Green Impact Report

Earls Gate Energy Centre

1. Introduction

The Green Investment Ratings (GIR) team of Green Investment Group Limited ('GIG') has prepared this report (the 'Report') in connection with the Earls Gate Energy Centre Limited (the 'Project'). GIG has forecast the Project's: landfill avoided; materials recycled and recovered; and greenhouse gas ('GHG') emissions avoided; (together, the 'Green Impact') and is pleased to set out its assessments in this Report, as summarised below. This Report also considers the Project's alignment with the United Nations Sustainable Development Goals.

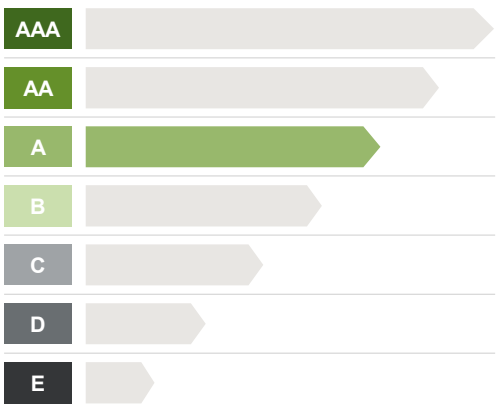
This assessment was undertaken using data provided to the GIR team.

The Project's GIG Carbon Rating is A. Refer to page 3 and the methodology in Appendix 1 for further information on how this is calculated.

Project Information	Earls Gate Energy Centre
Technology	Energy from Waste
Waste treatment capacity	216 kt / yr
Electricity generation capacity	21.5 MW
Steam generation capacity	44.6 MW
Stage	Development
Commencement of operations	2021

Green Impact: Forecast

GIG CARBON RATING: A



Landfill avoided	
Remaining lifetime	5,244 kt
Average annual	210 kt / yr
Materials recycled and recovered	
Remaining lifetime	1,350 kt
Average annual	54 kt / yr
GHG emissions avoided (carbon dioxide equivalent)	
Remaining lifetime	2,368 kt CO_2e
Average annual	95 kt CO_2e / yr

2. Green Impact Forecast

In this Report we use the term 'Green Impact' to refer to the landfill avoided; materials recycled and recovered; and GHG emissions avoided by the Project, as defined in Appendix 1. Forecasts are based on data provided to the GIR team and is subject to our assessment of Green Impact Forecast Accuracy (as set out on page 4). The forecasts and Green Impact Forecast Accuracy are subject to the methodology, assumptions, limitations and methods set out in Appendices 1 & 2.

Landfill avoided

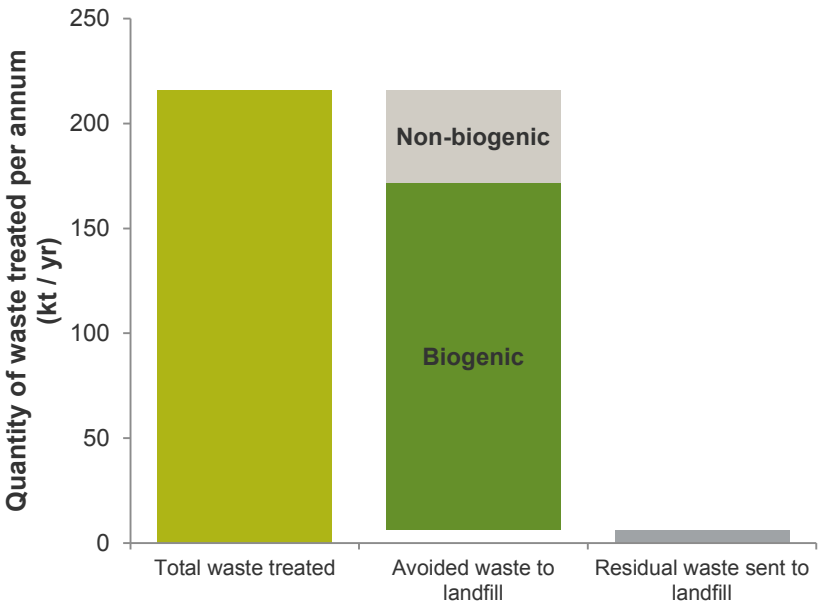
The Project is forecast to divert 210 kt / yr of waste from landfill

The Project is forecast, on a whole project basis, to prevent 166 kt / yr of biogenic waste and 44 kt / yr of non-biogenic waste from being sent to landfill.

The primary purpose of waste management facilities is to treat waste in a way that minimises harmful environmental effects. The Waste Hierarchy[1] ranks waste management options according to what is best for the environment. In the UK, waste disposal such as landfill is seen as the least environmentally desirable option for waste management.

The Project will therefore achieve Green Impact by diverting waste from landfill to waste treatment options higher up the Waste Hierarchy, such as recycling and energy recovery.

The waste processed by the Project can be subdivided into biogenic and non-biogenic waste. Biogenic waste is waste that originally derives from plant or animal matter (e.g. wood, food waste), and breaks down anaerobically in landfill sites to form landfill gas, which contains potent greenhouse gases.



Waste processed	
Total waste treated	216 kt / yr
Avoided waste to landfill	
– of which biogenic	166 kt / yr
– of which non-biogenic	44 kt / yr
Residual waste sent to landfill	6 kt / yr

[1] See www.gov.uk/guidance/waste for details.

Green Impact Report

Earls Gate Energy Centre

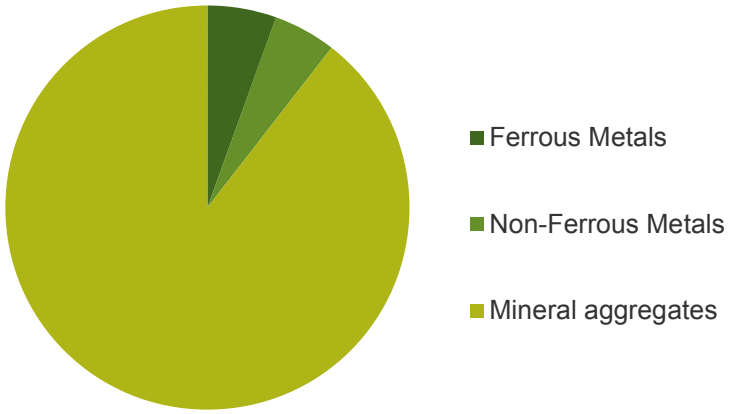
Materials recycled and recovered

The Project is forecast to recycle or recover 54 kt / yr of materials

The Project is forecast, on a whole project basis, to recycle 6 kt / yr of materials and recover 48 kt / yr of materials.

Waste management options other than disposal include recycling and recovering from the waste stream. This reduces the need for natural resources to be consumed in the manufacture new products.

The Project will recycle materials by extracting them prior to energy recovery. Following energy recovery the ash will be recovered and used for mineral aggregates, which avoids the need for extraction of virgin materials for use as aggregates.



Materials recycled and recovered	
Recovery: Mineral aggregates	48 kt / yr
Recycling:	
- Ferrous metals	3 kt / yr
- Non-ferrous metals	3 kt / yr
Total	54 kt / yr

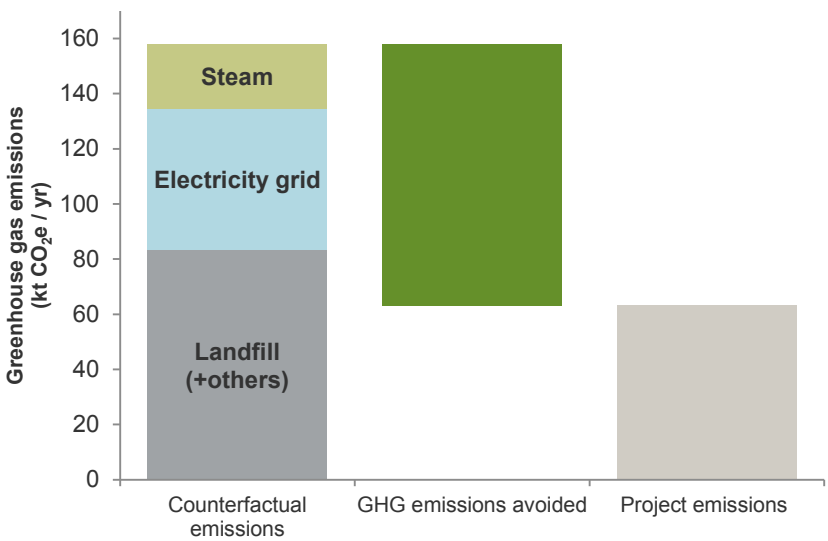
Greenhouse gas emissions avoided

The Project is forecast to avoid emissions of 95 kt CO_2e / yr

The Project is forecast, on a whole-project basis, to avoid 95 kt CO_2e / yr for the remainder of its lifetime.

Avoidance of GHG emissions (measured in carbon dioxide equivalent: CO_2e), both actual and forecast, is derived by comparing the emissions associated with the Project to a counterfactual (alternative method of energy generation and waste disposal). In this case the electricity counterfactual is the local marginal electricity grid mix, the steam counterfactual is a gas-fired boiler, and the waste counterfactual is disposal to landfill.

GHG emissions from the Project are anticipated to be just over 10% of the counterfactual emissions.



GHG emissions avoided (carbon dioxide equivalent)	
Remaining lifetime	2,368 kt CO_2e
Average annual	95 kt CO_2e / yr

3. Green Impact Forecast Accuracy

GIG has assessed the weighted average Green Impact Forecast Accuracy for the Project at Level 4 (High).

Green Impact Forecast Accuracy is GIG's assessment of the level of confidence that can reasonably be placed on the accuracy of any quantified Green Impact Forecast. It is based on information provided to the GIR team and on the methodology referred to in Appendix 1.

We assess Green Impact Forecast Accuracy at levels ranging from Level 1 (Low) to Level 5 (Very High), which represent the combined and weighted average of a series of factors, according to our in-house experience of the sensitivity of each element. See Appendix 1 for further detail.

The data quality and development stage scores are anticipated to increase when the Project becomes operational and actual performance is known. This will then result in an overall increase in Green Impact Forecast Accuracy.

Level 4 (High)

4. Contribution to Sustainable Development Goals

The United Nations Sustainable Development Goals[1] (SDGs) are a set of 17 goals for sustainable development, defined by 169 SDG Targets to be achieved by 2030. The GIR team has considered the performance of the Project against the SDGs and their associated Targets. The assessment has identified those Targets to which the Project directly contributes (associated SDGs shown as full coloured icons below), and those Targets to which the Project indirectly contributes (inverted coloured SDG icons below).

Direct contribution

Goal	SDG Target	Contribution
7 AFFORDABLE AND CLEAN ENERGY	***Target 7.2*** *By 2030, increase substantially the share of renewable energy in the global energy mix*	76.7% of the Project's electricity generation is from a renewable source (i.e. arising from biogenic materials).
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	***Target 9.4*** *By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities*	Waste-to-Energy plants improve the sustainability of the waste management industry, by increasing resource use efficiency (the Project will recycle or recover 54 kt of materials per annum) and improving environmental outcomes through the avoidance of landfill (the Project will reduce landfill by 210 kt per annum).
11 SUSTAINABLE CITIES AND COMMUNITIES	***Target 11.6*** *By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management*	216 kt of municipal and other waste treated per annum.

[1] http://sustainabledevelopment.un.org/sdgs

Direct contribution

Goal	Target	Contribution
	***Target 12.2*** *By 2030, achieve the sustainable management and efficient use of natural resources*	216 kt of municipal and other waste treated per annum. 6 kt of materials (ferrous metals / non-ferrous metals) recycled per annum. 76.7% of electricity generation is from a renewable is source (i.e. arising from biogenic materials).
	Target 12.4 *By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment*	210 kt of waste diverted from landfill per annum, reducing impacts associated with landfill related pollution (e.g. odour emissions, soil and water contamination).
	Target 12.5 *By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse*	6 kt of materials (ferrous metals / non-ferrous metals) recycled per annum.
	Target 12.6 *Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle*	Earls Gate Energy Centre will operate an Environmental Management System and will report annually on their sustainability performance.

[1] http://sustainabledevelopment.un.org/sdgs

Indirect contribution

Goal	Target	Contribution
6 CLEAN WATER AND SANITATION	***Target 6.3*** *By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally*	210 kt of waste diverted from landfill per annum, reducing water quality pollution associated with landfill.
13 CLIMATE ACTION	***Target 13.3*** *Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.*	The construction of a new Energy from Waste plant raises awareness and improves capacity on climate change mitigation through renewable energy production.
14 LIFE BELOW WATER	***Target 14.1*** *By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution*	210 kt of waste diverted from landfill per annum, reducing potential for marine pollution impacts associated with landfill (e.g. water contamination).
15 LIFE ON LAND	***Target 15.1*** *By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements*	210 kt of waste diverted from landfill per annum, reducing the land-use and ecosystem services required for landfill.
	Target 15.3 *By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world*	210 kt of waste diverted from landfill per annum, reducing the land-use and soil impacts associated with landfill.

SUSTAINABLE DEVELOPMENT GOALS

[1] http://sustainabledevelopment.un.org/sdgs

Appendix 1

Terms and Conditions: Terminology and Methodology

Terminology

Green Impact

The Green Impact metrics covered by this Report are identified in the header and executive summary. "Green Impact" is a collective term referring to the environmental benefits which have been calculated in accordance with GIG's methodology to be, or to be reasonably likely to be, delivered by the project(s) to which this Report refers. The collective term can include defined metrics such as tonnes carbon dioxide equivalent avoided (t CO_2e), tonnes oil equivalent avoided (toe), and tonnes (t) of other air pollutant emissions avoided.

Green Impact Forecast Accuracy

"Green Impact Forecast Accuracy" is an expression of the level of confidence that, in the opinion of GIG, can reasonably be placed on the accuracy of any quantified Green Impact forecast. This assessment of forecast accuracy is described in levels as follows: Level 1 (Low), Level 2 (Moderate), Level 3 (Good), Level 4 (High), and Level 5 (Very High).

Methodology v 1.1

The Green Impact and Green Impact Forecast Accuracy assessments presented in this Report are based on GIG's approach to assessing Green Impact using the methodologies set out within its proprietary green investment principles, policies and the associated processes of the Green Investment Handbook[1]. The Green Impact assessment has applied proprietary modelling techniques and comparative data developed and owned by GIG, or by third party owners and made available under licence to GIG.

Green Impact calculation

GIG's initial calculation of the Green Impact of each project is produced by comparing relevant information and data derived from that project against relevant counterfactual (or baseline)
data for the assumed environmental impacts that would occur if the project did not take place, based on GIG's proprietary reference sources or provided to GIG by relevant third parties or obtained from publicly available sources. The resultant estimated Green Impact is then subject to further qualitative evaluation before production of GIG's formal Green Impact Report.

For grid-connected projects that generate electricity, the counterfactual is assumed to be marginal electricity generated from the national grid in that country, which includes resources consumed to supply grid electricity. GIG's methodology calculates the net Green Impact of the project by comparing its likely emissions to those of a marginal grid electricity mix, using the methodology set out in the International Financial Institutions (IFI) approach to GHG accounting for renewable energy projects[2] and the IFI approach to GHG accounting for energy efficiency projects[3].

GIG's methodology calculates results for likely Green Impact on an annual and lifetime basis. The Green Impact reported is 100% of the Green Impact of the underlying project(s). There is no proportionate allocation of Green Impact to any particular project investment or to particular investors, all of whom may report the same Green Impact from the underlying project(s).

Exclusions

The counterfactual of marginal grid electricity does not include the total quantifiable lifecycle environmental burdens (e.g. resources consumed during construction, or indirect emissions during operations such as those from associated transport vehicles) associated with energy generation. Therefore, to produce a valid comparison, the calculation of Green Impact for the project(s) assessed in this Report is based solely on the operational phase of the relevant project(s), and does not include a full lifecycle assessment of the project(s) unless specifically stated otherwise. This approach is aligned with the Greenhouse Gas Project Protocol[4].GIG's assessment does not include a review of any underlying project's environmental and/or social, permitting, licencing or other compliance status.

Green Impact Forecast Accuracy

Green Impact Forecast Accuracy is determined from a number of project parameters that include the project technology, stage of project development, and country in which the project is located, together with GIG's opinion of the input data quality. These parameters have been assigned values that represent the degree to which they affect the accuracy of the forecast Green Impact, and are used to produce Forecast Accuracy scores for three elements: Data quality, Technology & development stage, and Country governance[5]. The Forecast Accuracy scores for the three elements are weighted according to GIG's in-house experience of the sensitivity of each element and combined to derive an overall level of Green Impact Forecast Accuracy

Carbon Rating

Our Carbon Rating is a measure of a project's lifecycle greenhouse gas emissions compared to the emissions of the counterfactual. Projects with the lowest lifecycle emissions relative to the counterfactual would score the highest ratings from AAA to B. Projects with lifecycle emissions similar to the counterfactual would score a C, and projects with greater emissions would score a D or E. The missions of the counterfactual are derived from the IFI approaches to greenhouse gas accounting – please see above for details. Where we do not have project-specific information on lifecycle emissions, we us the median harmonised values from the US National Renewable Energy Laboratory's Lifecycle Assessment Harmonization[6]

[1] www.greeninvestmentbank.com/green-impact
[2] http://documents.worldbank.org/curated/en/2015/12/25514886/ifi-approach-ghg-accounting-renewable-energy-projects
[3] http://documents.worldbank.org/curated/en/2015/12/25514884/ifi-approach-ghg-accounting-energy-efficiency-projects
[4] www.ghgprotocol.org/standards/project-protocol
[5] Country governance scores are determined from datasets of indicators from the World Bank, Transparency International and United Nations University Institute for Environment and Human Security
[6] www.nrel.gov/analysis/sustain-lcah.html

Appendix 2

Terms and Conditions: Assumptions, Limitations and other terms

Disclaimer

Green Investment Group Limited is not authorised or regulated by the Financial Conduct Authority or the Prudential Regulatory Authority. Green Investment Group Limited is not an authorised deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia), and Green Investment Group Limited's obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542. Macquarie Bank Limited does not guarantee or otherwise provide assurance in respect of the obligations of Green Investment Group Limited.

Scope and distribution of this document

UK Green Investment Group Limited ("GIG") has prepared this document (the "Report") for the exclusive use of the person with whom GIG has contracted to produce it (together with its subsidiaries and affiliates (the "Client")) in connection with the project or projects identified on page 1.

This Report has been prepared on the basis of the scope of work and subject to the terms and conditions set out or referred to in the terms of engagement agreed between GIG and the Recipient (the "Terms of Engagement"). The Terms of Engagement accordingly apply in full to the provision, receipt and use of this Report.

Liability and reliance

Unless GIG has expressly agreed otherwise in the Terms of Engagement, neither GIG nor any of its subsidiaries, holding companies (if any), joint ventures or affiliates (the "GIG Group") nor any of the directors, officers, employees, consultants, shareholders, sub-contractors or advisers of any member of the GIG Group (each of the foregoing being a "GIG Party") shall have or assume any liability whatsoever (whether direct or indirect and whether arising in contract, in tort or otherwise) to the Recipient, or to any of its affiliated companies or to any other person for or in connection with, and no claim shall be made by the Recipient or any other person in relation to, the provision, receipt or use of this Report or any of its contents or any error or inaccuracy in this Report.

The disclosure to, or receipt by, any other person of this Report shall not give rise to any legal or contractual relationship between any GIG Party and such other person, nor shall it give rise to any duty or assumption of responsibility in favour of such other person. No representation or warranty, express or implied, is made to any third party as to the accuracy, completeness or correctness of the information contained in this Report. No third party may rely upon the content of this Report and any use of this Report by such third party shall be at its own risk.

No GIG Party shall be liable to any such third party in relation to such use or reliance.

Intellectual Property Rights

All rights are reserved by GIG which, together with its relevant licensors, shall remain the exclusive owners of all intellectual property rights of whatsoever nature subsisting in (1) this Report, (2) any other document or materials provided by any GIG Party in connection with the evaluation of green impact and/or the preparation of this Report, (3) any systems, methodologies, software, algorithms or outputs used produced or developed by or for GIG in connection with this Report or any of its contents, and (4) otherwise made available for use by any person in connection with this Report.

Nature of the contents of this Report

The forecasts and assessments expressed in this Report are not ratings: they are, and shall be construed solely as, statements of opinion as to the relative prospects that particular environmental benefits can be achieved by a specified project or other asset that is the subject of any securities or other investment, and not as statements of current or historical or scientific fact, or as an endorsement of the accuracy of any data or conclusion or as any assurance that any environmental impact (either positive or negative) or risk will or will not occur.

The contents of this Report may not be relied upon as being a conclusive, complete or accurate representation of all elements and factors relating to any project. Furthermore, this Report is not, and shall not be interpreted or construed as, an assessment of the economic performance or creditworthiness of any person or project.

This Report is valid only as at the date of issue based on the information, data and/or documents provided to GIG by the Client or any relevant third party, or obtained using publicly available sources, as at the date of issue and shall not take account of any future information, events or changes with respect to the Client or any other person, any business, any financial instrument, any relevant project or transaction, any financial market or any relevant sector or otherwise (unless this Report is specifically amended at GIG's discretion).

This Report is not an offer or solicitation to buy or sell any investment or product or service, nor is it financial advice or trading advice or any other advice as to the merits of any investment, nor is it a recommendation regarding any investment decision or any decision to purchase, hold or sell any investment.

Project data

GIG has relied in good faith on publicly available data and data and information made available in connection with the relevant project(s) by the original Client and/ or relevant third parties, and has assumed that such data and information is complete, accurate and up to date.

GIG may, at its discretion, conduct limited validation of the data and information provided by original Client and/ or relevant third parties, based on a high-level telephone interview with the Client's representative(s) and/ or relevant third parties. GIG has not conducted, and shall not be responsible for conducting, any audit or detailed review or assurance or any other verification exercise of any such data (including data related to allocation of the use of proceeds).

Furthermore, no site-specific environmental or social due diligence has been, or is required to be, conducted by GIG, and GIG does not express any opinion on whether local site-specific environmental and/ or social impact have been mitigated appropriately. GIG has not undertaken any review of any underlying project's environmental and/or social, permitting, licencing or other compliance status.

Appendix 2

Terms and Conditions: Assumptions, Limitations and other terms

Reference data

In preparing this Report, GIG has relied upon various sources of data and information provided to GIG by relevant third parties or obtained through public information sources, the content of which no GIG Party has verified or controls.

GIG calculates Green Impact using reference data obtained from, among others, by the Ecoinvent life cycle inventory datasets for the calculation of environmental impacts. Green Impact is also calculated based on data supplied by the International Energy Agency (IEA), specifically from the 2015 editions of the World Energy Statistics and Balances dataset and the CO2 Emissions from Fuel Combustion dataset.

Any limitations and caveats that are applicable to the Ecoinvent and IEA datasets, as published on their websites, are also applicable to the results presented in this Report.

GIG's method is designed to work with a limited number of key inputs and to create results for over 200 different countries and makes some simplifying assumptions in order to achieve this degree of flexibility.

Publication and use of this Report

This Report has been made available with the consent of the original Client and must not be provided to any person other than the original recipient, nor published, reproduced or transmitted, by such recipient.

Neither the recipient of this Report nor any other person may in any way alter, modify or change this Report without the prior written consent of GIG. In particular, without limitation, the recipient (and any person in receipt of this Report) may only use or disclose this Report in its original, whole and complete format and shall not summarise, dissect or in any way use or display only part of this Report without the prior written consent of GIG.

Neither the Recipient nor any other person may disclose, publish or reproduce this Report in any manner which is misleading or which impairs the relevant data being disclosed, published or reproduced or in any manner which creates a false impression as to the origin or value of the information or which has an adverse impact upon GIG's reputation as a provider of the relevant services.

This Report is not for use by the recipient or any other person in:

a) evaluating specific technical or scientific aspects of relevant projects;

b) carrying out financial, commercial, economic or investment-related due diligence in relation to the Recipient or any other person, any financial instruments issued, or to be issued, by the Recipient or any other person, or relevant project(s) or transactions;

c) providing investment or financial advice, making investment decisions or recommendations or evaluating financial performance of any person or financial instrument;

d) valuing financial instruments;

e) verifying the accuracy or completeness of any information, data, documents or representations provided to GIG by the Issuer by any third party;

f) verifying the accuracy or completeness of any publicly available information, data, documents or representations; or

g) providing or obtaining advice on legal, regulatory, environmental, accounting or taxation matters.

No GIG Party shall be liable to the recipient or any third party for any losses suffered in connection with such use.

Governing Law

This Report (including these appendices) and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with it or its subject matter or use shall be governed by and construed in accordance with the law of England and Wales.

Appendix 3

Important Notice and Disclaimer:

The information contained in this presentation is confidential and must not be disclosed to any other party.

This presentation does not constitute an offer, invitation or recommendation and does not oblige Green Investment Group Limited (or any of its affiliates, or funds managed by its affiliates) ("**GIG**") to make an investment, underwrite or otherwise acquire an interest in any securities or to provide any financing in relation to the content of this document. Any proposal or offer would be conditional upon, amongst other things, GIG obtaining internal approvals and external approvals and detailed legal, taxation and accounting advice.

This presentation does not purport to contain all the information that may be required by the recipient to assess its interests in any proposal. GIG has prepared this presentation on the basis of information which is publicly available, and sources believed to be reliable. The accuracy of such information (including all assumptions) has been relied upon by GIG, and has not been independently verified by GIG. The recipient should conduct its own independent investigation and assessment as to the validity of the information contained in this presentation, and the economic, financial, regulatory, legal, taxation, stamp duty and accounting implications of that information. The recipient represents that it is not relying on any recommendation or statement of GIG. Except as required by law, GIG and its respective directors, officers, employees, agents and consultants make no representation or warranty as to the accuracy or completeness of the information contained in this presentation, and take no responsibility under any circumstances for any loss or damage suffered as a result of any omission, inadequacy, or inaccuracy in this presentation.

This presentation may contain certain forward-looking statements, forecasts, estimates, projections and opinions ("**Forward Statements**"). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. Actual future results and operations could vary materially from the Forward Statements. Similarly no representation is given that the assumptions disclosed in this presentation upon which Forward Statements may be based are reasonable. The recipient acknowledges that circumstances may change and the contents of this presentation may become outdated as a result.

The recipient acknowledges that neither it nor GIG intends that GIG act or be responsible as a fiduciary to the recipient, its management, stockholders, creditors or any other person. Each of the recipient and GIG, by accepting and providing this presentation respectively, expressly disclaims any fiduciary relationship and agrees that the recipient is responsible for making its own independent judgments with respect to any transaction and any other matters regarding this presentation.

Green Investment Group Limited is not authorised or regulated by the Financial Conduct Authority or the Prudential Regulatory Authority. Green Investment Group Limited is not an authorised deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia), nor do its obligations represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542. Macquarie Bank Limited does not guarantee or otherwise provide assurance in respect of the obligations of Green Investment Group Limited.

Contact us

Edinburgh
Atria One, Level 7
144 Morrison Street
Edinburgh
EH3 8EX
UK
+44 (0)203 037 2000

New York
125 West 57th Street
7th and 8th Floor
New York
NY 10019
USA
+ 1 212 231 1000

London
Ropemaker Place
28 Ropemaker Street
London
EC2Y 9HD
UK
+44 (0)203 037 2000

Hong Kong
Level 18, One International
Finance Centre
1 Harbour View Street
Central
Hong Kong
+852 392 21888

Find out more

www.greeninvestmentgroup.com