

Harewood Whin GEP – Introduction (NF)





- This Project Board has been arranged in person to enable a review of the first two requirements delivered by the project.
- These are the Baseline Report (summarised in these slides and full report available) and the Long List of Options.
- At this stage we want to establish firm ground for the future project work and ensure we are starting from a solid place.
- We talked in previous meeting about a' fork in the road' elating to the scope/vision for the project.
- We are approaching that 'fork' and we want to use this session and upcoming sessions to really test and understand where the Project Board are with their vision of a Green Energy Park
- We can deliver a limited scope within the Outline Business Case to deliver renewable energy and resale to the grid or
 we can fully progress the potential of the site, allowing a wide range of offtaking opportunities, wider use of renewable
 technologies, opportunity to provide light industrial/aligned sustainable business revenue, moving Hazel Court
 completely and reusing the current city centre site, creating a centre of excellence for Net Zero.
- The ambitious vision will face funding, operational and many other challenges, but what is the ambition and vision for the site?
- I want to not answer this now, just to pose the question to reflect on this as we start to present the options and what's possible.
- Today that's as far as we will go and we will follow up with further meetings to help narrow down these options and create a future roadmap to show how the Green Energy Park and the associated actions required needs to unfold.
- Regardless, I see a programme of work over many years, where we breakdown all the associated projects and over time we evolve the site towards the agreed vision of what CYC/the Combined Authority want from a Green Energy Park.

Harewood Whin GEP – Vision (NF/CF/GT)





Harewood Whin GEP Introduction

· We want to gauge project board stakeholder ambition to inform and guide longlist options.

Feb 25 = Guidance now Work underway to input to **High Level Option Delivery Mechanism** By 31/3/25 By 30/6/25 needed on the ambition the Project Board on 5/2/25 Summary for the project Strategic Option A Always a strategic option **Existing Operational** Do Nothing and This will follow the content of Arrangements. No further the baseline report revenue funding required. continue 'as is' Requirements Requirement One Baseline Report Three & Four This is likely to be a solar Project delivery continues 'As farm/battery facility Is' with revenue funding **Options Appraisal &** Strategic Option B dependent on grid requirement to progress Roadmap connection/pay back from straight to Full Business Case Limited Scope grid (eventually !) and use for with limited, but focused **Outline Business** Yorwaste operations only benefits Case Requirement Two Define a Green Energy Park! = Planning Programme Delivery -Long List of Technical Solar, wind, battery, hydrogen, Transformational programme Strategic Option C other technologies with multiple projects **Options** Ambitious Scope Move Hazel Court depot delivered overtime to execute Strategic Outline Introduce commercial the overall vision. **Business Case** offtakers e.g coaches, buses, Complexity of delivery vans etc interdependencies, but with = Scoping Sustainable business units to multiple benefits and rent/create centre of strategic/political importance excellence to the city and the region. Council net zero cremations Further revenue funding will Energy to run all council be needed to deliver either operations in the city stage 2 OBC or more detailed Local community energy **Full Business Case** Jobs-Sustainable Growth Resale excess back to the grid

Harewood Whin GEP – Baseline Do-Nothing Milestones Overview





Strate	gic Milestones										
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Policy						City of York Net Zero Target & HMG Clean Power Target					
Harewood	Possible Planning approval once glint and glare issue resolved for 28MW	Install 0.172MVA and 0.260 MVA solar PV based on grid connection agreements						capacity	e from to Gale lane for		
Hazel Court	Site is constrained for activities being undertaken with no room for growth - insufficient space for full EV charging infrastructure		Decision to be made 34 Refuse Vehicles w vehicles								
Hessay Solar 2	March 2025 - Grid Connection Milestone. Enable discussion on partnering to use spare connection capacity	Development of Solar array at Hessay next to HW. Planning approval 49.9MW, Grid agreement 40MW, and CFD agreement on 32MW export.									
First Bus	Electric Bus Fleet is decarbonised (86) with charging capacity during data at James's Street Depot										Net zero target including Pullman Coaches next to HW
CYC EV Charging Team		Potential commercial options available to develop EV charging at HW and/or supply Poppleton P&R									

Harewood Whin GEP – Baseline Report Overview





Baseline Report Overview

Harewood Whin Solar Generation Capacity

- Potentially up to 28MW
- Generating 28,674MWh/yr

Current CYC Electricity Demand (22/23)

- 10,344 MWh/yr
- £3.6m spent annually

Current Harewood Whin Energy Demand (20/21)

• Site Operations 962 MWh/yr

Harewood V

Harewood Whin Grid Constraints

- Costly and long lead times to connect renewable energy to grid at HW with NPG.
- Potentially 2032 and up to £7.5m (worst case)

Hessay Solar2 (Adjacent to HW)

- Planning approved for 49.9MW generation
- · Risk/opportunity for HW grid connection

Opportunity to decarbonise CYC Operations

 Full electrification of remaining CYC waste fleet could save 392t of CO₂.

Harewood Whin GEP – Baseline Report Overview





Baseline Report Overview

- The GEP project aims to contribute to the region's transition to net-zero carbon emissions by integrating a range of renewable technology options, potentially including a combination of solar and wind generation with battery storage and EV charging capabilities or hydrogen generation.
- The GEP is anticipated to add renewable capacity to York's energy mix, contributing to the UK Government Clean Power 2030 Plan and supporting the city's ambition to decarbonise its energy system by supporting the CYC Plan 2023-2027 and York Climate Change Strategy 2022-2032.
- This project is a discretionary function for CYC, with current funding only in place to the Outline Business Case stage. If approval/funding is obtained to progress to project implementation, it will not change current landfill maintenance operations and waste processing at Harewood Whin. However, the potential for renewable energy generation at Harewood Whin is significant, as long as planning, electricity grid, operational requirements, local stakeholder wishes, funding and potential commercial off taker challenges are overcome.
- Previous GEP feasibility studies suggest onsite renewable generation could potentially supply all of Harewood Whin's operational energy requirements, with potential financial benefits being realised by selling excess energy for export. There is also an opportunity to decarbonise CYC waste fleet operations and achieve potentially significant CO2 and fuel cost savings, however this would require significant investment to shift the current waste fleet to EV and transition associated infrastructure from Hazel Court depot (separate to this investment decision, but its decision being critical to future funding/operational approach beyond the outline business case).
- As of January 2025, a planning application has been submitted for an initial solar development on site by Harewood Whin operators Yorwaste. The application is currently under review, with the potential to be revised to a smaller development due to glint and glare concerns raised by the nearby airfield. A separate solar farm development immediately adjacent to the north-west boundary of Harewood Whin towards Hessay has successfully achieved planning permission, possessing both risks and opportunities for the GEP, particularly around grid connection capacity which is particularly constrained for new generation in the area and could result in significant lead times for connection.
- Despite risks to GEP development at Harewood Whin, a significant opportunity exists to repurpose unutilised land for sustainable energy generation and realise significant benefits through a brownfield development that harnesses renewable energy sources for CYC, Yorwaste, the City of York and the wider region. By transforming what was once a liability into an asset, GEP on landfill could exemplify innovation, sustainability, and the transformative approaches required by CYC and other local authorities to decarbonise operations and contribute to a sustainable future for their local industry and communities.

Harewood Whin GEP – Hazel Court Considerations (NC)





Land Considerations

- Hazel Court and Tip Site 7.8 acres edge of industrial but area has seen development in recent years
- · Land to front of Harewood Whin 29 acres agricultural and Green Belt

HC Site Options if Decant to HW

- Sell or lease out
- As industrial/office likely to be limited value. Ball park £6m
- Scope to expand content
- Residential ballpark acre = ballpark £11/12m
- Significant sized site and clever design could turn site around benefitting from proximity of St Nick's open space/ woodland.
- Need commercial agency advice to verify initial thoughts and values





(Not to Scale)





- The first stage of the business case to be developed for the Harewood Whin Green Energy Park (GEP) will be the Strategic Outline Business Case (SOBC).
- This is where a longlist of potential options for renewable energy generation on the site will be developed.
- The longlist of options have been built using a combination of building block 'lenses' as shown in the table:

Harewood Whin GEP - Longlist Options Generation (Building Block Approach)

Options Lens	Description	Longlist Level of Detail for Each Option	Scope
Technology Options	Describes the potential technology options to available for renewable energy generation at Harewood Whin and the coverage scope of the technology deployment at site.	Medium/High	
Service Solution – Offtakers	Describes the potential entities (businesses/organisations/grid) that could consume renewable energy from generation at Harewood Whin.	Medium	Harewood Whin
Service Solution – Power Sale	Describes the potential sale of renewable energy to entities (businesses/organisations/grid) from generation at Harewood Whin.	Medium	site only.
Service Delivery, Implementation & Funding	Describes the potential commercial options available to CYC at the design/build/operate phase.	Medium	





Technology Options

Lens Overview:

- Based on findings from a recent technology feasibility study undertaken by Yorwaste for the Harewood Whin site, a 'solar first' approach was recommended with additional technology added to the GEP over time, primarily due higher Internal Rates of Return for solar generation compared to other technologies.
- Battery Energy Storage systems are relatively expensive capital items, however they offer increased flexibility on the generation of renewable energy, particularly to manage supply/demand and in grid constrained areas such as Harewood Whin.
- EV charging infrastructure is both a technology solution and offtaker of energy generated. They could enable additional benefits such as CYC fleet charging or to 3rd parties to generate income.

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Technology	No Generation	Small Scale (~1MW) Ground Mounted Solar PV Array	Mid Scale (~10MW) Ground Mounted Solar PV Array	Large Scale (~28MW) Ground Mounted Solar PV Array	Onshore Wind Turbine(s)	Battery Energy Storage	Green Hydrogen Generation	EV Charging Infrastructure
Description	BAU - No renewable energy generation technology is developed on the Harewood Whin site.	multiple solar panels	ar photovoltaic (PV) arra installed on a ground-b o maximize sun exposu energy.	ased support	Aerodynamic blades rotate at the top of a pylon in wind to capture energy and convert into electricity.	Battery energy storage systems store excess energy produced from renewable and sources, allowing for the stabilisation of power supply, grid management, and improved energy efficiency by providing electricity when generation is low or demand is high.	Green hydrogen generation involves producing hydrogen fuel through the electrolysis of water using electricity from renewable energy sources, resulting in zero carbon emissions and offering a clean alternative to fossil fuels.	Electric vehicle (EV) charging infrastructure consists of a network of charging stations that supply power to electric vehicles, enabling their widespread adoption and supporting sustainable transportation.





Lens Overview:

Service Solutions - Offtakers

- · If a GEP is developed at the Harewood Whin site, offtakers will consume any energy generated.
- It is recommend that energy generated at the GEP is utilised at the site to reduce distribution costs. Therefore decarbonising existing Harewood Whin operations should take precedent for any renewable energy generated. Beyond that, local offtakers within a close geographical distance of the GEP are preferred followed by regional offtakers.
- · There is an option to sell energy generated to the National Grid, however this is less cost effective.
- If green hydrogen generation was adopted at site, the production of hydrogen would require renewable energy and hydrogen generated could also be sold.

	Option 1	Option 2a	Option 2b	Option 3a	Option 3b	Option 4	Option 5	Option 6
Technology	Harewood Whin Site Operations	Local Offtaker - Hessay Solar 2	Local Offtaker - (3rd Party - Pullman Bus/Poppleton P&R/Yorkshire Water)	Regional Offtaker - (CYC/Yorwaste)	Regional Offtaker - (3rd Party)	National Grid	Hydrogen Generation and Sale	No Offtakers
Description	Small scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management).	Mid scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND excess generation exported and sold to adjacent Solar 2 (Hessay) development, utilising excess capacity on their grid connection.	Mid/Large scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND excess generation exported and sold to adjacent entity such as Pullman.	Mid/Large scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND excess generation exported and sold to a like-minded regional entity such as CYC/Yorwaste.	Mid/Large scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND excess generation exported and sold to another regional entity such as University/Hospital etc.	Mid/Large scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND excess generation exported and sold to the National Grid.	Mid/Large scale solar renewable energy generation supplies electricity demand for operations on the Harewood Whin site (waste, landfill management) AND supply of renewable energy to produce green hydrogen from electrolysis then selling hydrogen.	BAU - No renewable energy generation technology is developed on the Harewood Whin site therefore no external offtakers.





Service Solutions – Power Sale

Lens Overview:

- Power sale options are closely related to who the offtaker is.
- Power Purchase Agreements (PPA) Private Wire arrangements are physical connections to an offtaker and would incur capital costs to install the connection, however suppliers and offtakers benefit from improved sell/buy prices using this arrangement.
- · When offtakers require the Grid to distribute energy generated (PPA Sleeved/National Grid Electricity Sale) energy sell/buy prices are further impacted.
- · Harewood Whin is Grid constrained for new energy generation, therefore off-grid solutions could be explored.

	Option 1a	Option 1b	Option 1c	Option 2a	Option 2b	Option 3	Option 4	Option 5
Technology	PPA Private Wire - to HW Yorwaste	PPA Private Wire - to Solar 2	PPA Private Wire - to Local Offtaker	PPA Sleeved - CYC/Yorwaste	PPA Sleeved - 3rd Party Offtaker	National Grid Electricity Sale	Island Mode - No Grid Connection	No Power Sale
Description	where a power purchaselectricity from a renew	e Agreement) Private Wese agreement facilitates in vable energy generator the hysical connection, enhas savings.	the direct supply of o a nearby private off-		wable energy electricity indirectly to the utility grid, with an ing" or managing the	Selling renewable electricity generation back to the national grid involves feeding surplus power produced by renewable energy systems into the grid, allowing producers to earn revenue and contribute to the overall supply of clean energy.	Not connecting to the electricity grid, also known as going offgrid/island, involves using standalone renewable energy systems, often paired with battery storage, to independently generate and manage electricity without relying on external power sources.	BAU - No renewable energy generation technology is developed on the Harewood Whin site therefore no external offtakers and power sale.





Service Delivery, Implementation & Funding

Lens Overview:

- · CYC will need to agree on the commercial approach to delivering and operating a GEP at Harewood Whin.
- Similar CYC infrastructure development has utilised a CYC procurement exercise to design and build outsourced to private sector, with CYC/private options for operation and maintenance.
- CYC EV charging at Hazel Court was directly procured through BP Pulse to design, build and maintain the infrastructure (grid reinforcement was additional works).
- CYC EV charging and canopy solar at Poppleton Park and Ride was directly procured through Evo Energy to supply and install.
- · CYC EV charging funding was sourced through EU funding and Government Office for Zero Emission Vehicles grant.
- Funding sources should be explored for the GEP, including the UK Infrastructure Bank.
- · A GEP funding scheme should not negatively impact non-discretionary services CYC provides.

	Hare	wood Whin GEP C	Commercial Delive	ery Structure Spe	ctrum							
Fully Council Le	Fully Council Led Fully Private Sector Led											
Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7						
Council funds, builds, operates, and owns the GEP with no involvement of private sector.	Council owns and finances the GEP, entering into a partnership agreement with private sector contractor(s) to design, build, operate, and maintain the asset with a strong element of risk and revenue reward sharing.	Fully council owned delivery vehicle (i.e., council SPV) with design and build (D&B) of GEP and some other functions outsourced to private sector delivery partner(s).	Public-public partnership/JV with joint development and financing – D&B and some other functions outsourced to private sector.	Public-private partnership/JV with joint development, delivery, and financing responsibilities.	Private sector led development and delivery with council involvement in elements of the project (e.g., council commits to long term PPA offtake; provision of grant funding etc.)	Full private sector development, delivery, and financing (i.e., council provides the site to a private sector developer and asset owner in return for a lease payment)						

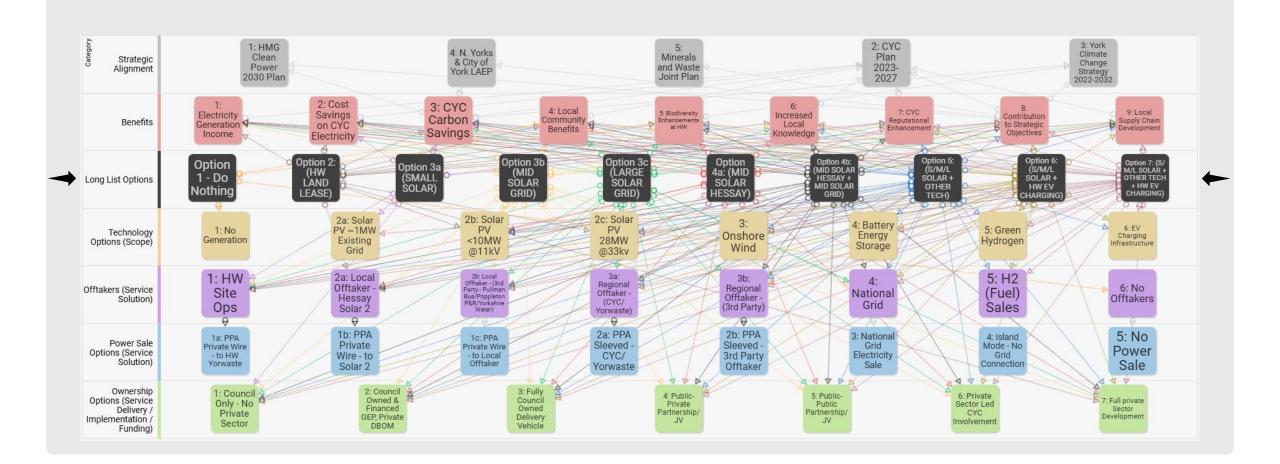




Longlist Options – All Options

Longlist Overview:

- Following SME and stakeholder interviews, individual options were created by connecting several 'lenses' downwards (as shown below).
- · Each option was also tested upwards against project benefits and its contribution to wider strategy (as shown below).
- The HW GEP project board members are invited to test this initial set of Long-list options and refine accordingly (next slide).



Harewood Whin GEP – Proposed Longlist Options





Proposed Longlist Options - All Options

Longlist Overview:

- This set of long-list options shows a spectrum of feasible HW GEP options developed from SME and stakeholder interviews connecting the 'lenses' as shown previously.
- Each option has its own initial Strengths/Weaknesses/Opportunities and Threats.
- The HW GEP project board members are invited to test this initial set of Long-list options and refine accordingly.

Strategic Option	Strategic Opti Do Nothing	on A			egic Option B Scope Ambition		Strategic Option C Ambitious Scope			
Long List Option	Option 1	Option 2b	Option 3a* (In Progress)	Option 3b	Option 3c	Option 4a	Option 4b	Option 5	Option 6	Option 7
Name	Do Nothing (BAU)	Harewood Whin Land Lease (to private solar developer)	Small Scale Solar Farm + National Grid Connection	Mid Scale Solar Farm + National Grid Connection	Large Scale Solar Farm + National Grid Connection	Mid Scale Solar Farm + Connection to Hessay Solar 2	Mid Solar + Connection to Hessay Solar 2 + Mid Solar + National Grid Connection	S/M/L Scale Solar + Other Generation Technology	S/M/L Scale Solar + Harewood Whin EV Charging	S/M/L Scale Solar + Other Generation Technology + Harewood Whin EV Charging
Description	No Investment in the Harewood Whin GEP.	Lease portion of the Harewood Whin site to adjacent solar development (Hessay Solar 2) and receive rent.	Up to 1MW solar generation at HW using existing grid connection to supply current operational demand at site.	Up to 10MW solar generation at HW with 11kV grid connection to Gale Lane sub-station.	Up to 28MW solar generation at HW with 33kV connection to Poppleton substation.	~10MW solar generation at HW with connection to adjacent Hessay solar development. This uses excess grid connection capacity on the Hessay development.	~10MW solar generation at HW with connection to Hessay solar development + 10MW solar generation at HW with 11kV grid connection to Gale Lane sub-station.	Option 3b/3c/4a/4b + Wind/ Hydrogen/ Battery	Option 3b/3c/4a/4b + Harewood Whin EV Charging Infrastructure	Option 5 + 6

Harewood Whin GEP – Proposed Longlist Options





Proposed Longlist Options – All Options

Proposed Longlist SWOT Analysis:

	Option 1	Option 2b	Option 3a* (In Progress)	Option 3b	Option 3c	Option 4a	Option 4b	Option 5	Option 6	Option 7
Name	DO NOTHING (BAU)	LAND LEASE	SMALL SOLAR	MID SOLAR + GRID	LARGE SOLAR + GRID	MID SOLAR + HESSAY	MID SOLAR + HESSAY + MID SOLAR + GRID	S/M/L SOLAR + OTHER GEN TECH	S/M/L SOLAR + EV CHARGING @ HW	S/M/L SOLAR + OTHER GEN TECH + EV CHARGING @ HW
Strength	No investment costs	Rental income	Low capital costs, realise renewable generation quickly	Generates excess electricity	Generates maximum solar excess electricity	Generates excess electricity, uses Hessay connection – quicker	Generates excess electricity, uses Hessay & NG connection to max output	Diversify HW GEP generation, more revenue	Opportunity for renewable EV fleet charging for CYC waste or others	Maximum potential of GEP generation at HW
Weakness	No green energy generation	Loose element of control of HW land	Generation only covers current HW demand	Requires NG connection, higher capital costs	Requires NG connection, high capital costs	Limited connection capacity to Hessay	Limited Hessay connection, long NG connection timeframes	Capital and operational costs	High capital costs for battery storage technology	Highest capital and operational costs
Opportunity	Focus on alternative solutions	No capital costs	Can provide impetus to further develop HW GEP	Offtakers for electricity sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Realise solar benefits earlier than if NG connection	Offtakers for electricity sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Opportunity to move CYC waste fleets from Hazel Court and sell the land.	Opportunity for CYC to show net zero leadership at local authority level
Threat	Missed opportunity for HW GEP	Complex land agent/legal solution at HW	Yorwaste don't progress HW GEP beyond this point	Grid connection is too prohibitive to progress	Grid connection is too prohibitive to progress	Needs strong commercial agreements	Needs strong commercial agreements, complex connections	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution

Harewood Whin GEP – Next Steps – Option Scoring





Next Steps:

- Take longlist options (Step 1)
- Check/add in any additional CSF's (Step 2)
- Test each option against each CSF (Step 3)
- Total scores for each option (Step 4)

	Option 1	Option 2b	Option 3a* (In Progress)	Option 26	Option 3c	Option 4s	Option 4b	Option 5	Option 6	Option 7
Name	DO NOTHING (BAU)	LAND LEASE	SMALLSOLAR	MID SOLAR+ GRID	LARGE SOLAR + GRID	MID SOLAR+ HESSAY	MID SOLAR + HESSAY + MID SOLAR + GRID	S/M/L SOLAR + OTHER GEN TECH	S/M/L SOLAR + EV CHARGING @ HW	S/M/L SOLAR+ OTHER GEN TECH+ EV CHARGING @ HW
Strength	No investment costs	Rentalincome	Low capital costs, realise renewable generation quickly	Generates excess electricity	Generates maximum solar excess electricity	Generates excess electricity, uses Hessay connection— quicker	Generates excess electricity, uses Hessay & NO connection to max output	Diversity HW GEP generation, more revenue	Opportunity for renewable EV fleet charging for CYC waste or others	Maximum potential of GEP generation at HM
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Opportunity	Focus on alternative solutions	No capital costs	Can provide impetus to further develop HW GEP	Offtakers for electricity sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Realise solar benefits earlier than if NG connection	Offtakers for electricity-sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Opportunity to move CYC waste fleets from Hazel Court and sell the land.	Opportunity for CYC to show net zero leadership at local authority level
Threst	Missed opportunityfor HW GEP	Complex land agent/legal solution at HW	progress HW GEP	Grid connection is too prohibitive to progress	Grid connection is too prohibitive to progress	Needs strong commercial agreements	Needs strong commercial agreements, complex connections	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution
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	Strategic Fit & CYC Need	Potential Value for Money	Potential Achievability	Supply Side Capacity and Capability	Potential Affordability	Mitigating Reputational Risk
CSF	Option (X) fits strategically with HMG / CYC aims for a decarbonised future.	Option (X) provides CYC with a value for money solution that will over time provide revenue for CYC.	Option (X) is an achievable proposition within the medium term.	Option (X) can be implemented by the supply side.	Option (X) is potentially affordable.	Option (X) can mitigate CYC net zero reputational risk.
Scoring	Strongly Agree (5)	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
	Agree (4)	Agree	Agree	Agree	Agree	Agree
	Neutral (3)	Neutral	Neutral	Neutral	Neutral	Neutral
	Disagree (2)	Disagree	Disagree	Disagree	Disagree	Disagree
	Strongly Disagree (1)	Strongly Disagree	Strongly Disagree	Strongly Disagree	Strongly Disagree	Strongly Disagree

	Option 1	Option 2b	Option 3a* (In Progress)	Option 35	Option 3c	Option 4a	Option 4b	Option 5	Option 6	Option 7
Name	DO NOTHING (BAU)	LAND LEASE	SMALLSOLAR	MID SOLAR+ GRID	LARGE SOLAR + GRID	MID SOLAR + HESSAY	MID SOLAR + HESSAY + MID SOLAR + GRID	S/M/L SOLAR + OTHER GEN TECH	S/M/L SOLAR + EV CHARGING @ HW	S/M/L SOLAR + OTHER GEN TECH + EV CHARGING @ HW
	No investment costs	Rentalincome	Low capital costs, realise renewable generation quickly	Generates excess electricity	Generates maximum solar excess electricity	Generates excess electricity, uses Hessay connection— quicker	Generates excess electricity, uses Hessay & NO connection to max output	Diversify HW GEP generation, more revenue	Opportunity for renewable EV ficet charging for CYC waste or others	Maximum potential of GEP generation at HW
	No green energy generation	Loose element of control of HW land	Generation only covers current HW demand	Requires NG connection, higher capital costs	Requires NG connection, high capital costs	Limited connection capacity to Hessay	Limited Hessey connection, long NG connection timeframes	Capital and operational costs	High capital costs for battery storage technology	Highest capital and operational costs
ŧ	Focus on alternative solutions	No capital costs	Can provide impetus to further develop HW GEP	Offtakers for electricity sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Realise solar benefits earlier than if NG connection	Offtakers for electricity sale & de-carbonisation	Offtakers for electricity sale & de-carbonisation	Opportunity to move CYC waste fleets from Hazel Court and sell the land.	Opportunity for CYC to show not zero leadership at local authority level
_	Missed opportunityfor HW GEP	Complex land agent/legal solution at HW	Yorwaste don't progress HW GEP beyond this point	is too prohibitive	Grid connection is too prohibitive to progress	Needs strong commercial agreements	Needs strong commercial agreements, complex connections	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution	Needs additional planning permission, long term solution



Harewood Whin GEP – Conclusions & Next Steps





Conclusions

- Baseline Report and Longlist Options have now been developed as part of the Harewood Whin GEP project.
- The Harewood Whin GEP project potentially needs to overcome complex dependencies to become a reality, however there are significant financial and non-financial benefits to be realised if the site is to be repurposed for renewable energy generation.

Next Steps

- Arcadis will initially score each option using the Critical Success Factors (CSF's) (this will be at a high level).
- This will provide us with an initial ranking of Options and an indication of Shortlist Options ahead of the next Project Board.