbitration (if the contract provides for arbitration or the parties otherwise agree to arbitration) or by agreement.”
56. Section 104 of the 1996 Act defines the construction contracts to which it applies:
- “(1) In this Part a “construction contract” means an agreement with a person for any of the following –
- (a) the carrying out of construction operations ...”
57. Section 105 defines construction operations for the purposes of the 1996 Act:
- “(1) In this Part “construction operations” means, subject as follows, operations of any of the following descriptions ...
- (b) construction, alteration, repair, maintenance, extension, demolition or dismantling of any works forming, or to form, part of the land, including (without prejudice to the foregoing) ... industrial plant ...
- (c) installation in any building or structure of fittings forming part of the land, including (without prejudice to the foregoing) systems of heating, lighting, air-conditioning, ventilation, power supply ...
- (2) The following operations are not construction operations within the meaning of this Part ...

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- (c) assembly, installation or demolition of plant or machinery ... on a site where the primary activity is –
 - (i) ... power generation ...”

58. The contractual right to adjudicate is limited to disputes falling within the ambit of the 1996 Act. The statutory right to adjudicate any dispute is limited to construction contracts as defined by sections 104 and 105. Therefore, the contractual agreement for the parties to refer disputes to adjudication is limited to disputes arising in respect of construction operations within the meaning of the 1996 Act.
59. It is common ground between the parties that the Sub-contract works comprised the “assembly, installation or demolition of plant or machinery”. It is also common ground that the activities on the site include both waste management and power generation. The issue is whether power generation is the primary activity on the site so as to bring the Sub-contract works within the exception set out in section 105(2)(c)(i).
60. If the primary activity on site is waste management (or, at least, power generation is not the primary activity), then the Sub-contract works constitute construction operations within the meaning of the 1996 Act. It follows that clause 47 of the Sub-contract conferred jurisdiction on the adjudicator to determine the disputes and the adjudication awards can be enforced.
61. If the primary activity on site is power generation, the Sub-contract works do not constitute construction operations within the meaning of the 1996 Act and the adjudicator did not have jurisdiction to determine the disputes the subject of the claim.

The parties’ submissions

62. Ms McCafferty QC, leading counsel for Fabricom, submits that the primary activity of the site is disposal and thermal treatment of waste. Power generation is merely a secondary or ancillary activity:
 - i) The purpose of the Energy Works Hull facility is to divert waste from landfill. The energy from waste industry exists in order to divert waste from landfill. Power generation is only a secondary benefit of this process.
 - ii) The local planning authority determined that the primary purpose of the facility was the disposal and thermal treatment of waste under the planning legislation.
 - iii) The Environment Agency determined that the primary purpose of the facility was the disposal and thermal treatment of waste under the relevant waste legislation.
 - iv) The majority of the physical activities on site, over most of the physical area of the site, are either exclusively waste treatment or have a dual purpose; only the generation of electricity in the steam turbine generator is exclusively power generation.
 - v) Although the facility obtained funding for generation of renewable energy through the ERDF from the Department for Communities and Local

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Government and subsidies through the CfD scheme, those funding arrangements simply reflect the fact that the facility generates some renewable energy. They are not determinative of the issue in this case, namely, the primary activity on site.

63. Ms McCafferty submits that relevant case law shows that when drafting section 105(2) of the Act, Parliament took great care in selecting the particular sectors of the construction industry that were to be exempt from the improvements introduced by the Act. Therefore, the exclusions should be construed narrowly. There is no evidence to suggest that Parliament intended to deny the energy from waste industry the benefits of the Act.
64. Mr Hargreaves QC, leading counsel for MW, submits that the primary activity of the plant is power generation:
- i) The plant takes in fuel and generates electricity from that fuel, which it exports to the National Grid.
 - ii) The EPC Contract is for a power station. It is a base load generator and the functional set up on the site is for power generation. There is a fuel specification for the RDF and pre-treatment takes place before delivery to site. The fuel is a traded commodity and there is no fixed waste source for the RDF. The RDF is used to produce heat, which is applied to water to produce steam, which turns the turbine to generate electricity. The EPC Contract contains an absolute performance guarantee for the plant to qualify as a recovery facility within R1 with a value of 0.65 or greater in accordance with the Waste Framework Directive, i.e. used principally as a fuel or other means to generate energy.
 - iii) The business of the owner and operator of the facility, EWHL, is production of electricity.
 - iv) The overwhelming emphasis in the planning documents was generation of low carbon and renewable electricity, to meet the UK's obligations under the Climate Change Act 2008 and avoidance of 46,000 tonnes of greenhouse gases, in comparison with avoidance of 8,880 tonnes of greenhouse gases through diversion of waste from landfill.
 - v) The funding arrangements for the facility indicate that its primary purpose is power generation. The CfD subsidy awarded is for low carbon electricity generating stations. The ERDF grant for the facility was made under the renewable electricity jurisdiction and not for waste management.
65. Mr Hargreaves submits that the 1996 Act excludes from its ambit operations on a site where the primary activity is power generation. It could have created an exception to that exclusion where the fuel was derived from waste but it did not do so.

Evidence

66. The following factual witnesses provided evidence as part of the proceedings:
- i) Christopher Nesbitt, project manager at Fabricom;

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- ii) Neil Robinson, the UK operations and commercial director of MW;
 - iii) Roy Meakin, director of energy projects for MW.
67. Each party relied on the evidence of an expert. Fabricom's expert was Judy Henderson, a chartered engineer, and a principal consultant in waste and energy at Royal Haskoning DHV. Ms Henderson's opinion is that the main purpose and primary activity of the Energy Works Hull plant is the thermal treatment of waste, with power generation being a secondary purpose or ancillary activity. In her report she drew attention to the fact that the local planning authority treated the planning application for the plant as a waste management issue. Further, when granting a permit under the Industrial Emissions Directive ("IED"), the Environment Agency determined that the plant was a waste incineration plant with the thermal treatment of waste as its main purpose. Ms Henderson read the Information Memorandum as presenting the plant to potential investors as a solution to the UK's waste disposal needs. She cautioned that the references to renewable energy in the publicity materials should be read having regard to the fact that renewables are more acceptable to the public than waste management. Ms Henderson considered that although the EPC Contract contained performance requirements regarding power generation rather than waste treatment, the two are directly related and therefore this was not indicative of the main purpose of the plant. Her view is that the plant is essentially a solution to avoid waste going to landfill and power generation is a secondary or subsidiary activity.
68. MW's expert was Max Krangle, managing director and director of research intelligence at NRG Expert. Mr Krangle's opinion is that the primary purpose of the plant is the generation of electricity. In his report he derived support for his view from his understanding that RDF is a commodity used to generate electricity; the plant does not have material recovery facilities on site and the MPT undertakes limited treatment of the RDF to improve its quality and size. He considered that the Waste Framework Directive would have applied to the plant regardless whether its primary purpose was power generation or waste treatment and therefore categorisation under the Directive is not of assistance. The plant operates in the deregulated UK electricity market and EWHL is listed at Companies House with SIC Code 35110: "Production of Electricity". Mr Krangle relied on the fact that (i) the financial model for the plant was based on 74% of the revenues derived from power sales and subsidies, as against 26% derived from gate fees for the RDF, (ii) the plant was eligible for the CfD subsidy and (iii) the ERDF grant was based on its status as a renewable energy plant.
69. Fabricom has raised concerns of principle regarding Mr Krangle's evidence. Mr Krangle is not an engineer and does not profess any expertise in the waste management or energy from waste industries. He is a legally qualified expert in energy pricing. In his report as served, Mr Krangle included information gleaned from Wikipedia and other websites, without referencing the source of such information. This was contrary to paragraph 3.2 of Practice Direction 35, which provides that an expert's report should make clear which of the facts stated in the report are within the expert's own knowledge. This breach of duty to the court was exacerbated by his reliance on such information in the opinion section of his report, contrary to paragraph 2.4 of the practice direction which provides that experts should make it clear when a question or issue falls outside their expertise. Such a practice is deprecated by this Court. It is unhelpful and falls short of the high standards expected from experts providing their professional opinion in legal proceedings. I accept that this was not done with the intention of misleading the

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Court but it could have been avoided easily by following the practice direction. Mr Krangle acknowledged the fault and provided a schedule to his report, identifying the sources of the quotations used. It does not undermine those parts of his opinion that are based on his knowledge of the energy pricing market but it serves to highlight the gaps in Mr Krangle's expertise in the fields of engineering and waste management.

Applicable legal principles

70. The exclusions in section 105(2) must be construed to give proper effect to the purpose of the Act: *ABB Power Construction Ltd v Norwest Holst Engineering Ltd* [2001] 17 Con.LJ 246 per HHJ Humphrey Lloyd QC:

“[12] ... The Act was intended to put right problems that were perceived to exist. It is well known that the Act legislates for only a small number of the reforms or changes in practice that were thought to be required (some of which will not be eradicated by passing new laws). Accordingly not only must it be assumed that the Act was carefully drawn up but it is also plain that great care was taken in selecting the construction operations that were to be exempt and in defining the circumstances where they might be found. Parliament and the Ministers responsible were informed by the discussions prior to the relevant sections (or clauses) being presented to Parliament, by consultations within the industry, sections of which must have had compelling arguments for exemption, and above all, no doubt, by the inquiries and soundings by the Department of the Environment (as it was then known) which had unrivalled knowledge of the construction industry. A most thorough investigation was evidently carried out for otherwise the Government and Parliament could not have been convinced that certain sectors of the construction industry were already so well organised that no regulation of any of their contracts or sub-contracts (at whatever level or tier) was needed. Indeed one cannot be but impressed by the detail of the work done, presumably by officials by the DOE: drilling for oil and gas is excluded but drilling for water (even if it is ultimately to be treated) is not; a project for tunnelling to lay a sewer (even if it is going to a sewage works) or to construct a railway has to be regulated but not a project requiring a tunnel for minerals; installing plant for nuclear processing, and power generation, or for water and effluent treatment is excluded but not plant for an incinerator. The wide immunity given to work in, for example, the water, oil and gas industries must be seen as is a tribute to them (and for all who carry out construction work for them) either for the absence of malaises which had been found to bedevil others, such as the prevalence of disputes and the presence of "pay when paid" clauses, or for the fact that the reforms required by the Act were not needed or had been carried out (as Judge Thornton recorded in paragraph 29 of his judgment in ABB v Palmer). Moreover it is two years since the Act came

into force and no alteration has been thought necessary under the powers given by section 105(3) (with one exception which is not material to the present case).

[13] Mr Blackburn submitted that section 105 (2) should be read as a whole. I agree. It must also be read in the context of sections 104 and 105(1). In my judgement section 105(2) when compared with section 105(1) therefore shows that it was the intention of Parliament that exception should be given by applying an additional and different test: was the object of the construction operation to further the activities described in section 105(2)(c) (and in paragraphs (a) and (b)) since in those industries or commercial activities it was not thought necessary that at any level there need be a right to adjudicate or to payment as provided by the Act. Subsection 105(1) provides conventional descriptions of various kinds of work or services. Paragraph (d) of subsection 105(2) does the same. In contrast the remainder of the subsection, whilst outlining an operation, qualifies it by reference to the ultimate purpose for which the operation is required... paragraph (c) makes explicit the need to identify the site or location of the activity and to ensure that it is the primary or dominant activity since of course the activities listed may be ancillary to the principal activity. The reason must in my judgment lie in the purpose of the legislation ...”

71. The construction of sections 105(1) and 105(2) of the Act was considered in *Cleveland Bridge (UK) Ltd v Whessoe-Volker Stevin Joint Venture* [2010] BLR 415 per Ramsey J at [45]:

“... the operations described in section 105(2) can generally be brought within the description of operations in section 105(1) so that the intention was to exclude a specific operation from the more general description of operations. The provisions of sections 105(2)(a) to (c) are aimed at excluding certain particular operations either generally or in specific industries. For those industries, instead of saying that all operations which would otherwise be construction operations are excluded, the reference is to particular operations on sites where the primary activity is one of the industries. The exclusion is therefore limited to those particular operations. The definition in section 105(2) has not been broadened by the use of such words as "*operations which form an integral part of, or are preparatory to, or are for rendering complete, such operations...*", as has been done in section 105(1)(e). In addition for the reasons set out in North Midland v Lentjes, the phrase "*assembly, installation... of plant or machinery*" in section 105(2)(c) should be construed narrowly by applying it only in cases where the work was assembly or installation of plant or machinery. All of those observations would suggest that the word "erection" in section 105(2)(c) should be given a narrow meaning.

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72. The basis of the excluded industries was considered by Akenhead J in *Savoie v Spicers Ltd* [2015] Bus LR 242 at [15]:

“One can thus break down these definitions into what are (Section 105(1)) and are not (Section 105(2)) to be considered as "construction operations". Thus, it can be seen that construction and engineering works are generally covered by the definition but certain types (for instance nuclear processing, power generation and water or effluent treatment works) are excluded. The reasons for the exclusions from the ambit of the HGCR are historical and, as appears from the Parliamentary debates on the Bill, the arguments of various interest groups persuaded Parliament that they should be excluded from its ambit. There is no particular logic in their exclusions other than that the industries in question were considered to be sufficiently important and (possibly) strategic to justify exclusion...”

73. The case of *Severfield (UK) Ltd v Duo Felguera UK Ltd* (2015) 163 Con LR 235 (TCC) concerned a hybrid contract, that is, works comprising construction operations under the 1996 Act but also works that were excluded from the scope of the 1996 Act pursuant to section 105(2). Having referred to the *Cleveland Bridge* case, Coulson J (as he then was) stated:

“[62] All of the difficulties here, in both the old and the new proceedings, can be traced back to s.105 of the 1996 Act and the legislature's desire to exclude certain industries from adjudication. A review of the debates in *Hansard* reveal that Parliament was aware of the difficulties that these exceptions would cause, but justified them on the grounds that (i) adjudication was seen as some form of 'punishment' for the construction industry from which (ii) the power generation and some other industries should be exempt, because 'they had managed their affairs reasonably well in the past'.

[63] I consider that both of these underlying assumptions were, and remain, misconceived. Adjudication, both as proposed in the Bill and as something that has now been in operation for almost 20 years, is an effective and efficient dispute resolution process. Far from being a 'punishment', it has been generally regarded as a blessing by the construction industry. Furthermore, it is a blessing which needed then - and certainly needs now - to be conferred on all those industries (such as power generation) which are currently exempt. As this case demonstrates only too clearly, they too would benefit from the clarity and certainty brought by the 1996 Act.”

74. More recently, in *C Spencer Limited v MW High Tech Projects UK Limited* [2020] EWCA Civ. 331 (CA), a case concerning this plant but on a different issue, Coulson LJ stated:

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“[1] The twin purposes of the Housing Grants, Construction and Regeneration Act 1996, as amended by the Local Democracy, Economic Development and Construction Act 2009 (together referred to as "The Act") was to improve cash flow in the construction industry, and to streamline its dispute resolution process. The former aim was achieved through mandatory provisions relating to interim payments, payment notices and the like, and the latter through a new, compulsory scheme of construction adjudication. The Act has been, on any view, a considerable success.

[2] Unfortunately, the Act is not as comprehensive as it might have been. It was suggested during the Parliamentary debates that the then Government was (in the words of Lord Howie of Troon) "got at by some big, powerful, important interests in what are called the process industries. They yielded to those pressures and in so doing lost sight of the aim of the Bill." Whatever the reason for it, many contracts for works which, on any sensible definition, are construction operations, were excluded from the ambit of the Act...”

75. There is a powerful argument for the ambit of the adjudication provisions in the 1996 Act to be reconsidered, following more than twenty years of statutory adjudication and having regard to developments in construction-related industries. Statutory adjudication is widely considered to be a success throughout the construction industry. It is recognised that there will always be residual injustices where a party is forced to make disputed payments to another without the benefit of a full trial but the advantages of early dispute evaluation and payment far outweigh the disadvantages of an interim finding that later proves to be wrong. However, as currently enacted, the purpose of section 105(2) is to exempt certain industries from the mandatory adjudication and payment regimes imposed by the 1996 Act. One of the exempt industries is the power generation industry.
76. The material test in this case is whether power generation is the primary activity at the site. The works will not fall within the section 105(2) exception if power generation is merely a secondary or ancillary activity: *ABB Zantingh Limited v Zedal Building Services Limited* [2001] BLR 66 (TCC) per HHJ Bowsher QC at [13]; *Mitsui Babcock Energy Services Limited* [2001] SLT 1158 (CS, Outer House) at p.1161F.
77. Identifying the primary activity at the site is a question of fact: *Laker Vent Engineering Ltd v Jacobs E&C Ltd* [2014] EWHC 1058 (TCC) per Ramsey J at [66]-[70]; *ABB v Zedal* (above) per HHJ Bowsher QC at [18]; *Conor Engineering Limited v Les Constructions Industrielle de la Mediterranee* [2004] BLR 212.
78. In determining that question of fact, it is convenient to consider the factual and expert evidence in respect of the following material factors in this case:
 - i) the regulatory framework and policy background;
 - ii) the Local Planning Authority’s decision, granting planning permission for the plant;

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- iii) the Environmental Agency's grant of a permit for the facility under the IED;
- iv) operations on the site, having regard to the requirements of the EPC Contract and the Sub-contract;
- v) the financial model for the plant, the sources of investment capital and income from the plant, including the CfD subsidy and the ERDF grant.

Regulatory framework and policy background

- 79. The Climate Change Act 2008 imposes a duty on the Government to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline. As originally enacted, and at the time of the development of the facility, this target was stated to be "80% lower than the 1990 baseline".
- 80. The EU Waste Framework Directive 2008/98/EC dated 19 November 2008 sets out policy and measures to prevent or reduce the adverse impacts of waste, through the waste hierarchy of prevention, recycling, recovery and disposal:

"Whereas

- (19) The definitions of recovery and disposal need to be modified in order to ensure a clear distinction between the two concepts, based on a genuine difference in environmental impact through the substitution of natural resources in the economy and recognising the potential benefits to the environment and human health of using waste as a resource.
- (20) This Directive should also clarify when the incineration of municipal solid waste is energy-efficient and may be considered a recovery operation.
- (31) The waste hierarchy generally lays down a priority order of what constitutes the best overall environmental option in waste legislation and policy, while departing from such hierarchy may be necessary for specific waste streams when justified for reasons of, inter alia, technical feasibility, economic viability and environmental protection.
- (37) It is necessary to specify further the scope and content of the waste management planning obligation, and to integrate into the process of developing or revising waste management plans the need to take into account the environmental impacts of the generation and management of waste. Account should also be taken, where appropriate, of the waste planning requirements laid down in Article 14 of Directive 94/62/EC and of the strategy for the reduction of biodegradable waste going

to landfills, referred to in Article 5 of Directive 1999/31/EC.”

81. Article 3 includes the following definitions:

“(1) ‘Waste’ means any substance or object which the holder discards or intends or is required to discard.

...

(9) ‘Waste management’ means the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.

(10) ‘Collection’ means the gathering of waste, including the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility.

...

(14) ‘Treatment’ means recovery or disposal operations, including preparation prior to recovery or disposal.

(15) ‘Recovery’ means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II sets out a non-exhaustive list of recovery operations.

...

(19) ‘Disposal’ means any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I sets out a non-exhaustive list of disposal operations.”

82. Article 4 sets out the waste hierarchy in order of priority as follows:

“(a) prevention;

(b) preparing for re-use;

(c) recycling;

(d) other recovery, e.g. energy recovery; and

(e) disposal.”

83. Article 6 provides that:

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“Certain specified waste shall cease to be waste within the meaning of point (1) of Article 3 when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions:

(a) the substance or object is commonly used for specific purposes;

(b) a market or demand exists for such a substance or object;

(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and

(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts...”

84. Article 23 requires Member States to require any establishment or undertaking intending to carry out waste treatment to obtain a permit from the competent authority, which in the UK is the Environment Agency.

85. Annex I includes in the list of disposal operations:

“D10 Incineration on land.”

86. Annex II includes in the categories of recovery operations:

“R1 Use principally as a fuel or other means to generate energy. ...

This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:

- 0,65 for installations permitted after 31 December 2008 ...”

87. The Waste Framework Directive was enacted in the UK through the Waste (England and Wales) Regulations 2011 (“the Waste Regulations”).

88. The Waste Regulations impose on the Government an obligation to publish its waste management policy. In 2014 the Department for Environment Food and Rural Affairs (“DEFRA”) produced a policy document entitled “Energy from Waste – a guide to the debate” in which it identified government policy as follows:

“Government’s main focus is on preventing waste in the first place or, where it does arise, ensuring it is viewed as a valuable resource, ideally reusing or recycling it. However, it is also Government policy that efficiently recovering energy from residual waste has a valuable role to play in both diverting waste from landfill and in energy generation. In recent decades, the use

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of fossil fuels such as gas, oil and coal have been contributing to climate change and it is necessary to find ways to generate energy through other means.”

89. At the time of the development of the facility, the relevant local waste strategy was the Joint Sustainable Waste Management Strategy Review developed by Kingston upon Hull City Council and the East Riding Yorkshire Council, published in 2006 and updated in 2012. This document set out the strategy, aims and targets for waste collection, recycling and disposal in the local area during the period 2006 to 2020. The stated strategy included:
- “Deal with waste in the most sustainable way by moving waste management practice up the waste hierarchy.
 - Ensure the area is well served by an integrated network of waste management facilities.
 - Divert biodegradable waste from landfill.”
90. The above documents establish the legislative and policy framework for the management of waste and energy generation. Central to the policy is the waste hierarchy, which prioritises energy generation and other waste recovery operations above waste disposal. Of significance, the distinction between the recovery and disposal categories is drawn by reference to the primary purpose for which the waste is treated. Recovery is defined as an operation in which the principal result is a useful purpose for the waste, such as energy generation, at which point the waste ceases to be waste within the meaning of the Waste Framework. Disposal is defined in negative terms as an operation which is not recovery, even where a secondary consequence of the operation is energy generation.
91. Mr Nesbitt of Fabricom provided two witness statements and gave oral evidence at trial. In his first statement, Mr Nesbitt explained that the key reason behind the project was the need to deal with waste from Hull and surrounding East Riding of Yorkshire in accordance with the 2012 Waste Management Strategy, namely, to divert waste away from landfill. However, he did not rely on his first witness at the hearing and that evidence was removed from his second witness statement, which stood as his full evidence for the trial. Mr Nesbitt confirmed in evidence that he has no knowledge as to the source of the RDF used in the plant. In cross-examination, he stated that he was not aware of any obligation in the planning consent, under any permit or pursuant to any contract, requiring EWHL to use waste from Hull or East Riding at the plant.
92. Mr Robinson of MW was not required to be cross-examined and his statement was treated as read. He explained in his statement that although the Information Memorandum dated April 2014 referred to various sources of feedstock supply for the plant, including biomass fuels (woodchip), in fact there are no plans now to use woodchip as fuel. During commissioning of the plant, RDF feedstock was sourced by EWHL from Grantham, Lincolnshire. Prior to termination of the EPC Contract, the proposed RDF suppliers for the plant identified sources from South Shields, Dewsbury, Nottingham, Burton, Oldbury, Widnes, Small Heath and Trafford Park.

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93. Thus, the factual evidence indicates that the plant was not developed or intended to be operated in furtherance of any particular waste or energy policy, such as the Joint Waste Management Strategy, albeit that it was consistent with that strategy.

Planning permission

94. The developer of the project was C Spencer Ltd (“CSL”). In June 2011 CSL applied for planning permission. The additional information to supplement the planning application form described the development as follows:

“The proposals are for an energy park that generates electricity and biomethane from biodegradable material and renewal sources through low carbon energy generation facilities providing up to but not exceeding 25.5MWe and 900,000 therms of gas energy, comprising of:

A 25 MWe Advanced Gasification plant which will gasify Solid Recovered Fuel (SRF) produced onsite from commercial, industrial and municipal sources, the end product of In Vessel Composting, pre-processed SRF and processed waste wood. These materials will be gasified to produce electricity for the purpose of exporting it [to] the national grid...”

In response to the question: “Is the proposal a waste management development?” CSL ticked the box marked “Yes”.

95. As part of the planning application, a climate change assessment was produced, which compared the carbon emissions for fossil fuel power plants with the gasification plant and stated:

“The main purpose of the proposed development is to generate electricity and gas rather than as a waste disposal facility. However, a positive consequence is the diversion of waste from landfill...”

96. The environmental statement prepared for the planning application stated:

“The UK needs around 30-35 Giga Watts over the next two decades to replace power station retirements and meet rising electricity demand, as the economy grows. The Climate Change Act (2008) sets a legally binding target for the UK to cut greenhouse gas emissions by at least 80% by 2050 against the 1990 baseline ... As a consequence, the Government is encouraging the generation of power from renewable sources via various [policies] ... The Proposed Development will not only work towards meeting the increasing energy demand but will facilitate the generation of the energy required through the use of new cleaner technology. It will contribute up to 25.5 MWe towards Hull’s target to provide 39 MWe renewable energy to the national grid by 2021. The Proposed Development will mean that material that would normally be disposed to landfill will be

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utilised as feedstock ... contributing to ... [the reduction of] material sent to landfill...

Key beneficial impacts associated with the scheme include:

- Energy generation through the use of new, cleaner technology;
- Contribution of up to 25.5 MWe towards Hull's target ... carbon savings of 51,140;
- Diversion of material from landfill ...”

97. Planning permission was granted. The notification letter dated 20 October 2011 described the development as:

“the Development of an energy works consisting of various buildings and plant (such as silos, conveyor belts, air cooled condensers, weighbridges and stack – 70m [230ft] high) which will produce sustainable electricity and biomethane through Advanced Gasification (25Mwe), Anaerobic Digestion (900,000 therms) and Solar Photovoltaics (0.5Mwe)...”

98. The explanatory document published to explain the planning permission granted contained the following information:

“Energy works (integrated waste energy facility) development

The proposed development is an integrated waste facility consisting primarily of waste disposal facility that would also include the installation of the following low carbon energy generation facilities, providing up to but not exceeding 25.5 megawatt electrical output (MW) and 900,000 therms of gas, as follows:

1. The anaerobic Digestion (AD) plant...
2. An Advanced Gasification plant (25MW), which will use a variety of fuels including Solid Recovered Fuel (SRF) (produced on site from commercial, industrial and municipal sources), the end product of In-Vessel Composting, pre-processed SRF, and processed waste wood. It is anticipated that the Gasification plant will process 24,000 kilograms (kg) of material per hour to produce steam, which in turn will be used to power a genitor to export electricity to the national grid; and
3. Roof mounted solar panels...

The Dalton Street site will receive up to 365,000 tonnes per annum (TPA) consisting of waste unprocessed commercial/industrial/municipal material and unprocessed

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organic material ... the Cleveland Street site will receive up to 115,000 TPA consisting of raw material for the operation of the facilities and solid recovered fuel...

The gasification plant proposed is a disposal facility, and so ranks alongside landfill. It is not efficient enough to be classified as an energy recovery facility...

The purpose of this proposal is to seek planning permission for an energy park incorporating 'green' technologies utilise to generate energy via the introduction of an alternatively sourced feedstock...

It is proposed that principally the main technologies will provide a solution for the generation of electricity via an Advanced Gasification process and solar photovoltaic system and a solution for the generation of biomethane gas through the use of an Anaerobic Digestion technology. In vessel composting will also be employed.

This proposal also seeks to provide a realistic solution to the question of landfill and the disposal of domestic and commercial material.

...

Mass-burn incineration is designed to receive unscreened material. By contrast, the gasification plant is designed to receive selected material which has been screened and sorted. It should therefore be seen as complementary to existing and further recycling schemes and as compliant with the waste hierarchy.

...

While it is feasible that the Energy works advance gasification plant could qualify as a Recovery plant (according to the Waste Framework Directive) we are not in a position to state this at this stage. The R1 ration (EU guidance on recovery) is heavily influenced by heat utilisation from the process ..."

99. In cross-examination, Mr Meakin accepted that the planning permission documents referred to the project as a waste management development. He explained that the application and permission included a two-stage development; the first part was the power plant at the Cleveland Street site, the subject of these proceedings; the second part was for another facility to be developed at a separate site, the Dalton Street site, for materials recycling.
100. In cross-examination, Ms Henderson agreed that a number of the documents forming part of the material in support of the application for planning permission emphasised the purpose of the development as the generation of renewable energy and the reduction of greenhouse gas emissions with the benefit of reduction in waste sent to landfill:

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“Q. In [the climate change assessment] you’ll see that: “The main purpose of the Proposed Development is to generate electricity and gas rather than as a waste disposal facility. However, a positive consequence [is] the diversion of waste from landfill...” And so ... would you agree, that the emphasis in this document is on the development of renewable energy and the reduction in greenhouse gas emissions?

A. Yes, that’s the purpose of this document... It’s about a climate change assessment that looks at both renewable energy benefits and moving waste up the hierarchy benefits.”

101. A close reading of the planning application documents shows that they were ambivalent as to the primary purpose of the facility. Some of the documents identified the project as a waste management facility but those statements must be read against the scope of the permission sought, namely, in respect of two separate stages of development, part of which was a dedicated waste treatment facility that did not form part of the EPC site. Other documents forming part of the planning application materials placed greater emphasis on the project as a plant for the generation of renewable energy, with diversion of waste away from landfill as an additional benefit. Given that the planning permission covered both the waste management and power generation aspects of operation, it is not determinative of the main activity on site.

IED permit

102. The IED, EU Directive 2010/75/EU, is concerned with the prevention and control of pollution arising from industrial activities, including rules designed to prevent or reduce emissions.

103. Article 3 includes the following definitions:

“(40) ‘waste incineration plant’ means any stationary or mobile technical unit and equipment dedicated to the thermal treatment of waste, with or without recovery of the combustion heat generated, through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated;

(41) ‘waste co-incineration plant’ means any stationary or mobile technical unit whose main purpose is the generation of energy or production of material products and which uses waste as a regular or additional fuel or in which waste is thermally treated for the purpose of disposal through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the

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substances resulting from the treatment are subsequently incinerated.”

104. Article 4.1 provides:

“Member states shall take the necessary measures to ensure that no installation or combustion plant, waste incineration plant or waste co-incineration plant is operated without a permit.”

105. Article 42 states that:

“If processes other than oxidation, such as pyrolysis, gasification or plasma process, are applied for the thermal treatment of waste, the waste incineration plant or waste co-incineration plant shall include both the thermal treatment process and the subsequent incineration process.

If waste co-incineration takes place in such a way that the main purpose of the plant is not the generation of energy or production of material products but rather the thermal treatment of waste, the plant shall be regarded as a waste incineration plant.”

106. In order to operate the gasification plant it was necessary to obtain an IED permit from the Environmental Agency pursuant to the Environmental Permitting (England and Wales) Regulations 2010.

107. Schedule 1 identifies the regulated activities for which an IED permit is required. Part 1 provides that:

“activity” means, subject to this Part, an activity listed in Part 2 of this Schedule;

...

“directly associated activity” ... means an operation which –

- (a) has a technical connection with the activity,
- (b) is carried on on the same site as the activity, and
- (c) could have an effect on pollution ...”

108. Part 2 includes in its definition of energy activities:

“Part A(1) ...

(b) Unless carried on as part of a Part A(2) or Part B activity, burning any –

...

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(iii) fuel, manufactured from, or comprising, any other waste.”

109. Chapter 5 “Waste Management”, section 5.1 contains the following definitions:

“ ‘co-incineration’ means the use of wastes as a regular or additional fuel in a co-incineration plant or the thermal treatment of waste for the purpose of disposal in a co-incineration plant;

‘co-incineration plant’ means any stationary or mobile plant whose main purpose is the generation of energy or production of material products, and –

(a) which uses waste as a regular or additional fuel; or

(b) in which waste is thermally treated for the purpose of disposal.

If co-incineration takes place in such a way that the main purpose of the plant is not the generation of energy or production of material products but rather the thermal treatment of waste, the plant must be regarded as an incineration plant.

‘Incineration plant’ means:

any stationary or mobile technical unit and equipment dedicated to the thermal treatment of wastes with or without recovery of the combustion heat generated, including –

(a) the incineration by oxidation of waste; and

(b) other thermal treatment processes such as pyrolysis, gasification or plasma processes in so far as the substances resulting from the treatment are subsequently incinerated.”

110. The 2010 Regulations were amended in 2013 to substitute in section 5.1 for Part A(1):

“(b) The incineration of non-hazardous waste in a waste incineration plant or a waste co-incineration plant with a capacity exceeding 3 tonnes per hour.”

111. CSL and EWHL applied to the Environment Agency for a permit to operate the facility as a waste incineration plant. The permit granted was to operate the facility as a waste incineration plant pursuant to section 5.1 Part A(1)(b). The specified activity was described as:

“The incineration of non-hazardous waste in a waste incineration plant with a capacity exceeding 3 tonnes per hour. D10: Incineration on land.”

112. Directly associated activities were stated to include electricity generation:

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“Generation of approximately 28MWe electrical power using a steam turbine from energy recovered from the flue gases.”

113. The decision document explained the basis on which the decision to grant the permit was reached, including the following:

“The Applicant has described the facility as Energy Recovery. Our view is that for the purposes of IED (in particular Chapter IV) and EPR, the installation is a waste incineration plant because:

Notwithstanding the fact that energy will be recovered from the process; the process is never the less incineration because it is considered that its main purpose is the thermal treatment of waste and:

- the plant only produces electricity and heat but no material output;
- the waste is the principal source of fuel;
- the waste being burned is mixed waste comprising different materials; and
- the waste has not been treated to improve its quality to a relevant standard.

In addition, although the process used to thermally treat the waste is gasification, for the process not to be considered to be a waste incineration plant, the resultant gases from the gasification process must be purified to such an extent that they are no longer a waste prior to their combustion and can cause emissions no higher than those in the burning of gas. The applicant has not demonstrated to our satisfaction that the gases have passed the ‘end of waste’ as referred to in the waste framework directive. Therefore the whole process is considered to be a waste incineration plant and therefore subject to the requirements of chapter IV of the Industrial Emissions Directive.”

114. Ms Henderson relied on the determination of the Environment Agency under the IED that the plant is a waste incineration plant, rather than a waste co-incineration plant, as an indication that the main purpose of the plant is the thermal treatment of waste, notwithstanding the fact that energy will be recovered from the process as a directly associated activity.
115. In her report, Ms Henderson explained that incineration is a type of energy from waste technology, where waste is burnt to generate heat, and the heat is used to generate electricity. The use of the term ‘incineration’ in the UK waste industry is generally to distinguish between different types of energy from waste technologies.

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116. The differences between incineration and gasification were summarised in Table 2 of her report:
- i) Incineration involves combustion of unprepared waste; gasification involves partial oxidation of the waste;
 - ii) Incineration requires sufficient oxygen to fully oxidise the fuel; gasification uses oxygen but the amounts are not sufficient to be completely oxidised or for full combustion to occur;
 - iii) Incineration requires combustion temperatures in excess of 850⁰C; gasification temperatures are typically above 650⁰C;
 - iv) During the incineration process, waste is converted to carbon dioxide and waste and non-combustible materials produce ash; the gasification process produces combustible gases, including carbon monoxide, hydrogen and methane, with a net calorific value of 4-10 MJ/Nm³, and solid residue containing non-combustible materials.
117. Ms Henderson referred to the Defra assessment of the potential benefits of gasification over incineration:
- i) there is the potential to use the syngas produced by the gasification process as a fuel in a gas engine or gas turbine in the gasification plant, which could increase electrical generation efficiency of the plant;
 - ii) the syngas produced by the gasification process could be used as a source of hydrogen for power generation or as a vehicle fuel, a greener source of energy;
 - iii) gasification could enable less costly pollution control strategies due to the reduction in the volume of process air required;
 - iv) gasification plants could be relatively small-scale, with flexibility to different inputs, and modular development.
118. Ms Henderson did not consider that there was a material difference between incineration and gasification. Both treat waste, or waste derived fuel, and produce energy as electricity or heat.
119. Mr Krangle considered that the process of incineration is not the same as the gasification process because incineration involves the full combustion of low-calorie waste that has been diverted from landfill, whereas gasification is a chemical reaction which converts RDF to a combustible gas, which has many uses. For the reasons set out above, I do not place any weight on Mr Krangle's stated views on this issue because they fall outside his area of expertise.
120. Mr Meakin acknowledged that the Environment Agency application made by EWHL stated that the plant was subject to the IED as an incinerator, rather than a co-incinerator. In cross-examination Mr Meakin explained that the IED application form did not give any option for the plant to be described as a gasifier.

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121. Ms Henderson agreed with Mr Meakin’s explanation. She accepted that, having regard to the inclusion of gasification within the definition of incineration in the Environmental Permit Regulations, the applicant for the permit had no option but to tick box 1(b) “incinerator”.
122. Ms Henderson explained in her evidence that in the UK the impact of classifying the plant as an incinerator, rather than a co-incinerator, for the purposes of the IED permit was negligible:
- “Now, the consequence of determining one versus the other in actual effect in the UK is negligible ... In practice in the UK they’re treated the same ...”
123. Further, Ms Henderson accepted that, although the plant was currently operating as a D10 disposal facility and had not been allocated an R1 recovery operation status by the Environment Agency, the EPC Contract required the plant to operate as an R1 facility, namely, using waste principally as a fuel to generate energy. She agreed that, once a plant had an environmental permit for a waste incineration plant, it would be possible to apply for R1 status for the plant, which, if granted, would turn the operation into recovery:
- “Q. So in other words, tell me if you agree with this , the path for arriving at R1 status is to apply for an environmental permit for an incineration plant , stage 1, not be a co- incinerator , stage 2, and then 3, depending upon what stage you apply - - and we see that on page 3 - - you have to demonstrate R1 status. Do you agree with that set of stages?
- A. Yes.
- ...
- Q. So when you flipped it over to R1, we have changed it, have we not, from “disposal” into “recovery”?
- A. Yes, we’ve moved it up the waste hierarchy.
- Q. Into recovery ... used principally as a fuel or other means to generate energy.
- A. But it’s still a waste. It’s still a waste treatment plant, it’s just a better waste treatment plant because it’s more efficient at recovering energy.”
124. Drawing those points together:
- i) CSL/EWHL applied for an IED permit for the plant as a waste incineration plant, rather than a waste co-incineration plant.

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- ii) The categorisation of the plant as a waste incineration plant was mandated by the inclusion of the gasification process in the IED definition of a waste incineration plant.
- iii) The IED permit was issued by the Environment Agency for the facility as a waste incineration plant. In explaining its decision, the Environment Agency stated that it considered the main purpose of the facility to be the thermal treatment of waste because the applicant had not demonstrated that the resultant gases from the process to have passed the end of waste test so as to amount to recovery.
- iv) The EPC Contract stipulated that the plant should achieve R1 status, i.e. the principal purpose of the plant would be energy recovery rather than waste disposal.
- v) EWHL could apply for R1 status at or after commissioning of the plant, provided that: (a) it held an IED permit for an incineration plant and (b) could demonstrate the relevant efficiency criteria to achieve R1 status.
- vi) Therefore, the application for an IED permit as an incineration plant did not indicate that the main purpose of the plant was waste disposal, rather than energy generation. Such application was consistent with the process required to achieve R1 status as required by the EPC Contract.

Operation of the plant

- 125. At the Energy Works Hull facility the RDF is processed in the fuel handling building. The RDF is delivered by truck across a weighbridge to the RDF reception hall and fed into the mechanical pre-treatment plant (“MPT”). The MPT processes the RDF by passing it across trommels and feeding it through shredders, to remove the fines and reduce it in size. Ferrous materials and non-ferrous metals are extracted by magnets. The material which is separated out during this process, such as the fines, non-combustible material, ferrous and non-ferrous metals, is stored in separate containers. Light combustible material is separated from heavy material and shredded further to reduce it in size. Once it has been processed, the RDF is stored in a bunker until required for use in the gasifier.
- 126. The fluidised bed gasifier heats the RDF to high temperatures in the absence of oxygen to produce a syngas. The gasification process takes place in two stages. In the first stage, the RDF is gasified and volatile gases are driven off in the resulting syngas. In the second stage, the syngas is oxidised and hot combustion gases are produced. The hot combustion gases are passed through a dual stage super-heater, then cooled before passing into the flue gas treatment system. The flue gas treatment comprises reduction of nitrous oxide emissions, removal of larger ash particles and particulates, removal of sulphur dioxide gases and treatment in a wet scrubber. The combusted syngas generates heat which is used to heat water in the boiler and produce high pressure steam. The steam turns a steam turbine connected to a generator which produces electricity.
- 127. Mr Meakin’s evidence was that the RDF is pre-treated prior to delivery to the site at MRF facilities operated by the RDF suppliers. The treatment of RDF at the plant in the MPT is limited and solely directed to producing RDF that meets the contractual

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specification for use as fuel. In cross-examination he accepted that the mass balance diagram for the plant showed that it had capacity to separate out 13.4% of the RDF going into the MPT as ferrous and non-ferrous metals that would not be sent to the gasifier but he disputed that the facility was a waste treatment plant:

“This is an RDF plant. This is not a waste plant. There’s a difference. And this is what I say in my statement. You know, this is an RDF that’s derived from municipal waste or C&I waste. If you build a waste plant, what everybody thinks of as a waste plant, a black bin plant, it does not look like this. It is far more complex. You very often have an MBT or something on the back end as well. Certainly the ones that I’ve built. This is not a waste processing plant. This is an RDF polishing plant...

...

on the MRFs that I’ve built, they have RDF lines, and this would be one section of a MRF after the waste has gone through a lot of preparation - pre-preparation. This is why what comes in was produced to a specification. It’s not a waste processing plant.”

128. Mr Meakin agreed that the gasification takes place in two stages. At the first stage, the RDF is heated to produce syngas. At the second stage, re-circulated flue gas and oxygen are introduced to combust the syngas. By contrast, the incineration process occurs in just one stage in which oxygen is introduced and the fuel is combusted. In both cases, the hot gases are put through a heat exchanger to heat water and produce superheated steam. Therefore, the output is the same but the process to get there is different.
129. Ms Henderson’s view is that RDF is both a fuel and a waste. Under the Waste Framework Directive, waste that has been treated, as in the case of RDF, continues to be considered a waste unless and until it passes an ‘end of waste’ test. RDF is a waste and must be managed in accordance with the relevant waste management and environmental legislation:

“In the case of refuse-derived fuel, the Waste Framework Directive is unequivocal. Refuse-derived fuel is a waste and it will always remain a waste forever. It is a waste because there’s no substantial change to that product, to that material to make it a product that is significantly different from the waste it originally was... In this case the RDF is minimally if at all treated and it is always a waste ...”

130. Ms Henderson agreed that the MPT at the plant was designed to remove 16.7% of the input waste stream; in particular the non-combustible material. This amounts to a significant amount of on-site pre-treatment that is not dissimilar to a MRF. Ms Henderson’s view is that there is no material distinction between a MRF and an MPT:

“A. A MRF can be designed to produce fuel or it can be designed to remove recyclables, and it will be considerably different depending on the purpose of the design.

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- Q. This is a MRF that produces RDF?
- A. Yes.
- Q. You accepted at least half of the waste does not go into the RDF?
- A. Yes.”

131. Following the conclusion of the hearing, MW produced a further witness statement from Mr O’Brien of Clyde & Co, dated 17 January 2020, attaching an environmental permit application by Geminor UK Limited, a waste management firm, for a MRF at a separate facility, which stated:

“The facility will primarily be accepting dry mixed municipal waste to produce RDF for onward transfer to the nearby Energy Works Energy from Waste Facility ... for incineration ...”

132. By letter dated 20 January 2020 Fabricom’s solicitors, Freeths LLP, responded, indicating that they did not object to the further evidence, provided that they could comment on the same. Fabricom’s position is that it is not disputed that RDF is to be sourced from various suppliers which may process the waste in a MRF before it is delivered to site but the RDF delivered to the site is subject to further treatment and processing in the MPT.
133. Ms Henderson agreed that RDF is a commodity that is traded as a fuel, derived from waste but her view is that it remains a waste. She accepted that there is an export market for RDF from the UK to Sweden, Denmark, Germany and the Netherlands.
134. Mr Krangle’s view is that RDF is a commodity used to generate electricity. The RDF arriving at the plant is a fuel. The plant does not have material recovery facilities on site. The MPT involves very limited treatment of the RDF, to regulate the size and increase the calorific value of the RDF.
135. The EPC Contract contains the following material provisions regarding operation of the plant:
- i) The general description of the EPC Contract works is a gasification facility receiving RDF prepared by others from waste. That accurately reflects the fact that the waste is treated off-site to produce RDF which is then delivered to the facility for use as fuel.
 - ii) The RDF specification for the plant does not stipulate or place any limitations on the source of the waste used to produce the RDF, provided that the RDF meets the specified parameters, including composition, size, calorific value and moisture content. That places emphasis on the use of the RDF as a fuel, rather than the treatment of the waste components in the RDF.
 - iii) The MPT carries out treatment of the RDF but the purpose of such treatment is to reduce the size of the RDF and remove non-combustibles so that it is suitable for use as fuel in the gasifier.

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- iv) The availability criteria for the reliability tests are by reference to the electricity exported by the plant and the calorific value of the syngas.
- v) The performance acceptance testing is measured by reference to the heat release from the fuel. It would have been possible to use the mass or volume of RDF processed at the plant as a measure of performance; the absence of such assessment indicates that waste treatment is not considered to be an essential function of the plant.
- vi) The performance guarantees include the qualification of the plant as R1 with an efficiency value of 0.65 or greater in accordance with the Waste Framework Directive. This amounts to a specific requirement for the plant to operate so that its primary purpose is energy generation.
- vii) The absolute performance guarantees are by reference to the plant's qualification for CfD, energy value of the syngas and achievement of R1 status. Thus, a ground for rejection of the plant under the EPC Contract is that the plant is unable to generate energy as specified.

Funding model

136. In 2014 CSL issued its Information Memorandum for the purpose of attracting investment for the project. The Information Memorandum stated that the plant would produce revenues of 37% from sales of electricity, 37% from renewables support and 26% from gate fees. The Information Memorandum indicated an internal rate of return ("IRR"), a function of the revenues as a percentage of capital, of approximately 18%, based on these revenue streams.
137. At the time of the Information Memorandum, the proposal was to use a combination of waste wood and RDF at the facility, using a number of different suppliers. Suppliers of RDF pay gate fees to the plant operator, whereas the operator pays the suppliers of waste wood. As built, the plant does not accept waste wood; it only accepts RDF. Mr Krangle accepted in cross-examination that this could result in a substantial change to the level of gate fees received:
- “Q. ... in the Project Joule document, the estimates of gate fees and how much the gate fees were going to contribute to the financing of the plant were really very considerably underestimated, weren't they?
- A. Yes, I do agree with that, but I should also say, and one of the tasks that I perform in energy pricing is looking at the pricing of commodities ... when forecasting forward, that not only can the gate fee for RDF go up, but it can also go down considerably... whilst the price of RDF has gone up since the Project Joule information memorandum, it can also go down...”
138. In 2014 the CfD scheme was introduced to support renewable energy producers by guaranteeing a constant revenue for each MWh of renewable electricity generated, independent of the electricity market price, enabling investment to be secured on the

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basis of a guaranteed revenue stream. The strike price for the CfD would be fixed at a level that would enable the relevant emerging industries to be financially viable.

139. The CfD eligibility criteria included: (a) the project was for a qualifying form of low carbon generation, including advanced conversion technologies (“ACT”) with or without combined heat and power (“CHP”); (b) planning permission or development consent had been secured; (c) a grid connection offer had been accepted.
140. For the purposes of the CfD, the plant was treated as a gasification plant and not an energy from waste plant with CHP.
141. Ms Henderson’s view is that the award of the CfD reflects the fact that the plant produces renewable electricity using an ACT process but does not determine the primary activity of the site.
142. Mr Krangle’s view is that CfDs are only awarded to eligible electricity generators as defined in the Contracts for Difference (Definition of Eligible Generator) Regulations 2014, Schedule 1. An incineration plant or a waste management facility would not qualify for CfD under the regulations (unless it were an energy from waste with combined heat and power ‘CHP’ plant). A CfD would not have been awarded if the plant did not focus on the generation of low carbon renewable electricity. In his view, therefore, the award reflects the fact that the primary activity on site is the generation of electricity. However, in cross-examination Mr Krangle accepted that the plant could qualify for the CfD subsidy regardless of whether the generation of power is a primary or a secondary activity on site.
143. The CfD is index linked for the duration of the contract. Mr Krangle agreed in cross-examination that this could act as a ceiling as well as a guaranteed floor for the price:
- “Q. ... it’s not so much a subsidy as a sort of guarantee that if the price falls below the strike price which has been agreed, then the ... scheme ... will top that up, won’t they?
- A. Yes.
- Q. But it goes both ways, doesn’t it, because if the price actually goes up and ... you’ve made more money from it than you were expecting, then the operator’s got to pay this company back, haven’t they?
- A. Absolutely, yes... So, you could call it capping. I think what you’re doing is you’re giving a guaranteed floor to the price to make sure that the operators have the certainty that they can run what is still a technology in its relative infancy compared to other forms of renewable electricity generation.”
144. An ERDF grant was made for the development of the plant as aid for renewable energy sources.

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145. The European Commission gave permission for state aid to be provided for the plant at Energy Works Hull through the ERDF. In its decision it stated:

“23. ... the gasification process produces a gas with the potential to be used in high efficiency processes and it is complementary to recycling ... the syngas production is gaining more importance to meet long term energy needs. Moreover, gasification technology is considered to be an emerging technology in the waste treatment sector requiring careful pre-treatment of waste as opposed to simple ‘mass burn’ incineration, which does not require a highly conditioned feedstock. Consequently there is a capital cost related to the pre-treatment plant, or – as applicable in the case of Energy Works – a lower gate fee is applicable to the RDF. This makes such a plant more expensive than a standard combustion plant...

29. Directive 2009/28/EC obliges Member States collectively to generate 20% of total energy from renewable sources by 2020 (using 1990 levels as baseline). In 2009 – 2010, the UK produced 6.6% of its electricity from renewable sources and so, requires further energy infrastructure deployment in order to reach the 20% mark in eight years time. The total power output from the Energy Works project will contribute to this target.

30. EU Parliament and Council Decision 406/2009/EC states that all Member States must cut green house gas emissions by 20% from 1990 levels. Energy Works project would help achieve this target by using sustainable sources to produce power – it would reduce carbon dioxide emissions by 92% compared to generating the same amount of power from the UK’s average fuel mix. Furthermore, Energy Works project contributes towards the 20% reduction target by preventing material to go to landfill and produce methane as a result...

43. Energy Works is active in electric power generation, waste collection, treatment and disposal activities; materials recovery in the area of Hull...

55. The Commission notes that, as Energy Works employs an innovative technology, to produce electricity from waste and as such it has a higher risk profile and demands a suitably high reward to attract investors. ...

70. The Commission notes that in the absence of aid, Energy Works would not consider investing in an “energy from waste” gasification plant to generate electricity from biomass content of waste materials would in all likelihood choose the considerably cheaper alternative of building a Combined Cycle Gas Turbine electricity generating plant...

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74. Energy Works plant will help to meet waste to landfill targets of reducing biodegradable municipal waste to landfill. According to the cost Benefit Analysis of Options the project will help to meet this target by diverting approximately 37,000 tonnes of residual waste away from landfill and approximately 150,000 tonnes of waste wood away from landfill on an annual basis once fully operational. The Commission notes that, even if the realization of this project might give an advantage to the beneficiary in obtaining future waste management contracts in the area, the proposed project clearly leads to a more environmentally friendly waste disposal management...

76. For these reasons, the Commission considers that the measure will contribute to mitigating the market failure related to the use of electricity generation from fossil fuels and, in particular, through a conventional gas-fired Combined Cycle Gas Turbine (CCGT) power plant in this case...

81. ... the type of investment needed for the specific type of technology under consideration, i.e. advanced fluidized bed gasification, and for the high risks being considered, i.e. for a new and not proven technology, would be unlikely to be undertaken in the absence of *ad hoc* aid measures. The aid allows Energy Works to use ... a more environmentally sustainable production process for electricity generation, which it would not otherwise be likely to use.

82. For these considerations, the commission concludes that the notified measure is an appropriate instrument to achieve the aim of reducing CO2 emission and in the same time contributing to the reducing biodegradable municipal waste to landfill.”

146. Ms Henderson’s view is that the ERDF funding was for the generation of electricity from the biodegradable part of waste based on advanced fluidised bed gasification technology, which at the time of the application was expected to be 84.65% of the fuel. However, the subsequent change to use RDF without any waste wood reduced the biodegradable percentage of the waste to 50%. In any event, it was not a pre-condition of the ERDF grant that producing renewable energy must be the primary activity of the site.
147. Mr Krangle’s view is that the plant was granted ERDF funding because it produces electricity using renewable energy sources, although he accepted in cross-examination that RDF is only 50% renewable. In his report, Mr Krangle stated that if the primary purpose of the plant was not the renewable generation of electricity and it was just a waste management facility, it is unlikely that the ERDF funding would have been granted. In cross-examination he accepted that ERDF funding would be available for waste management as well as renewable energy; therefore, the plant could qualify for an ERDF grant as a waste management facility, provided it satisfied other requirements for the funding. However, his view was that the plant would not satisfy the other requirements; there is no process by which the RDF is used to manufacture an end product and conventional technologies are not used in an innovative manner.

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148. In summary, the funding arrangements for the facility indicate:
- i) The facility was awarded a CfD based on its qualification as a project for low carbon generation, including ACT (without CHP) but it did not have to establish that power generation was its primary purpose.
 - ii) The facility was awarded an ERDF grant based on its qualification as a plant producing electricity using renewable energy sources. It would not have qualified for such grant as a waste treatment facility.
 - iii) At the time of development, it was anticipated that 74% of the facility's revenue would be generated by electricity exports to the National Grid and subsidies/grants. Those estimates were based on derivation of the fuel from waste wood and RDF; the use of RDF as sole source of fuel would increase the gate fees. However, there was no evidence that increased gate fees would become the dominant source of revenue so as to change the funding model.

Conclusion

149. In my judgment, the primary activity at the Energy Works Hull facility is power generation for the following reasons.
150. Firstly, the EPC Contract is very strong evidence that the primary purpose of the plant is energy generation, rather than waste treatment. The general description of the EPC Contract works as a gasification facility receiving RDF that has been pre-treated by others to a specification, and the limited treatment of the waste in the MPT indicates that the RDF is a fuel for the purpose of operation of the plant. The performance of the plant is measured by reference to heat and energy production, rather than waste throughput. The EPC Contract contains an express obligation on the contractor to achieve R1 status with an efficiency value of 0.65 or greater and failure to meet that obligation entitles the owner to reject the plant. The overriding contractual requirement is for the facility to operate as a power plant.
151. Secondly, although the IED permit was issued by the Environment Agency for a waste incineration plant on the basis that the main purpose of the facility was the thermal treatment of waste, the IED scheme permits the operator to apply to change the status of the plant from D10 (disposal) to R1 (recovery). Qualification for such an application was an obligation of the contractor under the terms of the EPC Contract and R1 status could only be achieved if the principal purpose of the plant was energy recovery rather than waste disposal.
152. Thirdly, the regulatory framework promotes the waste hierarchy and generation of energy from renewables as complementary policies. The factual evidence indicates that the plant was not developed or intended to be operated in furtherance of any particular waste or energy policy, although it was consistent with both policy initiatives.
153. Fourthly, the planning application documents identify the project both as a waste management facility and as a plant for the generation of renewable energy. Therefore, they do not assist in determining the issue whether waste management or power generation is the primary activity on site.

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154. Finally, the funding model for the facility estimated that most of the revenue would be generated by electricity exports to the National Grid and subsidies/grants. Although that model was not fixed, it is strong indication that the intention of the owner was to operate the facility for profit as a power plant.
155. For the reasons set out above, the Court's findings are as follows:
- i) The primary activity on the site is power generation.
 - ii) On a proper construction of the Subcontract and the 1996 Act, the Sub-contract works do not constitute construction operations within the meaning of the 1996 Act and therefore there was no statutory or contractual right to refer the disputes to adjudication.
 - iii) The adjudicator did not have jurisdiction to determine the disputes the subject of the claims.
 - iv) The awards made in the first and second adjudications are unenforceable.
 - v) Fabricom's claims are dismissed.