

# Product Disclosure Statement

Offer of ordinary shares by  
CarbonScape Holdings Limited

5 July 2017

This is a replacement Product Disclosure Statement and it replaces the Product Disclosure Statement dated 27 June 2017



This document gives you important information about this investment to help you decide whether you want to invest. There is other useful information about this offer on <http://www.companiesoffice.govt.nz/disclose>, offer number OFR11980. CarbonScape Holdings Limited has prepared this document in accordance with the Financial Markets Conduct Act 2013. You can also seek advice from a financial adviser to help you to make an investment decision.

## SECTION 1: KEY INFORMATION SUMMARY

### What is This?

This is an offer of ordinary shares ("Shares").

The Shares give you a stake in the ownership of CarbonScape Holdings Limited ("CarbonScape Holdings"). You may receive a return if dividends are paid or CarbonScape Holdings increases in value and you are able to sell your Shares at a higher price than you paid for them.

If CarbonScape Holdings runs into financial difficulties and is wound up, you will be paid only after all creditors have been paid. You may lose some or all of your investment.

The offer of Shares is only available to persons who hold shares in CarbonScape Limited ("CarbonScape Ltd"). The Remaining Shareholders are ineligible to participate in this Offer (a description of who are the Remaining Shareholders is set out in the Glossary of Terms on page 36 of this PDS).

### About CarbonScape Group

The CarbonScape Group consists of:

- CarbonScape Holdings; and
- CarbonScape Ltd and its non-operating wholly-owned subsidiary, CarbonScape Steel Technologies Limited.

CarbonScape Ltd is the only operating company within the CarbonScape Group. CarbonScape Holdings is a holding company that holds shares in CarbonScape Ltd and does not trade or operate.

CarbonScape Ltd has an internationally patented technology that converts forestry and timber waste such as sawdust and other carbonaceous biomass into high value carbon products such as biochar, green coke, activated carbon and graphite.



## Purpose of This Offer

The purpose of this Offer is to restructure the ownership of CarbonScape Ltd to make CarbonScape Ltd more attractive to future large investors.

The restructure will involve shareholders of CarbonScape Ltd, other than the Remaining Shareholders, selling their shares in CarbonScape Ltd to CarbonScape Holdings in consideration for receiving a corresponding number of Shares in CarbonScape Holdings.

The Remaining Shareholders will continue to retain their shares in CarbonScape Ltd.

As at the date of this PDS, CarbonScape Holdings holds 48.85% of the shares in CarbonScape Ltd. Assuming 100% take up of the Shares under this Offer and that none of the options in CarbonScape Holdings or CarbonScape Ltd are exercised (see Other Equity Securities of CarbonScape Holdings on page 16 for a further explanation of these options), CarbonScape Holdings will hold 75.53% of ordinary shares in CarbonScape Ltd.

The Board of CarbonScape Holdings and the board of directors of CarbonScape Ltd each believe, based on comments received from prospective large offshore investors, that CarbonScape Ltd will be more attractive to future large investors if it is a closely-held company. The restructure of CarbonScape Ltd pursuant to this Offer will (assuming full uptake under this Offer) result in CarbonScape Ltd being a closely-held company (as only CarbonScape Holdings Ltd and the Remaining Shareholders will be shareholders in CarbonScape Ltd).

## Key Terms of the Offer

The following are the key terms of this Offer:

Summary information	
<b>Who is the Offer available to?</b>	The offer of the Shares is made to all existing holders of ordinary shares in CarbonScape Ltd (subject to the selling restrictions set out under the heading "Selling Restrictions" on page 23), except for the Remaining Shareholders  The Remaining Shareholders will remain as shareholders of CarbonScape Ltd and may not apply for shares under this Offer.
<b>Description of Shares</b>	This is an offer of ordinary shares in CarbonScape Holdings.
<b>Consideration for the Shares</b>	The consideration for each Share applied for under this Offer is the sale of one ordinary share held by the Applicant in CarbonScape Ltd.
<b>Indirect interest in CarbonScape Ltd</b>	By applying for Shares under this Offer, Applicants will move from having a smaller but direct ownership interest in CarbonScape Ltd, with the ability to vote on matters affecting CarbonScape Ltd (e.g. major transaction resolutions and the directors of CarbonScape Ltd), to having a participation in a block vote and an indirect ownership interest in CarbonScape Ltd through a shareholding in CarbonScape Holdings.
<b>Offer open and close dates</b>	This Offer opens on 5 July 2017 (the "Opening Date") and closes on 21 July 2017 (the "Closing Date"), subject to any extension by CarbonScape Holdings.
<b>Number of Shares being offered</b>	This Offer is for a maximum of 21,653,572 Shares in CarbonScape Holdings. If the maximum number of ordinary shares is issued under this Offer, it will represent 35.3% of the ordinary shares in CarbonScape Holdings immediately after the issue under the Offer.

<b>Minimum and Maximum Parcels</b>	Each Applicant must subscribe for the same number of Shares under this Offer as the number of shares they hold in CarbonScape Ltd.
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## How You Can Get Your Money Out

CarbonScape Holdings does not intend to quote these Shares on a market licensed in New Zealand and there is no other established market for trading them. This means that you may not be able to sell your Shares.

The Shares are not redeemable.

## Key Drivers of Returns

CarbonScape Holdings considers that the current and future aspects of the CarbonScape Group's business that have, or may have, the most impact on the financial performance of the CarbonScape Group, and the key strategies and plans for those aspects, are:

<b>CarbonScape Holdings' shareholding in CarbonScape Ltd</b>	<p>CarbonScape Holdings' only material asset is the shares it holds in CarbonScape Ltd. CarbonScape Holdings:</p> <ul style="list-style-type: none"> <li>- will continue to hold its shares in CarbonScape Ltd (it currently holds 39,658,217 shares in CarbonScape Limited);</li> <li>- does not have any intention to carry on any business other than holding shares in CarbonScape Ltd; and</li> <li>- does not have any material cost structure (the only recurring costs incurred by CarbonScape Holdings are minor costs, including directors' fees and audit fees) or debt.</li> </ul> <p>The current intention of the Board is that any future capital raised by CarbonScape Holdings will be used solely to subscribe for shares in CarbonScape Ltd.</p> <p>Accordingly, the performance of CarbonScape Ltd is the key driver of returns for CarbonScape Holdings and the CarbonScape Group.</p>
<b>Pilot Plant</b>	<p>CarbonScape Ltd is currently building a pilot plant that will produce 150 tonnes of graphite or 450 tonnes of activated carbon or 470 tonnes of green coke per annum. The pilot plant is expected to be operational by the fourth quarter of 2017. Once the pilot plant is fully operational, CarbonScape Ltd expects to be in a good position to capitalise on a range of commercial opportunities.</p>
<b>Coated Spherical Graphite</b>	<p>CarbonScape Ltd is developing coated spherical graphite (CSPG) for the lithium-ion battery industry, in collaboration with Callaghan Innovation. Expected timing of completion for this project is the second half of 2018. The intellectual property resulting from this project will be 100% owned by CarbonScape Ltd. This technology comes at a time where the global market for high purity graphite created through environmentally friendly processes is growing rapidly. It is CarbonScape Ltd's current intention to establish its first commercial graphite plant (1,000 tonnes per annum) in Marlborough in the second half of 2018. The output from this plant is expected to be exported to key customers in geographic markets that may include USA, Germany, Japan, South Korea and Taiwan.</p>

**BlueScope Steel Supply Arrangement**

CarbonScape Ltd has a non-binding supply arrangement with BlueScope Steel of Australia for 9000 tonnes per annum of green coke (a sustainable coal substitute). However, this opportunity is currently on hold while the global steel industry recovers.

Detailed information on Key Drivers of Returns is provided in SECTION 2: CARBONSCAPE GROUP AND WHAT IT DOES of this PDS at page 9.

### Key Risks Affecting This Investment

Investments in shares are risky. You should consider if the degree of uncertainty about the CarbonScape Group's future performance and returns is suitable for you. The price of these Shares should reflect the potential returns and the particular risks of these Shares.

CarbonScape Holdings considers the most significant risk factors that could affect the value of the Shares are:

Risk Factor		Significance to CarbonScape Group
1	Going concern	The CarbonScape Group is currently loss-making and is reliant on raising future capital to meet expenses. There is a risk that the CarbonScape Group will not be able raise future capital and will not be able to continue as a going concern (see SECTION 7: CARBONSCAPE GROUP'S FINANCIAL INFORMATION at page 25 for further information).
2	Dilution	CarbonScape Holdings does not have any current revenues as its sole investment in CarbonScape Ltd will not return a dividend in the near future. Accordingly, while CarbonScape Holdings does not have a material cost structure, any costs incurred (for example, audit fees or directors' fees), must either be met by CarbonScape Ltd or by CarbonScape Holdings issuing shares. Any issue of shares by CarbonScape Holdings will dilute each existing investor's interest in CarbonScape Holdings and also their effective interest in CarbonScape Ltd and the CarbonScape Group.
3	Sole investment in single start-up company	CarbonScape Holdings' only asset is the shares it holds in CarbonScape Ltd. Accordingly, CarbonScape Holdings is reliant on the performance of CarbonScape Ltd to provide a return to its investors. There is a risk that CarbonScape Ltd may not generate a return on CarbonScape Holdings' investment in CarbonScape Ltd. The risks to CarbonScape Ltd's business are set out below.
4	Technological uncertainty	There is a risk that CarbonScape Ltd may uncover new technical challenges that may hinder future research and development (R&D) and commercialisation efforts.
5	Scale-up	There is a risk that the CarbonScape Ltd pilot plant is not scalable to commercial production levels.
6	Operational staff	CarbonScape Ltd has a small operational team. The loss of key personnel could result in loss of institutional knowledge and operational bottlenecks and make it difficult for CarbonScape Ltd to execute its business strategies.
7	Capital constraints	CarbonScape Ltd's technology development programme is ambitious and CarbonScape Ltd is a small start-up. There is a risk that CarbonScape Ltd

		may not have, or be able to raise in the future, sufficient capital to fully commercialise its technologies.
8	Intellectual property (IP)	There is a risk that some IP, particularly patents, may not be granted in key geographical markets or that CarbonScape Ltd may not have the funds to fully secure its IP position. There is also a risk that third parties may challenge or breach CarbonScape Ltd's IP.

This summary does not cover all of the risks of investing in the Shares. You should also read SECTION 8: RISKS TO CARBONSCAPE GROUP'S BUSINESS AND PLANS, SECTION 5: TERMS OF THE OFFER and SECTION 6: KEY FEATURES OF THE SHARES.

### Where You Can Find CarbonScape Group's Financial Information

The financial position and performance of CarbonScape Group are essential to an assessment of this Offer. You should also read SECTION 7: CARBONSCAPE GROUP'S FINANCIAL INFORMATION at page 25.

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## LETTER FROM THE CHAIRMAN



Dear Investor,

Greetings on behalf of the CarbonScape Holdings Board. I am delighted to invite you to become a shareholder in CarbonScape Holdings by exchanging shares you hold in CarbonScape Ltd for the same number of shares in CarbonScape Holdings.

In August 2016 I wrote to you to say that we were seeking to rationalise the CarbonScape Group to have the main collective of shareholders participating in CarbonScape Holdings.

It is my pleasure to inform you that all of the shareholders (apart from the Remaining Shareholders specified on page 36 of this PDS) in CarbonScape Ltd have agreed in principle to transfer into CarbonScape Holdings. This is an absolutely brilliant outcome. I am excited at this unanimity, partly because it is so hard to achieve but mainly because it is so unifying of us all and confirming of our intent. It comes from a rare moment of shared purpose for a disparate group of people who don't know each other but strive for a common purpose. Thank you again, one and all.

The Boards of both CarbonScape Holdings and CarbonScape Ltd firmly believe that this restructuring will ensure that CarbonScape Ltd is a more attractive company to future large investors through becoming a closely-held company.

One more step is required of us all. Please read this document carefully and complete the application form.

CarbonScape Ltd is progressing well. We forecast our pilot plant in Marlborough to be fully operational and producing graphite, activated carbon and green coke by the fourth quarter this year. One of our key priorities will then be to develop a range of customised activated carbons for assessment by Watcare Services Limited of Auckland.

We are also embarking on an exciting project to develop eco-friendly and sustainable coated spherical graphite for the lithium-ion battery industry. The global demand for long lasting and efficient lithium-ion batteries is growing exponentially, driven by the demand for electric vehicles and energy storage solutions. This project, led by Callaghan Innovation, will facilitate access to a lucrative global market and CarbonScape Ltd's active participation in the green economy.

The CarbonScape Group is growing from strength to strength. Thank you again for your part in the journey.

Go well,

A handwritten signature in black ink, appearing to read 'Timothy Langley', written in a cursive style.

Timothy Langley  
Chairman,  
CarbonScape Holdings Limited



## SECTION 2: CARBONSCAPE GROUP AND WHAT IT DOES

### Overview of CarbonScape Group

The CarbonScape Group consists of:

- CarbonScape Holdings; and
- CarbonScape Ltd and its wholly-owned (non-trading) subsidiary, CarbonScape Steel Technologies Limited.

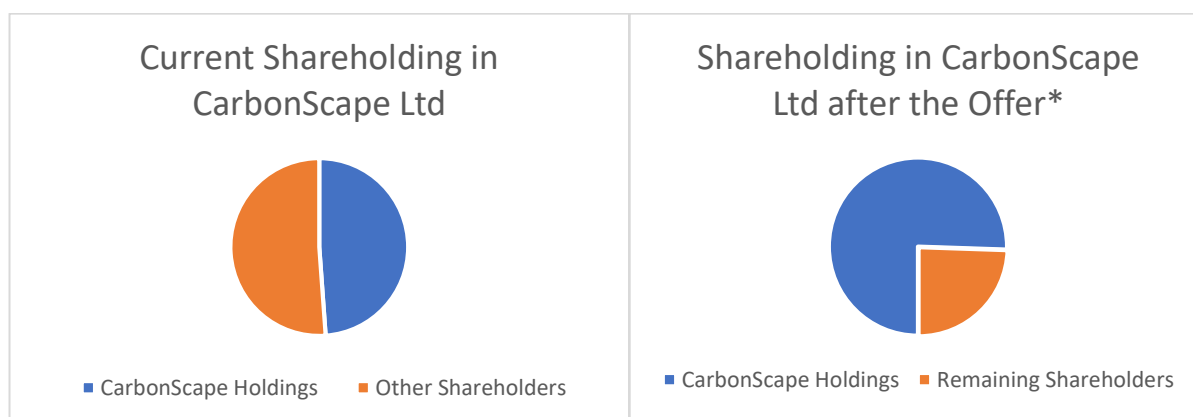
CarbonScape Holdings is a limited liability company based in Marlborough, New Zealand. It was incorporated on 11 December 2006 and is the largest shareholder in CarbonScape Ltd. CarbonScape Ltd is a limited liability company incorporated on 2 October 2012 and is the only operating company in the CarbonScape Group. Prior to the incorporation of CarbonScape Ltd, CarbonScape Holdings was the operating and trading company. Following the incorporation of CarbonScape Ltd, CarbonScape Holdings was repurposed to be solely a holding company to hold shares in CarbonScape Ltd.

The structure of the CarbonScape Group will not change following the issue of the Shares under this Offer. However, CarbonScape Holdings' shareholding in CarbonScape Ltd will significantly increase (assuming full uptake of this Offer).

CarbonScape Group Structure before and after the Offer

Company	BEFORE OFFER: Number of Ordinary Shares	AFTER OFFER: Number of Ordinary Shares
CarbonScape Holdings	39,658,217	61,311,789*
CarbonScape Ltd	81,179,943	81,179,943*

\*Assuming 100% take up of CarbonScape Holdings Shares under this Offer and that no CSHL Options or CSL Options are exercised.



\*Assuming 100% take up of CarbonScape Holdings Shares under this Offer and that no CSHL Options or CSL Options are exercised.

## Nature of Operations

CarbonScape Group has been developing technology that converts sustainable waste biomass, such as sawdust and forestry waste, into high value carbon products such as graphite, activated carbon and green coke for the last 10 years. This is the only sector or industry that the CarbonScape Group operates in.

## CarbonScape Holdings' Investment in CarbonScape Ltd

CarbonScape Holdings is solely a holding company. It does not, as at the date of this PDS, own any material assets (other than shares in CarbonScape Ltd) or trade or operate. As at the date of this PDS, CarbonScape Holdings holds the same number of shares in CarbonScape Ltd as it has on issue (being 39,658,217).

CarbonScape does not have any intention to carry on any business other than holding shares in CarbonScape Ltd in the future and does not have any material cost structure (the only costs incurred by CarbonScape Holdings are minor costs, including directors' fees and audit fees) or debt. The current intention of the Board is that any future capital raised by CarbonScape Holdings will be used solely to subscribe for shares in CarbonScape Ltd.

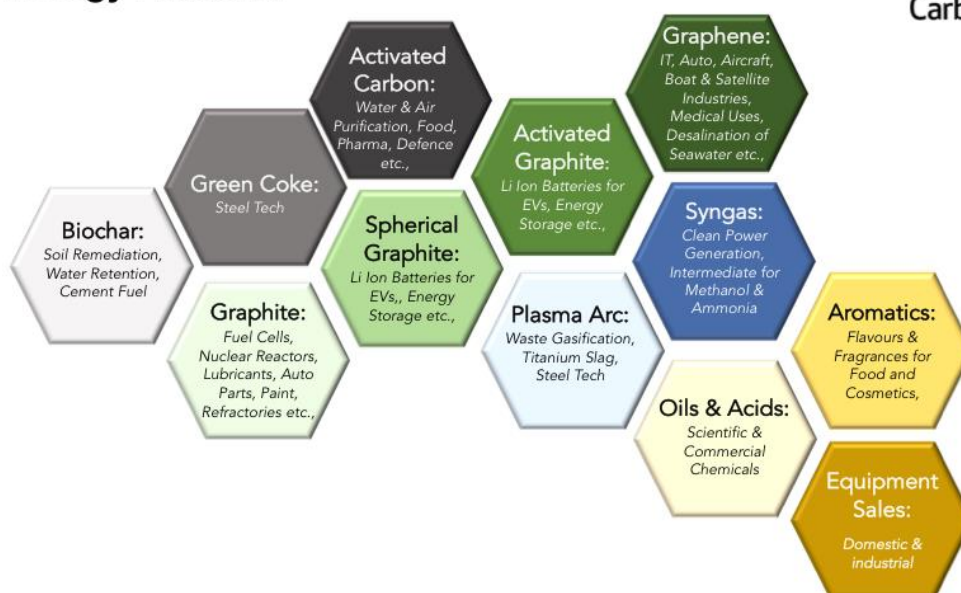
Accordingly, the performance of CarbonScape Ltd is the key driver of returns for CarbonScape Holdings and the CarbonScape Group.

## CarbonScape Ltd's Technology

CarbonScape Ltd's technology is a proprietary process developed 100% in New Zealand. It is based on a high speed, two-step electromagnetic chemical synthesis (microwave and hydrothermal) process. Activated carbon can be made in less than 15 minutes and graphite can be made in 30 minutes. The process is high yield, low cost, scalable and customizable. The technology is compatible with multiple sustainable wet feed-stocks, such as sawdust, timber waste and coconut shells. The process is environmentally friendly with low emissions.

A summary of CarbonScape Group's technology portfolio that will be developed and commercialized (subject to market considerations and availability of technical and capital resources) is set out below (current priorities comprise graphite, activated carbon and green coke).

## Technology Platform



## Commercialisation Options

CarbonScape Ltd intends to manufacture high value products such as coated spherical graphite in New Zealand for export and is currently developing various commercial opportunities for this technology as set out below. These commercial opportunities below are the current and future aspects of CarbonScape Ltd's and the CarbonScape Group's business that have, or may have, the most impact on the financial performance of the CarbonScape Group.

## Technology Commercialisation Options



TECHNOLOGY	Equipment Sales	Technology Sales	Licensing	Product Sales	Joint Venture	International Aid Funding
Biochar	✓		✓	✓ (NZ only)	✓	✓
Green Coke			✓	✓ (NZ only)	✓	
Activated Carbon			✓	✓	✓	✓
Graphite			✓	✓	✓	✓
Spherical Graphite				✓	✓	
Activated Graphite				✓	✓	
Graphene				✓	✓	
Plasma Arc		✓			✓	✓
Syngas		✓	✓	✓	✓	
Oils & Chemicals				✓	✓	
Flavours & Fragrances				✓	✓	

Revenues from lower value product lines such as biochar, green coke and activated carbon are likely to result from technology licensing arrangements with major players, with some local sales.

## Commercial Priority 1: Pilot Plant Implementation

CarbonScape Ltd is currently constructing a pilot plant and aims to have it completed and operational on a reliable and continuous basis by the fourth quarter of 2017. The aim of CarbonScape Ltd is that the pilot plant facility will produce a range of products that have the following common attributes:



- consistent in quality and performance (in selected areas of application);
- high purity;
- customisable to end-user specifications;
- high yield.

When the pilot plant is fully operational, CarbonScape Ltd will be in a good position to capitalise upon a range of commercial opportunities.

### Summary of the Initial Pilot Plant Product Range and Expected Attributes

Product	Attributes
Green Coke	<ul style="list-style-type: none"> <li>• 470 tonnes per annum production capacity.</li> <li>• Exceeding industry standard of greater than 85% carbon and less than 2% volatile components. (New Zealand nut-coke material specification)</li> <li>• Sustainable substitute for fossil fuel-derived coke imported from Australia.</li> </ul>
Activated Carbon	<ul style="list-style-type: none"> <li>• 450 tonnes per annum production capacity.</li> <li>• Exceeding the average lab results from pine feedstock of greater than 1,000 square metres per gram of surface area<sup>1</sup> and greater than 17% yield<sup>2</sup>.</li> <li>• Sustainable substitute for fossil fuel-derived activated carbon imported from Australia.</li> </ul>
Graphite	<ul style="list-style-type: none"> <li>• 150 tonnes per annum production capacity.</li> <li>• Matching or exceeding the specification of commercially available graphite<sup>3</sup> and greater than 12% yield<sup>3</sup>.</li> <li>• Sustainable substitute for mined graphite and fossil fuel-derived synthetic graphite from China.</li> </ul>

<sup>1</sup> Light Metals Research Centre B.E.T lab test results.

<sup>2</sup> CarbonScape lab results

<sup>3</sup> As determined by the New Zealand Callaghan Innovation Advanced Materials Team

## Commercial Priority 2: Customised Activated Carbon

Activated Carbon (AC) is made from natural raw materials and has a highly crystalline form and a well-developed internal pore structure. ACs have a very high surface area and are excellent adsorbents for use across a wide range of contaminants in water and air.

During water filtration through ACs, contaminants adhere to the surface of the carbon granules or become trapped in the small AC pores. AC filters efficiently remove organic materials that cause unwanted tastes, odours and colours as well as pollutants such as pesticides, pharmaceuticals, hormones, halocarbons and algal toxins.



When the pilot plant is fully operational, one of CarbonScape Ltd's key priorities is to develop a range of customised ACs for assessment by Watercare Services of Auckland. These ACs are expected to be high purity, evidence-based and specific to contaminants such as cyanotoxins, Geosmin and MIB (that cause unpleasant tastes and odours), as well as herbicides and pesticides that can occur in New Zealand water resources from time to time. Suitable blends of these ACs will then be developed and tested to ensure specified standards are met.

CarbonScape Ltd expects to initiate discussions regarding possible commercial supply arrangements with Watercare Services in the first half of 2018. However, at this stage no legally-binding contracts or arrangements for supply of commercial quantities of ACs have been entered into.

## Commercial Priority 3: Green Coke for BlueScope Steel

CarbonScape Ltd has a non-binding supply arrangement with BlueScope Steel of Australia for 9000 tonnes per annum of green coke, a sustainable coal substitute. This opportunity is currently on hold while the global steel industry recovers from oversupply and collapsing prices.

When the global steel industry recovers and the demand for sustainable green coke increases, CarbonScape Ltd expects to revisit this opportunity.

Possible future commercial options may include technology licensing arrangements with steel manufacturers who have access to sustainable biomass resources.



## Commercial Priority 4: Development of Spherical Graphite

CarbonScape Ltd is collaborating with Callaghan Innovation to add further value to CarbonScape Ltd's graphite by developing coated spherical graphite (CSPG) for the lithium-ion battery industry. The expected completion timing of this project is the second half of 2018.



This project is supported by the Bioresource Processing Alliance (BPA) with an initial funding allocation of \$30,014. BPA is a R&D collaboration between four Crown Research Institutes (Callaghan Innovation, Scion, Plant & Food and AgResearch) and funded by the Ministry of Business Innovation and Employment. BPA's goal is to generate \$100 million in export revenues by 2020 by working with the primary sector to get better value out of biological waste streams.

The intellectual property resulting from this R&D project will be 100% owned by CarbonScape Ltd. This technology is being developed at a time when the global market for high

purity graphite, particularly those created through environmentally friendly processes, is growing rapidly.<sup>4</sup>

It is CarbonScape Ltd's intention to establish its first commercial graphite plant with a production capacity of 1,000 tonnes per annum in Marlborough in 2019 in collaboration with appropriate joint venture partners. The output from this factory is expected to be exported to key customers such as lithium-ion battery manufacturers in geographic markets that may include USA, Germany, Japan, South Korea and Taiwan. Market research is underway to identify and qualify potential joint venture partners and end-users.

Please see *CASE STUDY: Development of Coated Spherical Graphite* on the Offer Register (offer number OFR11980) for more information.

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<sup>4</sup> Graphite Facts, Alabama Graphite, <http://alabamagraphite.com/graphite-facts/>

## Directors, Senior Managers, and Individual Relevant Parties

### Directors of CarbonScape Holdings Ltd & CarbonScape Ltd

Timothy John Langley and Dr. Benjamin Pak-ping Chen are directors of CarbonScape Holdings and are also directors of CarbonScape Ltd. CarbonScape Ltd also has one additional director, Dr. Suki Harding. Profiles of the directors of CarbonScape Holdings can be found on the Offer Register (offer number OFR11980).

### Senior Managers of CarbonScape Holdings & CarbonScape Ltd

CarbonScape Holdings does not have any employees. All key personnel for the CarbonScape Group are employed by CarbonScape Ltd. Profiles of the key personnel employed by CarbonScape Ltd can be found on the Offer Register (offer number OFR11980).

### Advisors of CarbonScape Ltd

CarbonScape Ltd is actively supported by several key technical and commercial advisors. Profiles of these key advisors can be found on the Offer Register (offer number OFR11980)<sup>5</sup>.

## Substantial Shareholders and Option Holders

### CarbonScape Holdings Substantial Share and Option holdings Before and After the Offer

Party	Legal Ownership of Relevant Interest	Ordinary Shares: Number (%)	CSHL Options: Number (%)
Rutherford Innovation Holdings Ltd	Rutherford Innovation Holdings Ltd	<i>Before:</i> 4,793,363 (12.09%) <i>After</i> <sup>1</sup> : 4,793,363 (7.82%)	<i>Before:</i> Nil <i>After:</i> Nil
Timothy John Langley	Timothy John Langley	<i>Before:</i> 3,636,297 (9.17%) <i>After</i> <sup>1</sup> : 3,636,297 (5.93%)	<i>Before:</i> 300,000 (1.91%) <i>After</i> <sup>*</sup> : Nil
Christian Stewart Macgregor Turney	Christian Stewart Macgregor Turney	<i>Before:</i> 3,205,536 (8.08%) <i>After</i> <sup>1</sup> : 3,205,536 (5.23%)	<i>Before:</i> 300,000 (1.91%) <i>After</i> <sup>*</sup> : Nil
Annette Simone Gaymer	Annette Simone Gaymer	<i>Before:</i> 2,677,342 (6.75%) <i>After</i> <sup>1</sup> : 2,677,342 (4.36%)	<i>Before:</i> Nil <i>After:</i> Nil
Duncan Cotterill Nelson Trustee (2010) Limited, Hamish MacFarlane and Jane Elizabeth MacFarlane	Duncan Cotterill Nelson Trustee (2010) Limited, Hamish MacFarlane and Jane Elizabeth MacFarlane	<i>Before:</i> 2,507,896 (6.32%) <i>After</i> <sup>1</sup> : 2,507,896 (4.09%)	<i>Before:</i> Nil <i>After:</i> Nil

<sup>1</sup> Assuming 100% take up of CarbonScape Holdings Shares under this Offer and no CSHL Options are exercised.

<sup>\*</sup> CSHL Options expire on 8 July 2017

<sup>5</sup> These individuals have consented to their details being set out on the Offer Register.

## Relevant Interests Held by Directors and Senior Managers

### Relevant Interests of Directors in CarbonScape Holdings

Director	Legal ownership of relevant interest	Ordinary Shares: Number (%)	CSHL Options: Number (%)
Timothy John Langley	Timothy John Langley	Before: 3,636,297 (9.17%) After <sup>1</sup> : 3,636,297 (5.93%)	Before: 300,000 (1.91%) After*: Nil
Benjamin Pak-ping Chen	Benjamin Pak-ping Chen	Before: 412,876 (1.04%) After <sup>1</sup> : 412,876 (0.67%)	Before: 600,000 (1.91%) After*: Nil

<sup>1</sup> Assuming 100% take up of CarbonScape Holdings Shares under this Offer and no CSHL Options are exercised.

\* CSHL Options expire on 8 July 2017

### Options to Acquire Securities of CarbonScape Holdings

CarbonScape Holdings has issued 15,727,141 options ("**CSHL Options**") to certain existing shareholders to purchase 15,727,141 ordinary shares for \$0.10 per share. The CSHL Options expire on 8 July 2017 and were issued in consideration for:

- the relevant holders subscribing for shares in CarbonScape Holdings on 8 July 2016; or
- the relevant holders giving CarbonScape Holdings an equivalent number of options (on the same terms) in CarbonScape Ltd.

CarbonScape Limited has also issued 19,890,756 options ("**CSL Options**") which are held by CarbonScape Holdings and the Remaining Shareholders to purchase 19,890,756 ordinary shares in CarbonScape Ltd for \$0.10 per share. The CSL Options were issued on 8 July 2016 and expire on 8 July 2017, and were issued in consideration for the subscription for shares in CarbonScape Ltd on 8 July 2016.

### Other Equity Securities of CarbonScape Holdings

Under the Constitution, the Board may issue shares that rank equally with or in priority to any existing shares already issued by CarbonScape Holdings, including ordinary shares issued under this Offer, without a special resolution of shareholders and without first offering those shares to the existing shareholders.

CarbonScape Holdings has previously issued 39,658,217 ordinary shares. All ordinary shares rank equally in all respects with each other and carry equal rights to:

- vote (one vote per share) on a resolution of Shareholders;
- receive any dividends; and
- participate in a liquidation of CarbonScape Holdings.



## Interests of Directors, Senior Managers etc.

### Remuneration

The total remuneration and other benefits to Directors (and past Directors) of CarbonScape Holdings for services for the year ended 31 March 2017 were:

Director	Position	Remuneration	Total Remuneration	Other benefits
Timothy John Langley	Chairman of Directors of CarbonScape Holdings	\$17,769	\$171,877*	Nil
	Chairman of Directors of CarbonScape Ltd	\$154,108		Nil
Benjamin Pak-ping Chen	Director of CarbonScape Holdings	\$19,750	\$53,750	Nil
	Director of CarbonScape Ltd	\$34,000		Nil
Christian Stewart Macgregor Turney	Director of CarbonScape Holdings (part of the year)	\$17,423	\$17,423	Nil
Gary John Hook	Director of CarbonScape Holdings (part of the year)	\$17,423	\$17,423	Nil
<b>TOTAL</b>			<b>\$260,473</b>	

#### NOTES

1. As at 31 March 2017 and the date of this PDS, Timothy Langley was Chairman of both CarbonScape Holdings and CarbonScape Ltd.
2. The remuneration of Timothy Langley includes remuneration for his services provided in his capacity as executive director of CarbonScape Ltd.
3. Christian Turney and Gary Hook resigned as directors of CarbonScape Holdings on 9 November 2016.
4. Timothy Langley, Benjamin Chen, Christian Turney and Gary Hook were all paid their directors' remuneration for acting as directors of CarbonScape Holdings in shares (not cash) for the year ended 31 March 2017.
5. Timothy Langley's remuneration was paid \$139,108 in cash by CarbonScape Limited, \$15,000 in shares by CarbonScape Limited and \$17,769 in shares by CarbonScape Holdings Limited. This remuneration includes back-pay for the year ended 31 March 2016.

CarbonScape Holdings does not have any employees. During the year ended 31 March 2017 there was one employee of CarbonScape Ltd, not being a director of CarbonScape Ltd, whose remuneration exceeded \$100,000.

\* The Directors consider the discretionary remuneration levels to be responsible and prudent for a pre-revenue start-up company. The salary for Timothy Langley for the year ended 31 March 2017 brings his average total annualized cash payments for salary and allowances as executive director of CarbonScape Ltd over the last seven years to less than \$65,000.

During the year ended 31 March 2017, CarbonScape Ltd implemented a program whereby all staff committed 25% of after-tax salaries to purchasing ordinary shares in CarbonScape Ltd. The aim of this

program was to reduce operating expenditures to match available capital. CarbonScape Ltd will implement a similar program in the future if needed in line with the future capital situation.

With the succession to the new Chief Executive Officer of CarbonScape Ltd complete, Timothy Langley is now working part-time for CarbonScape Ltd and his remuneration for the year ended 31 March 2018 will be materially less than for the year ended 31 March 2017. CarbonScape Ltd will have one employee that will receive remuneration including any other benefits in excess of \$100,000 during the year ending 31 March 2018.

## Interests

As at the date of this PDS, Timothy John Langley, the Chairman of Directors of CarbonScape Holdings, through his company Faith Charter Company Limited owns:

- 4,761,994 ordinary shares in CarbonScape Ltd (totaling 5.87% of all shares issued by CarbonScape Ltd); and
- 1,945,595 CSL Options (totaling 9.78% of all CSL Options in CarbonScape Ltd).

As at the date of this PDS, Benjamin Pak-ping Chen, a director of CarbonScape Holdings, owns 1,353,791 ordinary shares in CarbonScape Ltd (totaling 1.67% of all shares issued by CarbonScape Ltd) and does not hold any CSL Options.

## Other Material Governance Disclosures

### CarbonScape Holdings

The Constitution of CarbonScape Holdings allows certain persons to exercise powers which are usually exercised by shareholders' resolution.

In addition to the shareholders power to appoint and remove directors (see clause 12.3 and 12.4 of the Constitution), directors have the power to appoint directors under clause 12.5 of the Constitution to fill a casual vacancy or as an addition to the existing directors until the next Annual General Meeting (provided it does not exceed the maximum number of directors under the Constitution, being 8). This is a small restriction on shareholders having total control over the composition of Board of CarbonScape Holdings.

The directors also have the power to apply to the Registrar of Companies for removal of CarbonScape Holdings from the register of companies under clause 22.1 of the Constitution. This is usually done by shareholder resolution, but can be done by directors if authorised by the Constitution (section 318(1)(d) Companies Act). If CarbonScape Holdings is removed from the register of companies, it will cease to exist.

The Constitution of CarbonScape Holdings does not contain any provisions allowing the Board to act in the best interests of any entity other than CarbonScape Holdings.

### CarbonScape Ltd

The Constitution of CarbonScape Ltd contains pre-emptive rights. Subject to certain exclusions referred to in CarbonScape Ltd's Constitution, the pre-emptive rights require CarbonScape Ltd to offer new shares to all existing shareholders in CarbonScape Ltd on a pro-rata basis before they can be issued to a new investor or existing investors other than on a pro-rata basis.

CarbonScape Holdings Constitution does not contain any pre-emptive rights. The shareholders of CarbonScape Holdings have been encouraged and able at all times to invest in CarbonScape Holdings as the founders adopted an agile, flexible Constitution that facilitates that participation.

## SECTION 3: PURPOSE OF THE OFFER

The purpose of this Offer is to restructure the ownership of CarbonScape Ltd to make CarbonScape Ltd more attractive to future large investors.

The restructure will involve shareholders of CarbonScape Ltd (other than the Remaining Shareholders) selling their shares in CarbonScape Ltd in consideration for receiving a corresponding number of Shares in CarbonScape Holdings. The Remaining Shareholders will continue to retain their current shareholding in CarbonScape Ltd.

However, the restructure will not change the effective stake of an Applicant's interest in the CarbonScape Group. This is illustrated below.

### THE IMPACT OF MOVING FROM CARBONSCAPE LTD TO CARBONSCAPE HOLDINGS ON THE SIZE OF THE APPLICANT'S INTEREST IN THE CARBONSCAPE GROUP

#### Share Structure Before and After the Offer

Company	BEFORE OFFER: Number of Ordinary Shares	AFTER OFFER: Number of Ordinary Shares
CarbonScape Holdings	39,658,217	61,311,789*
CarbonScape Ltd	81,179,943	81,179,943*

\* Assumes full take up under the Offer and no CSHL Options or CSL Options are exercised.

#### EXAMPLE 1:

- If an Applicant currently has 10,000 shares in CarbonScape Ltd, this means the Applicant owns 0.0123% of CarbonScape Ltd.
- When the Applicant has been issued with 10,000 shares in CarbonScape Holdings under this Offer, the Applicant will own 0.0163% of CarbonScape Holdings\*.
- Given that CarbonScape Holdings will own 75.53% of CarbonScape Ltd after the Offer has been completed\*, the Applicant's effective stake in CarbonScape Ltd will remain unchanged at 0.0123%.

\* Assumes full take up under this Offer and no CSHL Options or CSL Options are exercised.

#### EXAMPLE 2:

- If an Applicant has 600,000 shares in CarbonScape Ltd, this means the Applicant currently owns 0.7391% of CarbonScape Ltd.
- When the Applicant has been issued with 600,000 shares in CarbonScape Holdings under this Offer, the Applicant will own 0.9786% of CarbonScape Holdings\*.
- Given that CarbonScape Holdings will own 75.53% of CarbonScape Ltd after the Offer has been completed\*, the Applicant's effective stake in CarbonScape Ltd will remain unchanged at 0.7391%.

\* Assumes full take up under this Offer and no CSHL Options or CSL Options are exercised.

No money will be raised under this Offer as the consideration for each Share applied for by an Applicant is the sale of one share in CarbonScape Ltd.

CarbonScape Ltd has grown from 2 shareholders in 2012 to 223 as at the date of this PDS and it is no longer a desirable, closely-held investment vehicle for large or offshore-based investors. Assuming full uptake of the Offer, only CarbonScape Holdings Ltd and the Remaining Shareholders will remain as shareholders in CarbonScape Ltd following this Offer; ie the restructure will result in CarbonScape Ltd reverting to being a closely-held company.

The Board of CarbonScape Holdings and the board of directors of CarbonScape Ltd each firmly believe that having CarbonScape Ltd as a closely-held company will provide efficiencies around decision making and administration and create a more attractive investment vehicle for large (often offshore-based) investors. The current intention of the Board of CarbonScape Holdings and board of directors of CarbonScape Ltd is that investments of \$500,000 or more will be received into CarbonScape Ltd and lesser amounts into CarbonScape Holdings.

These large investors are likely to play an important role in commercialising CarbonScape Ltd's technologies by providing large tranches of investment capital and commercial opportunities, business networks and direct assistance.

### Minimum Amount

There is no minimum amount that must be raised before the Shares are issued.

### Underwriting

This Offer is not underwritten.

## SECTION 4: KEY DATES AND OFFER PROCESS

Key Dates	
<b>Opening Date</b>	The Offer opens on 5 July 2017.
<b>Closing Date</b>	Applications must be received by CarbonScape Holdings by 5.00pm on 21 July 2017.
<b>Issue Date</b>	The issue of Shares will occur between 5 and 10 working days following the Closing Date.

CarbonScape Holdings reserves the right to vary these dates as it considers appropriate.

CarbonScape Holdings may also withdraw the Offer at any time before the issue of the Shares or accept late applications (either generally or in individual cases).

Further information about these dates is set out in SECTION 5: TERMS OF THE OFFER on page 22.

## SECTION 5: TERMS OF THE OFFER

A summary of the key terms of the Offer is set out in the SECTION 1: KEY INFORMATION SUMMARY on pages 2 to 6. The key features of the Shares are set out in SECTION 6: KEY FEATURES OF THE SHARES on page 24.

The Constitution also contains certain provisions which are relevant to the Shares, including provisions relating to rights attaching to Shares and calls, forfeiture, lien and transfer of Shares. The Constitution can be viewed on (or printed from) the Offer Register (offer number OFR11980) at [www.companiesoffice.govt.nz/disclose](http://www.companiesoffice.govt.nz/disclose), or from the Companies Office website at [www.companiesoffice.govt.nz/companies](http://www.companiesoffice.govt.nz/companies).

KEY TERMS	
Who is the Offer available to?	<p>This Offer is made to all existing holders of ordinary shares in CarbonScape Ltd (subject to the selling restrictions set out under the heading "Selling Restrictions" on page 23), other than the Remaining Shareholders</p> <p>The Remaining Shareholders will remain as shareholders of CarbonScape Ltd and may not apply for Shares under this Offer.</p>
Description of Shares	This is an offer of ordinary shares in CarbonScape Holdings.
Consideration for Shares	<p>The consideration for each Share applied for under this Offer is the sale of one ordinary share held by the Applicant in CarbonScape Ltd</p> <p>By applying for Shares under this Offer, each Applicant irrevocably offers to sell to CarbonScape Holdings all shares in CarbonScape Ltd held or owned by that Applicant in consideration for receiving a corresponding number of Shares in CarbonScape Holdings.</p> <p>By issuing Shares to an Applicant, CarbonScape Holdings accepts this offer and agrees to purchase all of the Applicant's shares in CarbonScape Ltd.</p>
Indirect interest in CarbonScape Ltd	By applying for Shares under this Offer applicants will move from having a smaller but direct ownership interest in CarbonScape Ltd with the ability to vote on matters affecting CarbonScape Ltd (e.g. major transaction resolutions and the directors of CarbonScape Ltd) to having a participation in a block vote and an indirect ownership interest in CarbonScape Ltd through a shareholding in CarbonScape Holdings.
How was the Share price determined?	<p>The consideration for the Shares was set at one share in CarbonScape Ltd for each Share applied for under this Offer to ensure that each Applicant's effective interest in the CarbonScape Group remains unchanged as a result of applying for Shares under this Offer (see THE IMPACT OF MOVING FROM CARBONSCAPE LTD TO CARBONSCAPE HOLDINGS ON THE SIZE OF THE APPLICANT'S INTEREST IN THE CARBONSCAPE GROUP on page 20).</p> <p>No independent or objective mechanism was used to set the price or consideration for the Shares.</p>
What are the key dates for this Offer?	The key dates for this Offer, being the Opening Date and Closing Date, are set out in SECTION 4: KEY DATES AND OFFER PROCESS on page 21.
How many Shares are being offered?	This Offer is for a maximum of 21,653,572 shares in CarbonScape Holdings. If the maximum number of Shares is issued, it will amount to 35.3% of the total

	issued ordinary shares in CarbonScape Holdings immediately after the issue under the Offer. There is no minimum number of Shares being offered.
Minimum Parcel	Each Applicant must apply for the same number of Shares under this Offer as the number of shares they hold in CarbonScape Ltd. No lesser amount can be applied for.

## Takeovers Code

CarbonScape Ltd is a "code company" for the purposes of the Takeovers Code. As CarbonScape Holdings currently holds more than 20% of the shares in CarbonScape Ltd, CarbonScape Holdings is caught by the fundamental rule in the Takeovers Code, which prevents CarbonScape Holdings from increasing its shareholding in CarbonScape Ltd without complying with the provisions of the Takeovers Code.

However, for the purpose of this Offer, and the acquisition by CarbonScape Holdings of shares in CarbonScape Ltd under this Offer, CarbonScape Holdings intends to rely on the Takeovers Code (Small Code Companies) Exemption Notice 2016 ("**Exemption Notice**"). If the requirements of the Exemption Notice are complied with, CarbonScape Holdings will not need to comply with the provisions of the Takeovers Code in relation to the acquisition of shares in CarbonScape Ltd under this Offer.

In order for CarbonScape Holdings to be able to rely on the Exemption Notice, CarbonScape Ltd (as the code company) must comply with the requirements of the Exemption Notice, including providing a disclosure document to all holders of ordinary shares in CarbonScape Ltd which contains a brief description of the transaction and various other prescribed disclosures.

CarbonScape Holdings will not issue any Shares under this Offer until all of the requirements of the Exemption Notice have been complied with by CarbonScape Ltd and CarbonScape Holdings is satisfied that it is not required to comply with the requirements of the Takeovers Code in relation to the acquisition of shares in CarbonScape Ltd pursuant to this Offer.

## Selling Restrictions

This PDS is intended for use only in connection with the Offer and does not constitute an offer or invitation in any place in which, or to any person to whom, it would not be lawful to make such an offer or invitation. Unless otherwise agreed with CarbonScape Holdings, any person subscribing for Shares under the Offer shall, by virtue of their Application, be deemed to represent that he, she or it is not in a jurisdiction which does not permit the making of an Offer or invitation of the kind described in this PDS and is not acting for the account or benefit of a person within such a jurisdiction.

## SECTION 6: KEY FEATURES OF THE SHARES

Key features of the Offer are also contained in SECTION 5: TERMS OF THE OFFER on page 22.

### Key features of the Shares

The Shares have the same key features as ordinary shares in a company generally.

### Dividend policy

CarbonScape Holdings has no dividend policy at this stage and no dividends have been issued to date.

The amount of dividends payable on the Shares (if any) will be determined at the discretion of the directors. No payment of dividends on the Shares is promised and dividends will only be declared once the directors determine that CarbonScape Holdings meets the solvency requirements specified in the Companies Act 1993 and that it is otherwise prudent for dividends to be declared.



## SECTION 7: CARBONSCAPE GROUP'S FINANCIAL INFORMATION

These tables provide key financial information about the CarbonScape Group. Full financial statements are available on the Offer Register (offer number OFR11980) at [www.companiesoffice.govt.nz/disclose](http://www.companiesoffice.govt.nz/disclose), offer number OFR11980. If you do not understand this financial information, you can seek advice from a financial adviser or an accountant.

The selected financial information in the table below has been taken from the consolidated financial statements of the CarbonScape Group

The 31 March 2015, 31 March 2016 and 31 March 2017 consolidated annual financial statements of the CarbonScape Group have each been audited by a qualified auditor.

The audit report on the consolidated annual financial statement for the year ended 31 March 2015 ("**2015 Financial Statements**") was qualified as the financial statements for the CarbonScape Group for the year ended 31 March 2014 had not previously been prepared or audited. Accordingly, the auditors could not determine whether adjustments to the results of operations and retained earnings might be necessary for the 2015 Financial Statements and the audit report was modified because of the possible effect of this matter on the comparability of the year ended 31 March 2015 figures and the corresponding figures. The audit report also noted that there was a material uncertainty that may cast significant doubt as to the CarbonScape Group's ability to continue as a going concern.

The audit reports on the consolidated annual financial statements for the years ended 31 March 2016 and 31 March 2017 ("**2016 and 2017 Financial Statements**") each noted that the CarbonScape Group was reliant on raising additional funding to meet its liabilities as they fell due and that if it could not raise such funding it may be unable to continue as a going concern. However, neither audit report was qualified in respect of this matter.

The only material asset of CarbonScape Holdings is the shares it holds in CarbonScape Ltd. Accordingly, CarbonScape Holdings will only earn revenue by way of dividends issued by CarbonScape Ltd. CarbonScape Ltd does not currently have any certainty of future revenue or any legally binding contracts in place in respect of the technologies it has developed. Prospective financial information has not been included because CarbonScape Holdings considers, after having made reasonable endeavors to obtain all relevant information, that prospective financial information would be likely to deceive or mislead, because it is not practicable to formulate reasonable assumptions on which to base any prospective financial information and any prospective financial information about CarbonScape Group would accordingly be very speculative and uncertain.

## Selected financial information

NZ\$	12 months ended 31 March 2015	12 months ended 31 March 2016	12 months ended 31 March 2017
Revenue	6,426	8,625	361,076
EBITDA	(645,665)	(704,380)	(1,285,114)
Net profit after tax	(661,338)	(733,295)	(1,313,064)
Dividends on all equity securities of CarbonScape Holdings	0	0	0
Total assets	812,843	325,183	1,274,648
Cash and cash equivalents	556,430	0	772,352
Total liabilities	140,574	152,340	118,779
Total debt	0	0	0
Net cash flows from operating activities	(388,762)	(593,729)	(1,362,431)

## SECTION 8: RISKS TO CARBONSCAPE GROUP'S BUSINESS AND PLANS

The following is a description of circumstances that CarbonScape Holdings is aware of that exist or are likely to arise that significantly increase the risk to the CarbonScape Group's financial position, financial performance, or stated plans.

### 1. GOING CONCERN

The CarbonScape Group is currently loss-making and is reliant on raising future capital to meet expenses. There is a risk that it will not be able to raise future capital and may not be able to continue as a going concern. See SECTION 7: CARBONSCAPE GROUP'S FINANCIAL INFORMATION at page 25 for further information and, in particular, the going concern statement in the audit reports on the 2016 and 2017 Financial Statements on the Offer Register, offer number 11980.

#### *Mitigation Strategies:*

The purpose of this Offer is to restructure the ownership of CarbonScape Ltd to make CarbonScape Ltd more attractive to future large investors.

The successful capital raise in June 2016 resulting in investment capital of \$1.1m in the CarbonScape Group and the further investment of an additional \$1m in December 2016 helped, and the take-up of some or all of the options expiring on 8th July 2017 will help, towards meeting CarbonScape Group's expenses and goals.

CarbonScape Ltd expects early revenues from its activated carbon sales in 2018 and is also investigating early revenues from biochar sales.

CarbonScape Ltd will continue to seek government grants to support its R&D activities where such investments are appropriate and can add significant value.

All CarbonScape Ltd projects and associated costs are carefully planned and managed.

### 2. DILUTION

CarbonScape Holdings does not have any current revenues as its sole investment in CarbonScape Ltd will not return a dividend in the near future. Accordingly, any costs incurred by CarbonScape Holdings (including audit fees, directors' fees and the costs associated with this Offer) must either be met by CarbonScape Ltd or by CarbonScape Holdings issuing shares.

CarbonScape Holdings' costs (other than directors' fees) have previously been met by CarbonScape Ltd. It is intended that CarbonScape Ltd will continue to meet any costs incurred by CarbonScape Holdings (other than directors' fees). As noted under the heading Interests of Directors, Senior Managers etc. on page 17, CarbonScape Holdings paid all directors' fees for the year ended 31 March 2017 in shares (not cash). The current intention is that directors' fees will continue to be paid by way of issue of shares in CarbonScape Holdings (and not in cash).

Any issue of shares by CarbonScape Holdings will dilute each existing investor's interest in CarbonScape Holdings and also their effective interest in CarbonScape Ltd and the CarbonScape Group.

#### *Mitigation Strategies:*

CarbonScape Holdings does not have any material cost structure or debt - the only recurring costs incurred by CarbonScape Holdings are minor, including audit fees and directors' fees.

CarbonScape Ltd will, from time to time, issue shares to CarbonScape Holdings in consideration for services provided by CarbonScape Holdings to CarbonScape Ltd (provided the board of directors of CarbonScape Ltd considers this is fair and reasonable to CarbonScape Ltd and all shareholders in CarbonScape Ltd). Any such issue of shares by CarbonScape Ltd will minimise the dilution of an investor's effective interest in the CarbonScape Group that results from CarbonScape Holdings issuing shares to directors for directors' fees.

CarbonScape Holdings does not have any intention to carry on any business other than holding shares in CarbonScape Ltd and, accordingly, it is not envisaged that CarbonScape Holdings will, in the future, incur any material costs.

### 3. SOLE INVESTMENT IN SINGLE START-UP COMPANY

CarbonScape Holdings' only asset is the shares it holds in CarbonScape Ltd. Accordingly, CarbonScape Holdings is reliant on the performance of CarbonScape Ltd to provide a return to its investors. There is a risk that CarbonScape Ltd may not generate a return on CarbonScape Holdings' investment in CarbonScape Ltd. These risks to CarbonScape Ltd are set out below.

#### *Mitigation Strategies:*

CarbonScape Holdings will ensure (to the extent it can as a shareholder in CarbonScape Ltd) that the board of directors of CarbonScape Ltd contains appropriately qualified, skilled and experienced directors, and that CarbonScape Ltd employs and/or engages appropriately skilled and qualified staff and advisors.

### 4. RISKS ASSOCIATED WITH TECHNOLOGICAL UNCERTAINTY

CarbonScape Ltd's technology and its potential applications are at the cutting edge of science and engineering. There is an ongoing risk that CarbonScape Ltd may uncover new technical challenges that could hinder current and future technology development and commercialisation efforts.

There is also a risk that such technical challenges may delay the commissioning of the pilot plant or result in significant cost overruns. There is also a possible risk that unresolvable technical challenges may prevent CarbonScape Ltd in developing value-added products such as coated spherical graphite, resulting in significantly reduced future revenue streams.

#### *Mitigation Strategies:*

These risks are mitigated by eight years of research and technical development and five separate iterations of the technology working at laboratory scale. The technology risks are also mitigated using sophisticated state-of-the-art computer microwave and thermal modeling software ensuring heightened probability that the scaled up reactor technologies will perform as intended. In short, the experience, skills and creativity of the CarbonScape Ltd technical and operational staff team (including management, governance and advisors) help mitigate these risks.

The team also has access to world-class technical specialists in New Zealand and overseas to assist with new product development, problem solving and troubleshooting as needed.

New Zealand Government departments and agencies such as Ministry of Business, Innovation and Employment and Callaghan Innovation have various R&D grant assistance programmes to support companies in reducing their technology development risks. CarbonScape Ltd has been successful in securing such support, and will continue to actively seek such assistance.

Technical uncertainty and associated risks are further mitigated by meticulous planning and management of the pilot plant roll-out and new product development projects.

## 5. RISKS ASSOCIATED WITH SCALE-UP

There is a risk that the CarbonScape Ltd pilot plant will not be scalable to commercial production levels for unforeseen reasons such as cost, technical barriers, safety requirements or limitations in the available skills base.

### *Mitigation Strategies:*

The pilot plant is CarbonScape Ltd's top priority. Funding has been prioritized for this purpose.

CarbonScape Ltd's technology concepts have been thoroughly proven at lab-scale. The scale up from lab to pilot stage is well underway, and has already resulted in many valuable lessons in terms of what works, what does not and areas where additional technical input is required.

Safety matters related to scale-up are considered every step of the way (and significant margins of safety are always maintained).

The step-up from production capacity of 150 tonnes p.a. graphite (pilot plant) to 1,000 tonnes p.a. (commercial plant) is reasonable and realistic.

Parallel smaller production lines are an attractive and low-risk commercial option which opens up new market opportunities such as mobile carbon product development stations.

## 6. RISKS ASSOCIATED WITH OPERATIONAL STAFF

CarbonScape Ltd has a small operational team. The loss of key personnel could result in the loss of critical technical and institutional knowledge, cause operational bottlenecks and make it difficult for CarbonScape Ltd to execute its technology development and business strategies.

### *Mitigation Strategies:*

These operational risks have been mitigated by building a strong value based culture, creating a cohesive team, rewarding staff well, managing an appropriate employee incentivisation scheme, maintaining detailed technical notes (in hard and softcopy form), and by drawing upon the skills and expertise of an extended team of advisors.

The use of external experts to assist with new product development helps reduce the burden on CarbonScape Ltd's operational staff whose current priority is the pilot plant. An example of this is the technical collaboration with Callaghan Innovation in developing coated spherical graphite in 2018.

## 7. RISKS ASSOCIATED WITH CAPITAL CONSTRAINTS

CarbonScape Ltd's R&D programme is ambitious and CarbonScape Ltd is a small start-up company. There is a risk that the CarbonScape Group may not have, or be able to raise, enough capital to fully commercialise the technologies. For example, CarbonScape Ltd currently has insufficient funds for construction of its first commercial graphite plant in 2019.

*Mitigation Strategies:*

The mitigation strategies are the same as set out under the Going Concern risk above.

Furthermore, CarbonScape Ltd's governance, management and investors are experienced in fund raising and have extensive investment networks in New Zealand and offshore. Our investors have also indicated that raising funds for a commercial graphite plant would be commercially attractive and relatively straight forward once the pilot plant is fully operational.

## 8. RISKS ASSOCIATED WITH COMMERCIAL ARRANGEMENTS

One of CarbonScape Ltd's key commercial priorities is to develop a range of customised activated carbons for assessment by Watercare Services Ltd, as described in CarbonScape Ltd's funding contract with Callaghan Innovation. Given the technological risks noted above, there is a risk of implementation delays or non-delivery, and resulting loss of credibility. No legally binding contract for supply of product has yet been entered into between CarbonScape Ltd and Watercare Services Ltd and there is a risk that no such legally binding contract will ever be entered into.

CarbonScape Ltd also has a non-binding supply arrangement with BlueScope Steel of Australia for 9000 tonnes p.a. green coke. In line with the technological risks noted above, there is a risk that CarbonScape Ltd will not be able to enter into a binding supply arrangement with BlueScope Steel.

In 2018, CarbonScape Ltd aims to develop coated spherical graphite for the lithium-ion battery industry. This project is led by Callaghan Innovation, but CarbonScape Ltd will own all intellectual property. There is a risk that Callaghan Innovation will be unable to produce coated spherical graphite that meets the requirements of the lithium-ion battery industry. There is also a risk that CarbonScape Ltd will be unable to develop relationships with suitable partners when establishing its first graphite plant and/or that CarbonScape Ltd will be unable to enter into commercial graphite supply arrangements with key end users.

*Mitigation Strategies:*

The arrangement with Watercare Services Ltd is a key priority for CarbonScape Ltd, and every effort will be made to deliver in full and on time.

CarbonScape Ltd's potential opportunity with BlueScope Steel is currently on hold while the global steel industry recovers. CarbonScape Ltd is monitoring developments in the steel industry. When the time is right, CarbonScape Ltd expects to be able to enter into commercial arrangements such as licensing arrangements with relevant parties.

Callaghan Innovation's Advanced Materials Team has the necessary expertise and equipment to develop coated spherical graphite as specified. Graphite is a supply critical commodity in the green energy supply chain and the global market for high purity, sustainable graphite created through eco-friendly processes is growing rapidly. As such, once the pilot plant is fully operational, CarbonScape Ltd expects to be in a strong position to enter into arrangements with investors and partners to set up its first commercial graphite plant in Marlborough in 2019. At this time, CarbonScape Ltd also expects to be able to enter into supply arrangements with end-users of its choice.

CarbonScape Ltd will seek on-going end-user input into new product development processes to ensure that all its products meet customer specifications.

CarbonScape Ltd has an extensive international market development network to assist with these commercial arrangements.

## 9. RISKS ASSOCIATED WITH INTELLECTUAL PROPERTY (IP)

There is a risk that some IP, particularly patents, may not be granted in selected target markets. There is also a risk that third parties may challenge or breach CarbonScape Ltd's IP.

Furthermore, protection of IP is an expensive exercise, as is seeking remedies against possible IP breaches. There is a risk that CarbonScape Ltd may not have the funds to fully secure or to defend its IP position. Seeking remedies against possible IP breaches may be beyond the scope of CarbonScape Ltd's financial capabilities.

### *Mitigation Strategies:*

According to the International Patents Examiner, CarbonScape Ltd's method and apparatus are "novel and inventive in all respects". CarbonScape Ltd has IP protection in NZ, Australia, China, South Africa, Eurasia and the USA. IP protection in other target markets are progressing well.

IP protection is a key element of CarbonScape Ltd's business strategy, and the company has prioritized funds for protecting its IP portfolio. CarbonScape Ltd takes appropriate specialist advice in relation to protecting its IP.

Some of the core CarbonScape Ltd IP has not been published in any patents but is closely held in-house as formulae, recipes and trade secrets. Once the at-scale production of high value carbons is proven and before it is published CarbonScape Ltd expects to move expeditiously to enter into commercial arrangements with substantial key partners.

## 10. RISKS ASSOCIATED WITH FEEDSTOCK AVAILABILITY

There is a potential risk that CarbonScape Ltd may be unable to secure the waste biomass feedstock it needs for its production processes.

### *Mitigation Strategies:*

Pine saw dust and forestry waste is available in vast quantities in New Zealand. According to Scion, routine forestry harvesting is expected to produce 4.3 million tonnes of logging residue during 2016-2020 and 8.4 million tonnes in 2026-2030. New Zealand sawmills and other wood processing sectors also produce 4.1 million tonnes of wood residue per annum.

Joint venture arrangements and strategic partnerships with wood waste producers will ensure that feedstock supplies are secured in the long term.

## SECTION 9: TAX

Tax can have significant consequences for investments and can affect your return from the Shares. If you have any queries relating to the tax consequences of investing in the Shares, you should obtain professional advice on those consequences.



## SECTION 10: WHERE YOU CAN FIND MORE INFORMATION

Further information relating to CarbonScape Holdings and the Shares are available on the Offer Register (offer number OFR11980) at [www.companiesoffice.govt.nz/disclose](http://www.companiesoffice.govt.nz/disclose), offer number OFR11980 (for example, a copy of CarbonScape Holdings' constitution and financial statements of the CarbonScape Group). A copy of the information on the Offer Register is available on request to the Registrar of Financial Service Providers (email: [registrar@fspr.govt.nz](mailto:registrar@fspr.govt.nz)).

Further information relating to CarbonScape Holdings is also available free of charge:

- on the public register at the Companies Office of the Ministry of Economic Development (available at [www.business.govt.nz/companies](http://www.business.govt.nz/companies)); and
- on CarbonScape Group's website at [www.carbonscape.com](http://www.carbonscape.com).

Any request for information can be made to CarbonScape Holdings at the following address:

Tim Langley (Chairman)

Address: CarbonScape Holdings Limited  
Unit 1, 12 Liverpool St  
Riverlands Estate,  
Blenheim 7274

Telephone: 03 579 2273

Mobile: 021 2755589

Email: [tim@carbonscape.com](mailto:tim@carbonscape.com)

A reasonable fee will be charged for printing and any postage expenses.

CarbonScape Holdings is registered on the Financial Services Providers Register. Applicants can search the Financial Service Providers Register to find out details about CarbonScape Holdings at [www.companiesoffice.govt.nz/fsp/](http://www.companiesoffice.govt.nz/fsp/).

## SECTION 11: HOW TO APPLY

Applications to subscribe for Shares must be made by completing and signing the Application Form accompanying this PDS. Please note that the Application Form on page 37 of this PDS is a sample.

The Application Form accompanying this PDS will set out in the boxes under the heading "Total Number of Shares" the total number of shares you hold in CarbonScape Ltd and the total number of Shares you must apply for in CarbonScape Holdings.

To complete the Application Form, all you need to do is insert the date at the top of the Application Form, and sign the Application Form on page 2 (all Applicants named in the Application Form must sign).

Completed Application Forms must be returned to CarbonScape Holdings before 5pm on 21 July 2017:

- By email to [tim@carbonscape.com](mailto:tim@carbonscape.com); or
- By post to:

CarbonScape Holdings Limited  
C/- Timothy Langley  
PO Box 55  
Blenheim, NZ

## SECTION 12: CONTACT INFORMATION

Enquiries about the Shares offered in this document may be made to CarbonScape Holdings using the following contact information:

Tim Langley (Chairman)  
CarbonScape Holdings Limited  
Unit 1, 12 Liverpool St  
Riverlands Estate,  
Blenheim 7274,  
Marlborough,  
New Zealand  
Telephone: 03 579 2273  
Mobile: 021 2755589  
Email: [tim@carbonscape.com](mailto:tim@carbonscape.com)

CarbonScape Holdings' Share Registrar can be contacted as follows:

Buddle Findlay  
Level 4, 83 Victoria Street  
Christchurch 8140  
New Zealand  
Telephone: 03 379 5659  
Email: [Tim.Hayward@buddlefindlay.com](mailto:Tim.Hayward@buddlefindlay.com)  
<mailto:philippa.kennard@buddlefindlay.com>

CarbonScape Holdings' registered office is as follows:

C/- Buddle Findlay  
Level 4, 83 Victoria Street  
Christchurch 8140  
New Zealand

## GLOSSARY OF TERMS

Applicant	means a person who submits a validly completed Application Form.
Application	means the act of applying for Shares under this Offer by submission of an Application Form.
Application Form	means the Application Form accompanying this PDS.
Board	means the board of directors of CarbonScape Holdings.
CarbonScape Ltd	means CarbonScape Limited.
CarbonScape Group	means CarbonScape Holdings, CarbonScape Ltd and CarbonScape Steel Technologies Limited.
CarbonScape Holdings	means CarbonScape Holdings Limited.
Closing Date	means 21 July 2017 (subject to any extension by the Board).
Companies Act	means the Companies Act 1993.
Constitution	means the constitution of CarbonScape Holdings, as may be amended from time to time.
CSHL Options	has the meaning set out under the heading Other Equity Securities of CarbonScape Holdings on page 16
CSL Options	has the meaning set out under the heading Other Equity Securities of CarbonScape Holdings on page 16
Directors	means the directors of CarbonScape Holdings from time to time and "Director" shall mean any one of them as the context may require.
FMA	means the Financial Markets Authority.
FMCA	means the Financial Markets Conduct Act 2013.
Offer	means the offer of Shares described in this PDS.
Offer Register	means the electronic register of offers of financial products ("Disclose") kept under Schedule 2 of the FMCA and available at <a href="http://www.companiesoffice.govt.nz/disclose">www.companiesoffice.govt.nz/disclose</a>
Opening Date	means 5 July 2017.
PDS	means this product disclosure statement.
Remaining Shareholders	means the following shareholders in CarbonScape Ltd: Danny Chan, Oliver John Foster, Faith Charter Company Limited and ClearWorld Energy (Singapore) Pte Ltd.
Share	means an ordinary share in CarbonScape Holdings.
Shareholder	means a holder of Shares.
Share Registrar	means Buddle Findlay.

# APPLICATION FORM



DATED ..... 2017

..... (the "Applicant")

This application form is issued with a Product Disclosure Statement dated 5 July 2017 (the "PDS") issued by CarbonScape Holdings. Please complete and sign this application form and return it to, or lodge it with CarbonScape Holdings, at the address specified in this application form. Terms defined in the PDS will have the same meaning in this application form.

**Before completing this application form, Applicants should read the Product Disclosure Statement and review the Offer Register, Offer number OFR11980 for the Offer to which this Application relates.**

The Applicant wishes to invest in CarbonScape Holdings by applying for Shares under this Offer. By completing this Application Form, the Applicant irrevocably offers to sell to CarbonScape Holdings all shares in CarbonScape Ltd held or owned by the Applicant (as set out below) in consideration for receiving an equal number of shares in CarbonScape Holdings. The applicant irrevocably appoints Timothy John Langley as his or her Attorney to execute a formal transfer in favour of CarbonScape Holdings of all his or her shares in CarbonScape Ltd.

By accepting this Application and issuing Shares to the Applicant, CarbonScape Holdings accepts this Offer and agrees to purchase the Applicant's shares in CarbonScape Ltd for a consideration of one share in CarbonScape Holdings for each of the Applicant's shares in CarbonScape Ltd.

The Shares will be issued on the same terms and with the same rights as all other ordinary shares on issue in CarbonScape Holdings.

## TOTAL NUMBER OF SHARES

<i>Total number of Shares in CarbonScape Holdings applied for by Applicant</i>	<i>Total number of shares in CarbonScape Ltd to be sold to CarbonScape Holdings by Applicant</i>

## NEXT STEPS

The Applicant must sign, scan and return this application form by email to [tim@carbonscape.com](mailto:tim@carbonscape.com) before 5pm on 21 July 2017.

Alternatively, the signed form may be posted so that it is received prior to 5pm on 21 July 2017 to:

CarbonScape Holdings Limited  
C/- Timothy Langley  
PO Box 55  
Blenheim, NZ

CarbonScape Holdings Ltd will then issue the Shares to the Applicant and complete and duly file as required all documents in connection with the issue of the Shares.

**SIGNATURE(S) OF APPLICANTS – ALL APPLICANTS ON THE APPLICATION FORM MUST SIGN**

I/We acknowledge that I/we have received and read the PDS and apply for the number of Shares set out above and agree to accept such Shares on, and subject to, the terms and conditions set out in the PDS.

In particular, I/we irrevocably offer to sell to CarbonScape Holdings the number of shares in CarbonScape Ltd set out above that are held or owned by me/us in consideration for receiving an equal number of Shares in CarbonScape Holdings.

I/We irrevocably appoint Timothy John Langley as my/our Attorney to execute a formal share transfer in favour of CarbonScape Holdings in respect of the shares in CarbonScape Ltd set out above.

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(Signature)

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(Signature)

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(Signature)

Date: 2017