

Meeting:	Executive
Meeting date:	2 September 2025
Report of:	Claire Foale, Chief Strategy Officer
Portfolio of:	Cllr Kent, Executive Member for Environment and Climate Emergency

Decision Report: Harewood Whin Green Energy Park

1. City of York Council owns the former landfill site at Harewood Whin. With the exception of a small area of the site being used as a waste processing operation by site operator Yorwaste, the vast majority of the 200+ acre site is not utilised.
2. A feasibility study was undertaken of potential future uses of the site, which identified the potential for a Green Energy Park (GEP), utilising renewable energy generation and complementing technologies to derive financial and environmental benefits for the Council.
3. Following the initial feasibility study, funding was secured from the Combined Authority Net Zero Fund to undertake an Outline Business Case (OBC) for the GEP, which has included planning permission being granted for up to 16MW of ground-mounted solar. The conclusions of the OBC indicate a viable scheme for the Council which could be progressed to Full Business Case (FBC).
4. Executive are now being invited to consider whether to progress with the FBC, subject to further funding from the Combined Authority Energy Generation Accelerator Programme (EGAP).

Benefits and Challenges

5. The potential benefits that could be realised have been highlighted within the Outline Business Case (see **Annex A**). These are summarised below and will be tested through the development of the Full Strategic Business Case:

Equalities and Human Rights

- a) The project has the potential to contribute to the city's energy independence. Access to affordable, reliable, sustainable, and modern energy is specifically mentioned in the United Nations Sustainable Development Goal (SDG) number 7.¹
- b) New local renewable generation capacity supports an equitable energy transition by enabling local ownership and addressing fuel poverty.

Affordability

- a) On a 5MW solar scheme over 30 years, the Council could achieve cashflow in excess of £7m, with Net Present Value (NPV) in excess of £2m.
- b) Further phases of up to 10MW could add an additional £10m, of cashflow for the Council, following the initial phases.
- c) The Council currently pays an additional amount for a Green Energy Tariff of £195K per year. This offsets emissions from electricity use in council annual emissions reporting. Approximately half of this cost would be saved with a 5MW scheme, with a 100% saving at 10MW, once the council demonstrates that enough renewable energy is being produced to offset the Council's annual electricity consumption. Note - This is based on the current contracted rate which could reduce when the next electricity contract is negotiated in March 2027.
- d) The Electricity generation income will require new contractual arrangements to be concluded. At present it is likely the Smart Export Guarantee will offer the best rates of income, securing rates of up to 11p per kWh. Alternatively, arrangements can be made via a Power Purchase Agreement (PPA). The PPA rates are likely to be lower, but the business case still provides a positive financial return at any income rates above 8p per kWh.²

Climate

- a) 5MW of electricity generation is approximately 50% of the Council's annual electricity requirement. Once the scheme generates 10MW, the council will be meet all of its current demand through self-generation. This will negate the need for a Green Energy Tariff and obtaining the Renewable Energy Guarantee of Origin (REGO) certificates that currently cost

¹ <https://sdgs.un.org/goals/goal7>

² <https://www.ofgem.gov.uk/environmental-and-social-schemes/smart-export-guarantee-seg>

£195K p/a. CYC can use evidence of the renewable energy generation to achieve zero emissions for electricity in its annual emissions reporting.

- b) Beyond 10MW, the opportunity is the additional electricity produced could offset other scope 1 and scope 2 emissions (mainly caused by fleet and heating emissions). As an example, it's estimated that each additional 5MW can offset 25% of the remaining scope 1 and scope 2 emissions.
- c) For future phases (that don't currently have planning approval), there is a further 12MW available for installation, which would fully offset all carbon emissions produced by CYC. It should be noted that performance of solar output over time can weaken slightly as panels get older and these performance levels may 'drop off' slightly in later years.
- d) The project aligns with the national Government's legally binding target for the UK to be net zero by 2050 and the drive to grow the economy through green infrastructure projects.

Health and Wellbeing

- a) Local renewable generation reduces dependence on fossil fuels, improving air quality and reducing health related conditions.
- b) Affordable energy reduces instances of fuel poverty, improving living conditions for residents.

Other Benefits

- a) There are wider indirect benefits achieved through the civic leadership of self-generating green energy. The project can act as a demonstrator to others in the city, including with strategic partners, who have the resources or opportunities to consider similar approaches. The Council will be taking an active leadership role in achieving climate change ambitions.

Challenges

There are several key risks associated with the project that will be mitigated through the development of the FBC. These are set out in section 7 of the OBC.

Specific challenges associated with delivering the FBC are considered below:

- Approving progress to Full Business Case sets an expectation that the council is committed to a project that could, through the development of the FBC, prove to be undeliverable with too much uncertainty to make the scheme viable.

- Many of the aspects of the FBC will remain highly volatile and variable. With a relatively new market and supply chain that is frequently influenced by geopolitics and world-wide energy supply and demand, there is insufficient historical evidence to demonstrate a consistent value that would reduce this uncertainty.
- Funding to deliver the FBC has not yet been secured; however, the project shows strong alignment with the Combined Authority's Energy Generation Accelerator Programme (EGAP) and there is an expectation that this funding can be secured for the Council.

Policy Basis for Decision

6. The project directly contributes to delivering the Council Plan 2023-2027 Four Core Commitments:
7. **Climate and the Environment:**
 - a) Reduce energy consumption and generate more local sources of renewable energy.
 - b) Content of this report supports the ambitions of the York Climate Change Strategy 2022-2032, and directly aligns with the objectives to:
 - Improve energy efficiency of existing buildings
 - Build strong relationships and networks
 - Grow the green economy
 - Increase resilience to climate risks
 - Increase renewable energy generation
 - c) The Council Plan 2023-27 set the level of CO2 emissions from council buildings and operations as a key performance indicator for council delivery.
8. **Equalities and Human Rights** – Utilising the Green Energy produced to benefit directly City of York Council and its own electricity consumption will equally benefit all residents in the city, who directly and indirectly access Council services.
9. **Affordability** – The project has the potential to provide revenue to City of York Council over 30 years. This revenue will then be

available to the Council to distribute to other projects that could help create a more affordable city

10. **Health** – Cleaner green energy produced within the City and for use initially by the Council's own operations and as the potential for further production from the site increases, so does the potential for other city partners to benefit. The overall net effect will be a reduction in fossil fuels used in the city and a greener and more healthier city for all.

Financial Strategy Implications

11. The Outline Business Case has been delivered with funding of £243,500 through the Net Zero Fund, from York and North Yorkshire Combined Authority. While this work has required input from officers, it has had no direct impact on the council budget.
12. Progress to FBC should be dependent on access to external grant funding, likely from the Energy Generation Accelerator Programme (EGAP). EGAP has no requirement for local authority contributions, ensuring that this work can be completed at no cost to the council.

Recommendation and Reasons

13. Recommendation:

Executive are recommended to accept the Outline Business Case and approve progression to the next stage, development of a Full Business Case, subject to funding from the MCA.

Reason:

The Outline Business Case has provided sufficient confidence that there is a viable project to create financial and environmental benefits from a landfill site which is underutilised.

The risk and financial impact to City of York Council in further exploring the business case and progressing to Full Business Case is very low. Progress is subject to external funding for the Council and Executive are not asked to authorise any funding from City of York Council at this stage.

Background

14. An initial feasibility study was completed in 2021 to identify opportunities for generating renewable energy at the former landfill site at Harewood Whin. The study, commissioned by Yorwaste and the York & North Yorkshire Local Enterprise Partnership, identified the potential for 28MW of ground mounted solar and complementing energy storage technologies.
15. On 20th February 2024 Executive approved the project initiation to progress the feasibility study and explore renewable energy options for the site in more detail to produce a business case for the Harewood Whin Green Energy Park. Revenue funding of £243,500 was secured via the Net Zero Fund, administered by York and North Yorkshire Combined Authority. The revenue funding was secured to deliver a Strategic Outline Business Case (SOC) and Outline Business Case (OBC) for the scheme by July 2025.

The OBC has been completed and is presented in the Annex A of this report. Both stages of business case completion follow the government's Green Book guidance³.

16. Planning permission was obtained in April 2025 for a solar installation up to 16.5MW. The application was reduced in size from 28MW following objections to part of the scheme from the nearby airfield.
17. The Strategic Outline Business Case (SOC) recommends a 'Phased' approach to developing the Green Energy Park on the former landfill site at Harewood Whin. A phased set of project stages over time will create the best opportunity for the earliest delivery of benefits and mitigates the risks of one large project.
18. The first two phases would provide up to 6MW of solar electricity generation. The first, smaller phase, creating up to 1MW of electricity to be funded and directly used by the site operator, Yorwaste. The second phase to provide up to 5MW of electricity generation for City of York Council, creating both financial and

³https://assets.publishing.service.gov.uk/media/66449468ae748c43d3793bb8/Project_Business_Case_2018.pdf

environmental benefits. Further phased stages are to be developed with other technologies over time.

19. The OBC considers the financial case for delivery of each phase and identifies options to finance the initial phase through borrowing, generating income and a positive cash-flow over a 30-year period.

Key risks

20. The outline business case and strategic business case has identified several risks that will be further explored and mitigated/managed through the development of the Full Strategic Business case:
 - a) Electricity Income Generation Rate – Securing the actual tariff is both complex and difficult to achieve before investing in the solar infrastructure. There is no guarantee that the rate achieved will be sufficient and no guarantee how long or for how many years over the 30-year period that the target rate is achieved. This is not a passive strategy and requires ongoing management.
 - b) Grid Connection – Costs remain estimates. Need to submit the grid application, to request full costs and secure a provisional place in the connection queue. There is a decision to be made within the Full Business Case period, regarding the timing to submit this application. It will require approximately £5K submission cost, but also approximately £25K as a deposit to secure the amount/timescale within 90 days of receipt. This £25K is likely to be required before a full business case is approved and to strengthen the recommended position within that full business case.
 - c) Borrowing Approach – Another variable that needs to be confirmed in the FBC. The outline business case has been modelled with all borrowing independent to the Council's treasury management strategy. There is also a potential benefit, where City of York Council's borrowing is on a centralised, rather than per project basis, so the scheduling may show that borrowing can be arranged with more beneficial timings and amounts to cover the interest payments.

- d) Ground Conditions – Preliminary ground investigations have indicated a low level of risk associated with surface mounted solar PV at the site, which have been used as the basis for financial modelling. However, geotechnical laboratory results are still to be finalised, which could pose a risk to delivery.
- e) Capital costs - the full capital required will only be certain following a competitive tender process. Factors could change between now and that process and the tenders received back might exceed the estimates modelled.
- f) Delivery model - There are several delivery models ranging from full council project delivery and operation, through to very low risk options such as renting the site to external developers. The council's risk appetite of full ownership or less active landlord arrangements will help determine the risk for the project and how to mitigate using the contractual approaches explored during the development of the full Business case.

Consultation Analysis

- 21. The Strategic Outline Business Case (SOC) and Outline Business Case (OBC) reported to the Climate Change and Natural Capital Programme Board, with quarterly updates provided to corporate Management Team (CMT).
- 22. The SOC and OBC was developed in consultation with Yorwaste, Arcadis (Technical Consultant) and a City of York Council Project Board that included representatives from across the Council, covering City Development, Strategy, Carbon Reduction, Finance, Legal, Property, Ecology, Waste, Fleet, Operations and in consultation with representatives from the funder, York and North Yorkshire Combined Authority.
- 23. Regular Bi-monthly updates have taken place with the Chair of Rufforth Parish Council.
- 24. Scrutiny were invited to provide comment and feedback in July 2025. Feedback was largely supportive with requests for full consideration of the risks, which will be incorporated into the FBC. There were no formal recommendations for the Executive.

Options Analysis and Evidential Basis

25. Option A - *Progress to Full Business Case, subject to funding from the Combined Authority.*

This option would allow the continued development of the business case, providing greater clarity to the commercial and management case and progress the project to the point of delivery to realise the benefits and mitigate the risks. With grant funding support from the Combined Authority, this work can progress at no cost to the Council.

26. Option B - *Do not progress to Full Business Case*

The Council's role in progressing the business case would come to an end. Other parties may pick-up this work at a future date, but there is an increased risk that the project will not develop and the benefits will not be realised.

Organisational Impact and Implications

27. **Financial**

The OBC proposes a potential financially viable project and recommends the scheme should be progressed to development of a Final Business Case, subject to the availability of appropriate funding, likely from the Energy Generation Accelerator Programme (EGAP). A base project scheme of 5MW over a period of 25 years could achieve net cash inflows for the council of £4m and a NPV of £1.5m. A scheme of this scale could reduce the council's Green Energy Tariff costs of £195k per annum by 50%. The council has received funding of £243,500 to date through the Net Zero Fund, from York and North Yorkshire Combined Authority, to support the development of a SBC and OBC, which does not require match funding to be provided by the council. Grant funding has been incorporated into the currently approved revenue budgets.

The FBC will include financial metrics such as the level of capital investment required the length and cost of borrowing and the level of electricity and income generated. Detailed financial modelling work would be required as the FBC develops and income, capital and operating costs become more certain, along with finer details of how generation income can be secured, as the volatility of energy prices is a key investment decision factor and high risk area.

The financing of the project would need to be considered alongside the capital financing requirements of the council's wider capital programme, considering the availability of any internal and external resources, and borrowings.

28. Human Resources (HR)

There are no HR implications contained within this report. Should additional resource be required to progress to full business case this would be established and recruited to in accordance with council policy.

29. Legal

Regarding the Net Zero Fund revenue funding of £243,500, a subsidy control assessment has been carried out in relation to the activities undertaken in progressing the project to the Outline Business Case stage. The assessment concluded the revenue funding awarded will not be classed as a controlled subsidy under the Subsidy Control Act 2022 for the following reasons:

- a. as between the Combined Authority and the Council, as no economic advantage will be given to the Council because funding will be passed directly to end recipients, with no retention by the Council; and
- b. as between the Council and the consultants it procures, as no economic advantage will be given so long as all contracts are procured using processes compliant with current procurement legislation and the Council's Contract Procedure Rules, with contracts being entered into at market prices and on market terms.

Under Section 1 of the Localism Act 2011, a local authority has the power to do anything an individual can do provided it is not prohibited by other legislation. Given the nature of this project, which could ultimately lead to the generation and onward sale of energy and utilities, this would be classed as a discretionary function.

It is noted that new contractual arrangements will be required to facilitate the supply and purchase of electricity for electricity generation income. Further consideration will need to be given to the level of income generation to ensure the Council is complying

with the obligations in the Localism Act 2011 regarding income generation and appropriate delivery models. Guidance will be sought from the council's legal team in assessing the available options and determining the most appropriate delivery model.

Although the Council is the freehold owner of the Harewood Whin site ("the Site"), the Site was leased to Yorwaste on 5th May 2004 and is currently occupied by them. The lease was varied by a deed of surrender of part and variation on 2nd June 2020 ("Yorwaste Lease"). The Yorwaste Lease comprises approximately 229 acres consisting of 4 separate parcels of land, each of which are held on different terms. Therefore, any implementation of the proposed GEP project at Harewood Whin will require negotiations with Yorwaste and may necessitate agreed variations to the Yorwaste Lease, including potentially Yorwaste surrendering or handing back possession of part(s) of the site to the council. Part of the land is sublet to another third party who may need to be included in such negotiations if they remain in occupation.

Legal Services have carried out a preliminary title review of the Site which revealed the following:

- There are various title issues affecting the Site that will need to be resolved prior to commencing the proposed development. For example, part of the Site appears to be unregistered land which the Council may need to register and part of the land is subject to unknown restrictive covenants meaning there is a risk that a third party could object to the proposed development. This could be mitigated by the Council obtaining indemnity insurance for this title defect.
- The Site is subject to various incumbrances (including a public bridleway) that may inhibit the proposed development. If this project is to commence to the next stage then Legal Services will need to be provided with more information about the proposed development in order to advise further as to the implications and any required action.
- There are a number of private rights of way affecting the Site/surrounding roads which need to be reviewed and considered in close detail in order to determine whether or not they are relevant and may affect the proposed use of the site as a solar park.

- A third party is seeking to claim a right of way in respect of part of Tinker Lane.

Further due diligence will be required to address all the matters raised in the preliminary report on title prepared by Legal Services if this project proceeds to full business case. It is also recommended that a full set of searches is undertaken in respect of the Site as part of the preparation of the Full Business Case to ensure all relevant factors are taken into account when deciding whether to proceed with the proposed development.

30. Procurement

Procurement will be a main tool used to source the most appropriate supplier to provide technical support to deliver the Full Business Case. All services must be procured via a compliant, open, transparent, and fair process in accordance with the council's internal Contract Procedure Rules and where applicable, the Procurement Act 2023. Creative and innovative ways of procuring will be explored whilst ensuring all relevant legislations are adhered to. The targeted market will be given plenty of time to allow sufficient planning within their business to allow a competitive, quality bid to be put forward for consideration. Within the procurement, there will be a quality and price split with associated weightings to drive quality and efficiencies. All relevant notices such as UK2 and UK4 will be completed and published on the relevant platforms.

31. Health and Wellbeing

Public Health support the recommendation to explore the Full Business Case. Green energy production is beneficial for health, as it lowers our reliance on fossil fuels. This initiative aligns with our ongoing efforts to improve air quality locally, and the actions within Air Quality Action Plan (AQAP) 4.

32. Environment and Climate Action

The project has the potential to support the Climate Change objectives of the council by creating new renewable energy generation in the city.

33. Affordability

There are no known implications of the affordability of energy at this stage, whether there are some additional social value outcomes that could lead to cheaper electricity for specific

communities, as well as the council, will be explored through the SBC.

34. Equalities and Human Rights

No direct impacts identified following completion of an Equalities Impact Assessment.

35. Data Protection and Privacy

As there is no personal data, special categories of personal data or criminal offence data being processed for this decision, there is no requirement to complete a DPIA. This is evidenced by completion of DPIA screening questions - reference AD-02034.

36. Communications

We will incorporate this project into the public narrative of our work around climate change and net zero should the project business case be confirmed. At this early stage, communications support on this should centre around engagement with government and other key delivery stakeholders.

37. Economy

The opportunity to develop a renewable energy park on Harewood Whin provides considerable economic opportunity, throughout the supply chain, and within the ongoing operations itself. Although it is too soon to understand the direct impact, one of the considerations for delivery will be the incorporation of the social value outcome framework which includes work and skills opportunities for some of our most deprived communities.

Risks and Mitigations

Funding – Progressing the FBC is dependent on external funding. The Combined Authority's Energy Generation Accelerator Programme has been assessed as a strong strategic fit for supporting the project.

Reputational – The OBC has progressed with support of the MCA through the NZF. A decision not to progress to FBC, could present a future risk to the relationship with the MCA, access to future funding and the reputation of the council. Failure to progress to

FBC may also be perceived as a lack of leadership to tackle the climate emergency.

Market variation – energy markets are susceptible to volatility from external factors. The analysis in the OBC is based on best knowledge and assumptions at the time of writing. However, this can change quickly and any analysis will need to be brought up to date in the FBC. Future projections are also subject to low levels of certainty, but sensitivity analysis has been used to provide confidence in the assumptions.

Resident acceptance – The Rufforth and Knapton area has received several applications for new solar farms. This could create a fear of over production with residents expressing concern. The landfill is seen as a better alternative use for solar PV than surrounding arable land and will have a minimal visual impact.

Technical Support Services – Development of the FBC will require technical support to cover specialist areas of legal, procurement, financial and commercial aspects. Securing the level of expertise required may be challenging in a competitive market but we have strong existing relationships with potential providers. Funding for the FBC must be sufficient to cover these costs.

Grid connection – To secure a grid connection, a G99 application must be submitted to Northern Powergrid. Until the application is submitted (at initial cost of £5k and holding deposit of £25k) the full cost and timescales will not be confirmed. The cost and process of a G99 application will be built into the FBC and financial modelling will be updated based on the outcome.

Wards Impacted

38. All

Contact details

For further information please contact the author of this Decision Report.

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Annexes and Appendices

Annex A: Outline Business Case

Outline Business Case Appendices:

- Appendix A: Annex A_HW Baseline Report
- Appendix B: HW Baseline and Options Review
- Appendix C: HW Financial Models and Cashflow
- Appendix D: HW Financial Models and Sensitivity
- Appendix E: HW Strategic Outline Case
- Appendix F: HW Risk Summary
- Appendix G: (EXEMPT] HW Preliminary Title Review⁴
- Appendix H: HW Supplementary Technical Details
- Appendix I: Ground Investigation Interim Summary

Annex B: Equalities Impact Assessment

⁴ This annex is exempt from publication as it identifies personal details and financial information.