

O.C.O Leeds Production Facility Output Audit Report – Q2 2025

For Puro.Earth

CO ₂ Removal Supplier	O.C.O Technology Limited
Removal Method	Carbonated Materials
Production Facility	O.C.O Aggregate Manufacturing: Leeds Production Facility – ID No. 625222
Production Facility Addresses	Leeds: Hub 45 37 Knowsthorpe Gate Leeds, UK LS9 0NP
Net Volume of CO ₂ Removal	2,723.91 CORCs
Reporting Period	April 1 st , 2025 – June 30 th , 2025
Auditors	350Solutions Guy Ingram-Hardwick Bill Chatterton
Report Date	December 19 th , 2025
Version	v1.2

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PRODUCTION FACILITY & OUTPUT AUDIT REPORT

Company O.C.O Technology Limited	Company Contacts:	Audit Team:
Removal Method: Carbonated Materials	Dr. Peter Gunning	Guy Ingram-Hardwick*
Report Date: December 19 th , 2025	Stephen Roscoe	Bill Chatterton
Document No: 350VR-OCO-PU2501.02		
Rev: 1.2		

* primary contact/lead author

1. Introduction

350Solutions, Inc. was contracted to perform an audit of carbon dioxide removal credit (CORC) claims for O.C.O Technology Limited’s carbonated aggregate production process. 350Solutions declares that we are an impartial auditor, free from any conflicts of interest, capable, and qualified to complete this audit according to Puro Standard and related Validation and Verification Body Requirements.

In December 2022, 350Solutions conducted a Production Facility audit of the process, lifecycle CO₂ emissions assessment (LCA), and other administrative details to verify compliance with the requirements of the Puro.Earth Puro Standard General Rules (Version 3.1) and Carbonated Materials Methodology (Edition 2022, v 1.0) [1], [2]. The Production Facility audit remains valid until August 31st, 2026. This follow-up output audit was conducted to verify O.C.O’s reported CORCs for the Leeds production facility over the period of April 1st, 2025 - June 30th, 2025. The verification was conducted through a detailed document review and audit.

Table 1. 2025 Q2 O.C.O Leeds Production Facility Output Audit Summary

Verification Summary	
CO₂ Removal Supplier	O.C.O Technology Limited
Removal Method	Carbonated Material: Production of carbonated aggregate from waste materials
Verification Type	Removal supplier output audit; Puro Standard General Rules (v3.1) and Carbonated Materials Methodology (v2)
Production Facility Name and Identification Number	O.C.O Aggregate Manufacturing Facility: Leeds Production Facility - Facility ID No. 625222
Production Facility Locations	Hub 45, 37 Knowsthorpe Gate, Leeds, UK LS9 0NP
Reporting Period	April 1 st , 2025 – June 30 th , 2025
Verified CO₂ stored Factor	130.64 kg CO ₂ -eq/t aggregate product
Verified CORCs	2,723.91
Audit Kickoff Date	September 24 th , 2025
Audit Report Date	December 19 th , 2025

2. Technology Description

The O.C.O Technology (O.C.O) process and technology uses carbon dioxide to treat various waste materials via Accelerated Carbonation Technology (ACT). O.C.O produces a lightweight carbonated aggregate for use in construction applications, such as in precast concrete block and ready-mixed concrete. O.C.O currently operates several sites in the UK treating air pollution control residue (APCr) primarily from waste-to-energy plants and producing aggregate that meets EN13242 and EN13055 requirements. The aggregate production process utilizes CO₂ from biogenic or other sources injected during the accelerated carbonation step and absorbs and reacts with significant amounts of CO₂ in ambient air during on-site curing and storage. For CORC purposes, only CO₂ from biogenic sources, or absorbed directly from the atmosphere during curing is credited. CO₂ is permanently sequestered in the aggregate product in the form of carbonates. The process is summarized in Figure 1.

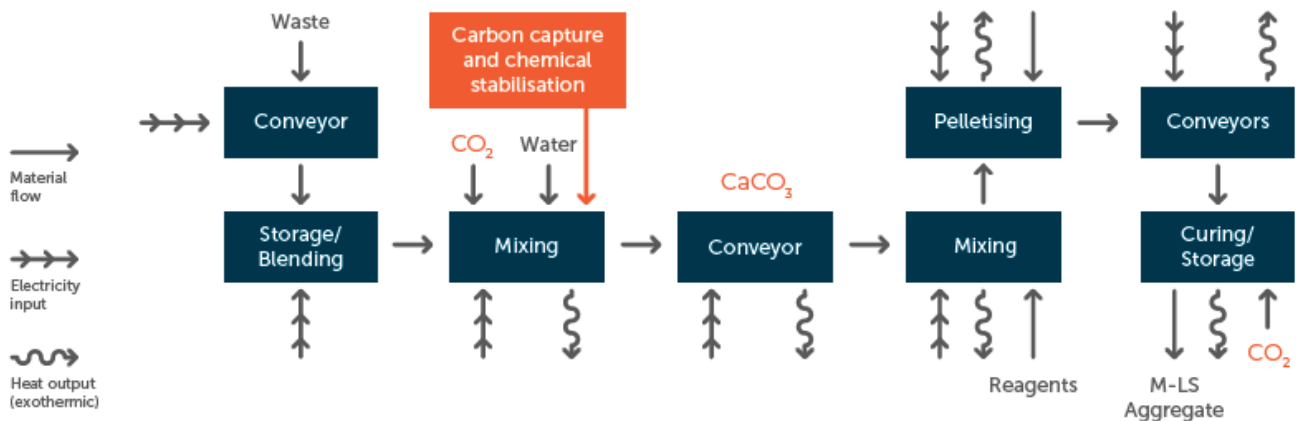


Figure 1. O.C.O Technology Carbonated Aggregate Process.

O.C.O operates production facilities in the U.K. (Avonmouth, Brandon, Leeds, Wretham) utilizing the same general process, inputs, and outputs in each location. O.C.O Manufactured LimeStone (M-LS) aggregate is currently sold primarily as construction material to concrete block makers, ready-mix concrete producers, and for pavement, earthworks (i.e. foundation fill), and similar applications.

2.1. Process Inputs & Outputs

The O.C.O aggregate manufacturing process uses similar inputs as a concrete batching process, with the primary exception being the use of air pollution control residue (APCr) as a primary feedstock, which the O.C.O process treats and stabilizes in the aggregate carbonate matrix that forms. Primary inputs include APCr, water, CO₂, sand, and other aggregates or residues, such as limestone dust or scalping's (crushed rock). The process uses electricity for operation of equipment, and requires heavy equipment for material handling, which require diesel fuel use.

The O.C.O process produces very little to no waste products and has very limited emissions of any kind from the facility. Any waste produced on site is typically recycled and used in the mix in small quantities, as they are often components of feedstock or product. There are no air emission points, with the primary potential emissions being fugitive dust, which is controlled and monitored at the

sites, and water vapor emitted as bound water in the raw material is released during the carbonation reaction. All CO₂ inputs are absorbed and reacted in the Stage 1 process, which is controlled and monitored by pressure in the sealed mixer to ensure CO₂ is not injected until prior injection has been reacted.

Table 2 summarizes the observed inputs and outputs from the process and typical rates from supplied operational data.

Table 2. Verified Production Facility Inputs & Outputs

Input or Output	Item	Verified Amount Over Monitoring Period	Notes (Specifications, source, etc.)
Inputs	APCr (tonne)	23,444	O.C.O tests each APCr delivery to ensure it is within specifications to enable aggregate production.
	CO ₂ (tonne)	722.16	CO ₂ values provided for reporting period are the total CO ₂ delivered to O.C.O, all injected CO ₂ was biogenic sourced.
	- Biogenic injected	0	
	- Fossil injected	0	
	Ambient CO ₂ absorbed during curing	6,194.05	
	Water (m ³)	7,269	Utility metering data
	Cement (tonne)	5,118	Data recorded using process control output files associated with production facility weigh scales
	Limestone dust (tonne)	15,870	
	Other waste materials (sand, C&D debris, scalpings, recycled glass, etc.) (tonne)	0	
	Raw material supply inputs (extraction, handling, transportation emissions)	Included in Production & Operation CO ₂ emissions below	Emissions are from raw material extraction and production processes (OneClick EPD software used for EPD emission factors and calculation) as well as transport of materials to O.C.O. EPD independently verified by EPD Hub
Production inputs:			
- materials handling equipment (diesel)	16,302 liters	No additional energy inputs are required. All electricity and diesel usage is based on utility bills or purchase records.	
- Site electricity use (solar)	98,907 kWh		
- Electricity from grid	146,183 kWh		
CO ₂ present in feedstock (E _{priorcarbon})	18.3 kg CO ₂ e per tonne aggregate	Based on monthly analysis of APCr feedstock material and rate.	
Outputs	Aggregate product output (tonne)	52,942.27	Aggregate product output is based on delivered product weighed as it leaves the plant gate on calibrated weigh scales.
	CO ₂ stored in aggregate (E _{stored})	6,916.21 tCO ₂ e (130.64 kgCO ₂ e per tonne aggregate produced)	Based on measured carbonate content of M-LS aggregate (monthly), as detailed in document the uploaded Carbon Assessment Datasheet
	Production and operation CO ₂ emissions output (E _{production})	4,192.30 tCO ₂ e (79.19 kgCO ₂ e per tonne aggregate produced)	Includes all raw material extraction and transportation and aggregate production process.

	Net CO ₂ emissions	2,723.91 tCO ₂ e (-51.45 kgCO ₂ e per tonne aggregate produced)	$E_{\text{stored}} - E_{\text{production}}$
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2.2 Changes since last Output Audit

No changes since the last audit have been outlined by O.C.O

3. Audit Summary

3.1. Audit Approach

A planned series of audit activities were conducted by 350Solutions to independently verify production and output data, and CORC claims for the reporting period. The audit was conducted following the specifications of Puro General Rules (Version 3.1) and Carbonated Materials Methodology (Edition 2022, v 1.0). Specific audit activities conducted are summarized in Table 3. A completed Puro Carbonated Materials Methodology Audit Checklist used during the audit is attached to this report as Appendix 1. Auditor qualifications are attached as Appendix 2.

Table 3: Audit Activities

Date(s)	Verification Activity	Verification Tasks	Documents Reviewed
September 24 th , 2025 – December 5 th , 2025	Introductory Document Review	<ul style="list-style-type: none"> - Review of operational and procedural changes - Review of LCA and supporting documentation - Review of Puro CORC calculations - Review of raw material sources and sustainability - Review of system inputs and outputs - Review evidence of product output - Review of product properties - Review of product end use - Review of equipment and calibrations 	Baseline.pdf field-values.csv CO2 Removal Data - CO2 Removal Data.csv Carbon Assessment Datasheet.xlsx Product Despatch Report - Leeds Q2 - Product Despatch Report.csv Diesel Utilities.csv 2A5 Renewable_Energy_Certificate Electricity (renewable) Solar power Water.png
September 24 th , 2025 – December 5 th , 2025	Data Review	<ul style="list-style-type: none"> - Review of LCA and supporting documentation - Review of Puro CORC calculations - Review of raw material sources and sustainability - Review of carbon content of input materials and output aggregate - Review of system inputs and outputs - Review evidence of product output - Review of product properties - Review of product end use 	Leeds Aggregated Off Site Deliveries Q2.xlsx OCO Leeds Q1 Data - Off Site Deliveries.csv Hope EPD.pdf Transport.png Off Site Deliveries 06-04-2025 21-08-49 Limestone.png Rock Crushing.png Ecoinvent information.png 1B2 BES6001 Sustainable Sourcing Certificate.pdf 1A1 CO2 Supplier 2 Contract.pdf 1A1 CO2 Supplier Contract.pdf Off Site Deliveries 06-04-2025 21-08-49.xlsx Electricity (gas).png Electricity (mixed).png Ladywell Q4 2024.xlsx St Nicholas Court Farms CO2 Data 2024.xlsx

			CORC Report Summary - Carbonated Materials - OCO, Leeds, Q2 '25 (1) 250505 LCA Report.pdf 3B1 Terms and Conditions of Sale.pdf 05A Permanence Risk Assessment 3C1 Aggregate Customers 3C3 BlockMix - Sales Factsheet 3C4 6F - Sales Factsheet 3C5 UKCA Blockmix 3C6 UKCA 6F 1C2 O.C.O Methodology for CO2 Removal v3.pdf 1C3 Acid Digestion Method (Section 2.2).pdf OCO LCA Model - Leeds – Q2 2025 (1).xlsm
November 28th, 2025 – December 18th, 2025	Report Development	- Compose Verification Report - Internal quality control	<i>No additional documents reviewed following data review</i>

3.2. Verified Output & CORCs

Table 4 includes the specific CORCs claimed by O.C.O. and verified by 350Solutions during the output audit process.

Table 4: Verified CORCs for O.C.O Leeds Production Facility

Performance Metric Name / Description	Revised Value	Verified Value	Monitoring Period
Net CO₂ Removal Factor*	51.45 kgCO ₂ / tonne aggregate	51.45 kg CO ₂ / tonne aggregate	April 1 st , 2025 – June 30 th , 2025
Aggregate Output	52,942.27 tonnes	52,942.27 tonnes	
Biogenic CO₂ Injected	722.16 tonnes	722.16 tonnes	
Ambient CO₂ absorbed during curing**	6,194.05 tonnes	6,194.05 tonnes	
Total CORCs***	2,723.91 CORCs	2,723.91 CORCs	

* CO₂ Removal factor is the net value of CO₂ removed in the aggregate product based on the O.C.O M-LS Environmental Product Declaration. All of CO₂ injected during the reporting period was of biogenic source.

** Determined using the average measured carbonate content of M-LS aggregate and the mass of biogenic CO₂ injected.

*** CORC calculations are based on the net CO₂ emission rate determined and verified in the valid Environmental Product Declaration (EPD) for the reporting period, and the average measured carbonate content of M-LS aggregate. CORC values are calculated based on this factor and the total aggregate product delivered during the reporting period. The values of inputs during the reporting period are verified and reported here for completeness and to cross check versus the EPD.

4. Audit Findings

4.1. Summary of Audit Findings

350Solutions has reviewed and audited the documentation of the technology, the instrumentation, the procedures, performance and collected data and has found that the data presented in the Puro Audit Package:

Meets the requirements of the Puro General Rules V3.1 and Carbonated Materials Methodology V2

Meets the requirements of the Puro General Rules V3.1 and Carbonated Materials Methodology V2 with minor modifications

Does Not Meet the requirements of the Puro General Rules V3.1 and Carbonated Materials Methodology V2

350Solutions utilized a reasonable level of assurance in performance of the output audit. A summary of findings associated with each primary requirement of the *Puro General Rules* and *Carbonated Materials Methodology* and any identified issues with the audit are summarized below.

Table 5: Audit Findings

Puro Standard CM Method. Section Ref.	Audit Verification Topic	Findings
1.1.1	CO ₂ Source	Acceptable. O.C.O utilized biogenic CO ₂ during the reporting period (no CO ₂ injected was fossil sourced). A significant portion of the CO ₂ in the product occurs via absorption from ambient atmosphere and reaction in the aggregate during the curing and storage process on-site.
1.1.2 5.2.1 5.2.2	Sustainable Raw Materials	Acceptable. O.C.O utilizes waste material (APCr) as a primary input, serving as a certified End-of-Waste treatment facility. In addition, O.C.O has obtained BES 6001 certification for Responsible Sourcing of Construction Materials for other inputs.
1. 3.1.1 3.1.2 3.1.3 5.2.1 5.3.1 5.3.2 5.3.3	Net-Negative LCA	Acceptable. O.C.O has demonstrated an appropriate basis for CORCs according to the Puro Methodology. The LCA was completed and independently verified as part of the independently verified EPD development, and utilizes the appropriate standard (ISO 14040/14044), system boundary (cradle to gate – excluding distribution use and end-of-life), cut-off approach for secondary materials, and results in a net-negative LCA, with -51.6 kg CO ₂ removed per tonne of aggregate (after accounting for prior carbon present in the APCr feedstock material). The evidence produced for the RECs associated to production have been deemed acceptable for now, but future output audits must follow the updated Puro.Earth rules regarding for RECs which have been applied to all methodologies. Puro.Earth confirmed that for this current output audit, the evidence is acceptable.
1.2.4	Output Quantification	Acceptable. All reported aggregate production is based on deliveries at the gate, as measured on a calibrated weigh scale at the facility. All shipped aggregate product is accounted for in dispatch records, which form the basis for the claimed production and CORCs. O.C.O also documents raw material usage and production via plant SCADA systems,

		<p>which can be used for cross-check purposes. Water, electricity, and diesel fuel use are determined by either on-site meters, utility bills, or purchase receipts, respectively.</p> <p>O.C.O has a valid EPD for the M-LS aggregate product. All LCA inputs in the EPD are complete and analysis performed in compliance with the Puro methodology.</p>
2.1.3 5.4.1	<i>Product usage</i>	Acceptable. The carbonated aggregate produced by O.C.O is utilized in a variety of construction processes. O.C.O maintains a complete list of customers and a summary of applications of the aggregate. In addition, O.C.O certifies that the product meets EN13242 and EN 13055 standards for specific aggregate types for use in certain construction materials.
2.2.5	<i>Demonstrated Additionality</i>	Acceptable. O.C.O has provided financial models and financial records demonstrating the need for carbon finance. Specifically, the primary counterfactual for the O.C.O process is the treatment and landfilling of the APCr residues. Companies that perform this process are typically able to provide lower tipping fees than what O.C.O charges for treatment, which is in large part due to the additional costs of operating the O.C.O process compared to traditional landfilling. To remain competitive with the counterfactual, O.C.O requires carbon finance to enable tipping fee reductions for APCr, to secure their primary input. In addition, with increasing operating costs (electricity, CO ₂), and low value of aggregate product, the carbon finance revenues support financial results that significantly improve options for future investment and scaling.
4. 5.3.2	<i>CORC Calculation Methodology</i>	Acceptable. O.C.O follows the CORC quantification methodology in the CBM Methodology. Note that O.C.O now uses direct measurement of carbonate content of M-LS to quantify CO ₂ uptake. Direct measurement of carbon content of APCr waste feedstock material is used to deduct prior carbon from the end-product carbon content.
5.5.1	<i>Statement re: Double Counting</i>	Acceptable. O.C.O is aware of end-user customer practices and assures no-double counting is taking place. O.C.O has provided written confirmation of use of product. O.C.O utilizes language in its terms and conditions that state that the carbon credits associated with the product do not transfer with the product purchase and credit ownership may be negotiated separately.

4.2. Critical Findings and Exceptions

Table 6: Notable Findings contains a list of notable findings identified during the output audit for this reporting period. All findings, primarily associated with missing supporting evidence, have been addressed and closed. A list of all findings can be found in Appendix 1.

Table 6: Notable Findings

ID No.	Finding/ Issue	Supplier Response	Conclusion/ Resolution
4	Transportation distances used for calculating emissions associated to transport are incorrect for some of the locations. Please update these values with the correct distances and ensure transport emissions adjust appropriately.	All supplier and customer transport distances reviewed and updated with the correct distances.	Noted that some of the supplier locations require Ferry transport as well as truck transport. FAR to ensure emissions associated to this are included within for the next viable output audit (Leeds Q4).

6	Values in delivery report for Breedon cement, Marshall limestone and Hanson sand do not match those reported. Please review	Values corrected for reporting file.	Values updated and corrected so that source file matches values reported.
8	RECs certificates do not include much information. Clarification needed from Puro.Earth	-	Puro confirms that RECs are eligible for this output audit. FAR for next viable OA.

4.3. Forward Action Requests and Recommendations

Table 7: contains the list of forward action requests that should be addressed by O.C.O prior to the next reasonable Output Audit (expected to be Q4 Leeds).

Table 7: FARs and Recommendations

ID No.	Finding/ Issue	Supplier Response	Conclusion/ Resolution
4	Some transportation associated to delivery of raw materials required the use of a Ferry. These emissions are not currently accounted for.	These shall be updated for the next viable output audit (Leeds Q4)	FAR to be addressed in the next viable output audit (Leeds Q4)
8	RECs certificate does not include any information regarding the location or age of the RECs used to offset the energy used by OCO during this reporting period. Clarification needed from Puro as to whether the evidence is acceptable, or whether more information regarding the RECs used is required.	-	See Puro published clarification CL023 CMA regarding the use of RECs and the evidence now required to ensure purchased RECs are eligible [3]. FAR for next viable output audit (Leeds Q4) that all RECs certificates meet the new guidance from Puro.Earth.
9	Recommended that O.C.O update calculations for transportation emissions. Currently, error is introduced by averaging distances and multiplying by the total tonnage transported for the reporting period.	This shall be updated for the next output audit	Error is less than 2% of the actual transportation emissions for this reporting period. FAR to ensure that this calculation is updated for future verifications and no other similar calculation errors exist anywhere else.

5. Revision History

Version	Date Issued	Noted Changes
Draft v1.0	December 14 th , 2025	Initial Draft
Draft v1.1	December 15 th , 2025	Updated dates following internal review
Draft v1.2	December 18 th , 2025	Final draft following review by Puro and OCO

6.0 Auditor Signatures

Auditor Information		
VVB	Auditor	350 Solutions Project ID No.
350Solutions, Inc.	Guy Ingram-Hardwick (Lead Verifier)	PU2501.02
350Solutions, Inc.	Bill Chatterton (Quality Assurance)	

Signed: Guy Ingram-Hardwick (Lead Verifier)

Bill Chatterton (Quality Assurance)



6. References

[1] Puro.Earth, Puro.Earth General Rules version 3.1, 2023, Website:
<https://puro.earth/document-library>

[2] Puro.Earth, Puro.Earth Carbonated Materials Methodology (2022, version) Website:
<https://puro.earth/document-library?tab=methodologies>

[3] Puro.Earth, Clarifications Puro Standard, 17th December, 2025, page 23/34 Website:
<https://puro.earth/document-library?tab=clarifications>

Appendix 1: Puro.Earth Carbonated Materials Methodology Audit Checklist

Type	Finding/Issue	Required Action	Supplier Response	350 Response	2nd Supplier Response	Conclusion/Resolution
Omission	Contact information for auditor missing	Provide requested documentation	Requested documentation provided			Requested document uploaded and meets requirements
Clarification	Clarification whether APCr average batching data is based upon SCADA data for the reporting period?	Confirmed whether this is correct	Confirmed			Resolved.
Omission	Contact information for auditor missing	Provide requested documentation	Requested documentation provided			Requested document uploaded and meets requirements
Clarification	Please confirm that the most up to date energy usage per tonne of CO2 Is being used for the Ladywell CO2 supply.	Confirm value	Value confirmed as the most up to date available			Confirmed
Clarification	Can you confirm why the amount of water used on site is greater than the total billed by the supplier.	Confirm mismatch in values	Site also receives water from onsite boreholes and harvested rainwater. For the LCA, all water is assumed to be from municipal source			Confirmed, thank you for the clarification.

Appendix 2: Verifier Qualifications

Verifier Qualifications	Criteria Met?	Evidence / Notes <i>(note how the criteria was met, specific documents - resume/CV, publications, certifications, etc.).</i>
Verifier has relevant technical knowledge of the type of technology being evaluated and carbon removal processes in general		
A) Does Verifier have:		
1. An in-depth technical knowledge of the technology type under verification;	<input checked="" type="checkbox"/>	350Solutions is accredited to ISO/IEC 17020:2012 and ISO 14034 Environmental Technology Verification (ETV) as a Type A (third party) Inspection Body (ANAB Certificate Number: AI-2618). The technical scope of 350's accreditation includes verification of performance and environmental impact as it relates to design, materials, equipment, installation and operations of technologies in the categories of Energy, Clean Production and Process, and Air Pollution Monitoring and Abatement. As documented in 350Solutions' ETV Standard Operating Procedure (ETV QPM 350-223-03), and Quality Systems Procedures for verifier qualifications (QSP-350-005-02), 350Solutions conforms to the requirements of ISO 17020 Annex A with respect to verifier qualifications and procedures relevant to the Puro.Earth General Standard. 350 staff have participated in the evaluation and development of small scale biomass gasification and biofuels technologies. 350 also served as lead verifier for the Carbon XPrize competition and contributed to the development of procedures and processes for verification of relevant calculations, modeling, and statistical methods in order to assess team results and calculations of performance metrics and uncertainty. 350 has demonstrated knowledge of data quality and data validation approaches and execution in supporting verification of performance claims and results.
2. Knowledge of specific risk areas associated with performance of such technologies (i.e. common failure points, performance issues, barriers to scaleup);	<input checked="" type="checkbox"/>	
3. Knowledge of the environmental implications related to the use of the technology from a life cycle perspective, such as impact of the technology on lifecycle CO2 emissions and carbon removal;	<input checked="" type="checkbox"/>	
4. Knowledge of relevant applicable test methods and standards for evaluating performance or impact of the technology;	<input checked="" type="checkbox"/>	
5. Knowledge of relevant calculation, modeling, and statistical methods in order to assess test results and calculations of performance metrics and uncertainty, as applicable;	<input checked="" type="checkbox"/>	
6. Knowledge of data quality and data validation approaches, including QA/QC procedures, for example.	<input checked="" type="checkbox"/>	
Verifier is a credible independent 3rd party		
B) Is Verifier:		
1. third-party body independent of the team registered for the Puro Earth CORCs;	<input checked="" type="checkbox"/>	350Solutions is accredited to ISO/IEC 17020:2012 and ISO 14034 ETV as a Type A (third party) Inspection Body. As documented in 350Solutions ETV Policy Manual (ETV QPM 350-200-03), 350Solutions conforms to the requirements of ISO 17020 Annex A with respect to impartiality for Type A inspections, pursuant to ISO 14034 activities. These procedures and quality management programs are generally relevant to verification under the Puro.Earth General Standard. Note that verifications completed for Puro.Earth are not equivalent to ISO 14034 verifications.
2. Not directly involved in the design, manufacture or construction, marketing, installation, use or maintenance of the specific technologies submitted to Puro.Earth for verification, or represent the parties engaged in those activities.	<input checked="" type="checkbox"/>	
3. Not part of a legal entity that is engaged in design, manufacture, supply, installation, purchase, ownership, use or maintenance of the items inspected.	<input checked="" type="checkbox"/>	

Guy Ingram-Hardwick
Carbon Removal Verification Engineer, 350Solutions

EDUCATION:

MEng Materials Science and Engineering, Loughborough University, UK - 2022

EXPERIENCE SUMMARY:

Guy Ingram-Hardwick is a Carbon Removal Verification Engineer, with experience in materials engineering, process engineering, MRV protocol development, experimental design and life cycle analysis (LCA). At 350 Solutions, Guy's efforts center on validation and verification of varied carbon removal pathways, including biochar, biomass storage, and DAC+S. Guy has led the verification of a biochar CDR supplier registered with Puro.Earth and supported verifications of bio-oil and biomass geologic storage pathways as well as DAC technology assessments. Guy began his experience in carbon removal working to develop an LCA model for Brilliant Planet, a marine based carbon removal company growing, processing and burying microalgae for carbon sequestration. Once completing the LCA model, Guy managed the third-party verification and co-authored the MRV methodology for Brilliant Planet before managing its adoption with carbon market registries and developing relevant documentation required for carbon removal verification and crediting.

Guy also studied degradation mechanisms for biodegradable polymers which was the focus of his Master's thesis. His work during the Master's thesis and at Brilliant Planet provided experience in experimental design and execution, including conducting field trials for developing novel technologies. This included leading design and execution of demonstration and testing of processing and storage of the microalgae, displaying the long-term permanence of the carbon removal system. Prior to his experience at Brilliant Planet, Guy worked as a process engineer at Pirelli's rubber compound manufacturing plant in Burton-on-Trent with a focus on data analytics for driving continuous improvement, as well as developing familiarity with industrial manufacturing operations and data, quality assurance, and international standards.

RESEARCH AND PROFESSIONAL EXPERIENCE:

January 2025 – Present: Carbon Removal Verification Engineer, 350Solutions
Verify carbon dioxide removal technologies on behalf of registries and private companies ensuring high quality and meaningful climate impact.

Jul 2022 – Dec 2025: LCA and MRV Associate, Brilliant Planet
Quantified the carbon removal efficiency of the Brilliant Planet system across a variety of engineering designs using LCA. Developed the proprietary MRV methodology and PDD as well as setting up a novel experimental design to display the permanence of the stored carbon.

July 2019 – September 2020: Process engineer, Pirelli
Completed data analytics to drive continuous improvement for increasing efficiency, safety and rubber compound quality.



Bill Chatterton
Senior Verification Scientist, 350Solutions

EDUCATION:

B.S. Environmental Science, SUNY at Plattsburgh, 1982
A.A.S. Environmental Technology, Paul Smith College, 1979
Certified Measurement and Verification Professional (CMVP), 2019

EXPERIENCE SUMMARY:

Mr. Chatterton has over 30 years of experience in management of energy and environmental technology development and demonstration projects and programs, as well as multimedia environmental engineering efforts. The majority of his recent work has focused on the evaluation of innovative carbon capture, utilization, and removal technologies. Mr. Chatterton has supported the development and management of large technology evaluation programs in the advanced energy, transportation, and climate change areas.

RESEARCH AND PROFESSIONAL EXPERIENCE:

2019-Present Sr Verification Scientist – 350Solutions, Inc.

Owns and operates a small cleantech engineering consulting business focused on the independent evaluation of new cleantech innovations and their impact on the environment and carbon emissions. Provides engineering consulting, testing and evaluation, techno-economic assessment, and other support to companies developing, using, or investing in new clean technology innovations. Manages administrative, business development, and project activities for 350Solutions.

2010-2019: Program Manager - Energy and Environment, Southern Research

Managed scientific and technical staff performing research, development, and evaluation of innovative clean energy technologies. Projects range from \$25,000 to \$6million in size, and are funded by the US Department of Energy, Department of Defense, and commercial partners. Technical focus areas are conversion of biomass to fuels and chemicals, carbon capture and utilization, energy efficient building technologies and renewable energy generation.

2000-2009 Sr. Project Leader, Environmental Engineer, Southern Research

PROJECT EXPERIENCE:

Mr. Chatterton has executed several independent technology performance verifications of emerging carbon, energy and transportation technologies for 350Solutions and previously at Southern Research Institute. Mr. Chatterton has completed clean technology evaluations for the Department of Defense, state energy agencies, commercial clients, investors, and technology developers, involving evaluation of commercial feasibility, economic and environmental impacts, and technology performance. Mr. Chatterton served as a Lead Verifier for the NRG COSIA Carbon XPrize – a \$20M prize competition for technologies that capture and beneficially utilize CO₂. Mr. Chatterton is also a Certified Measurement and Verification Professional, issued in 2019.