

PROJECT REVIEW REPORT

This project review report includes findings raised during Verra’s review of the Project specified below. The V.V.B. must address the findings before the project request can be considered for approval by Verra. The project review report will be made publicly available on the Verra Registry. Confidential information may be provided in separate attachments.

Project ID	2649
Project Name	Housing Decarbonisation in the United Kingdom
Review Type	Verification Approval
Program(s)	VCS Program
Verification Period	01 January 2023 to 31 December 2023
Project Proponent	Arctica Partners
Methodology	VM0008 Weatherization of Single Family and Multi-Family Buildings, Version 1.1
VB	SustainCERT S.A.
Assessment Criteria	VCS Standard version 4.7
Date of First Issue	05 February 2025
Review Conclusion	Approved
Date of Final Issue	17 April 2025

FINDINGS

#	Finding Description	VVB Response	Status
1	<p>Incomplete information on Implementation</p> <p><u>Issue</u></p> <ol style="list-style-type: none"> In section 3.1 of MR, information is missing on how many households are category A and B projects, if they belong to low or medium impact, etc. Section 3.3 of monitoring report (MR) states 39,927 individual PAIs have been included in the project activity between January 1, 2023, and December 31, 2023. The approved MR for first monitoring period (MP) states that 6,717 individual dwellings were included in the project activity between July 1, 2022, and December 31, 2022. <p>Details are missing on how many <u>new</u> PAIs were included in the current MP and how the 6,717 PAIs included in previous MP have been accounted for if all the 39,927 PAIs were included in the current MP. It is also inconsistent with section 3.3 of verification report that 33,254 new PAIs have been added during this verification period.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> VVB must ensure that the information regarding households is included in the MR. VVB must ensure that information regarding new PAIs added in this monitoring period is consistently reported in MR. <p><u>Program Rule(s)</u> VCS Monitoring Report Template, Sections 3.1 and 3.3</p>	<p>Round 1</p> <p><u>VVB Response:</u></p> <ol style="list-style-type: none"> PP has provided the required breakdown of households under Category A and Category B, distinguishing between low-income and middle-income groups. The updated data includes: <p>Low-Income Households: Category A: 926 Category B: 26,415 Total: 27,341</p> <p>Middle-Income Households: Category A: 2,601 Category B: 9,985 Total: 12,586 Overall Total: Category A: 3,527 Category B: 36,400 Grand Total: 39,927</p> <p>The PP has correctly incorporated this information into the Table-2b under section 3.1 of the monitoring report.</p> <p>Additionally, the same details have been reflected in Section 4.1 of the Verification Report and Section 3.1 of the MR to maintain consistency.</p> <p>Conclusion: The revised MR and verification report now contain the required information, and the VVB confirms that the action required has been adequately addressed.</p>	Closed

		<p>2. The PP has provided a clarification regarding the discrepancy in the reported numbers of PAIs. The revised breakdown is as follows: Total PAIs from the First Monitoring Period (MP1) (July 1, 2022 – December 31, 2022): 6,717</p> <p>New PAIs onboarded in the Current Monitoring Period (MP2) (January 1, 2023 – December 31, 2023): 33,211</p> <p>Total PAIs as of the end of MP2: 39,928</p> <p>The variation from the earlier reported total of 39,927 is due to the removal of one PAI from the first monitoring period.</p> <p>Action Taken The Verification Report which initially stated 33,254 new PAIs were added, was a typo error. The section 3.3 of the Verification Report has now been updated to reflect the accurate number of 33,211.</p> <p>The required information on the number of new PAIs included in the current monitoring period is now consistently reported in the MR and VR. The VVB confirms that the discrepancy has been resolved, and the figures are now aligned across the relevant documents.</p> <p><u>PP Comments:</u></p> <ol style="list-style-type: none"> 1. For Low-Income Households, there are 926 in Category A, 26,415 in Category B, and a total of 27,341. <p>Middle-Income Households include 2,601 in Category A, 9,985 in Category B, and a total of 12,586.</p>	
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		<p>Overall, Category A comprises 3,527 individuals, Category B includes 36,400, bringing the total across all groups to 39,927. Please see the table below for an overview:</p> <table border="1"> <thead> <tr> <th></th> <th>Category A</th> <th>Category B</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Low-Income</td> <td>926</td> <td>26,415</td> <td>27,341</td> </tr> <tr> <td>Middle-Income</td> <td>2,601</td> <td>9,985</td> <td>12,586</td> </tr> <tr> <td>Total</td> <td>3,527</td> <td>36,400</td> <td>39,927</td> </tr> </tbody> </table> <p>A table (<i>Table 2b</i>, with the existing Table 2 retained and renamed as <i>Table 2a</i>) and text including this information has been included in the revised MR.</p> <p>2. 33,211 new PAIs were onboarded for this monitoring period; however, when combined with the 6,717 from the initial monitoring period, the total PAI count is 39,928.</p> <p>The difference is due to 1 PAI being removed from the PAIs onboarded during the first monitoring period.</p> <p>The MR has been updated to reference this.</p> <p>The verification report inclusion of 33,254 new PAIs is incorrect. Updating of verification report deferred to VVB.</p>		Category A	Category B	Total	Low-Income	926	26,415	27,341	Middle-Income	2,601	9,985	12,586	Total	3,527	36,400	39,927	
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Low-Income	926	26,415	27,341																
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Total	3,527	36,400	39,927																
		<p><u>Verra Response</u> The required information has been provided. This finding is closed.</p>																	
		<p>Round 2</p>																	
		<p><u>VVB Response</u></p>																	
		<p><u>Verra Response</u></p>																	

2 Inconsistencies in information on Monitored Parameters	
<p><u>Issue</u> In Sections 4.2 and 5.2 of MR, clarity is required for the following parameters /values.</p> <ol style="list-style-type: none"> On Page 84 of the MR, the value of $Elec_{b,i,j}$ is mentioned as “Not applicable during this monitoring period”. However, the ERR sheet reflects this value as 3,52,83,157 kWh. On page 87 of the MR value of $F_{b,i,j}$ is mentioned as “Not applicable during this monitoring period”. However, the ERR sheet reflects this value as 5,78,82,483 m³. For parameters HDD_b and HDD_y have been reported as ‘not applicable for the monitoring period’. However, the ERR spreadsheet report this value and applied in ER calculation. <p><u>Action Required</u></p> <ol style="list-style-type: none"> VVB must ensure that all monitored parameters are consistently reported in MR and ERR spreadsheet. VVB shall verify the updated information and revise verification report accordingly. <p><u>Program Rule(s)</u></p> <p><i>VCS Monitoring Report Template, Sections 4.2, Section 5 ERR Calculation spreadsheet</i></p>	<p style="background-color: #333366; color: white; padding: 2px;">Round 1</p> <p><u>VVB Response</u></p> <p>As per the methodology: Table 9 – Adjusted Consumption Approach:</p> <ol style="list-style-type: none"> Adjusts energy consumption based on baseline and post-retrofit conditions. Requires parameters like $Elec_{b,i}$, $F_{b,i,j}$, HDD_b, and HDD_y. Designed for projects that adjust historical energy consumption based on external influencing factors. <p>Table 10 – Pre- and Post-Retrofit Approach:</p> <ol style="list-style-type: none"> Directly compares measured energy consumption before and after retrofits. Does not require adjustments for external conditions like heating degree days (HDD) or fuel-based energy consumption. Only requires parameters explicitly listed under Table 10. <p>As the project followed Table 10 (Pre- and Post-Retrofit Approach), the parameters listed in Table 9 were not monitored and were correctly marked as "Not Applicable" in the MR.</p> <p>VVB would like to mention here that under section 4.2 of the monitoring report the parameter (marked as "Methodology Reference" "Table 9") are taken as such from the registered PD and these parameters are not applicable for the previous as well as during current monitoring period undergoing verification. PP has included them in the monitoring period as they are/were part of the registered PD. Therefore, it is confirmed by VVB team no correction is applicable in monitoring report and emission reduction sheet w.r.t to comment no.1, 2 and 3.</p>
Closed	

		<p><u>PP response:</u></p> <p>In this Monitoring Period, the project has not implemented the Adjusted Consumption approach. Table 9 of the VM0008 Methodology only refers to values for the Adjusted Consumption approach. As such, none of the parameters listed in Table 9 of the methodology are required, this includes the Elec_{b,l}, Fb_{i,j}, HDD_b and HDD_y values. These parameters are therefore marked as 'Not Applicable'.</p> <p>In this Monitoring Period, the project has implemented the Pre- and Post- Retrofit approach. Table 10 of the VM0008 Methodology refers to values for the Pre- and Post- Retrofit approach. As such, the value of Elec_{b,l}, Fb_{i,j}, HDD_b and HDD_y, are listed in the MR under Table 10 of section 4.2.</p> <p>We believe you are referring to Elec_{b,l}, rather than Elec_{b,l,j}, which is the parameter required in Table 10 of the VM0008 Methodology.</p> <p>There is a value in the ER spreadsheet (at cell G39930), however, this I not related to any of the parameters in VM0008. This value is for internal calculation purposes. The value present in cell G39930 reflects aggregated energy consumption data that was used for internal verification but is not a monitored parameter during the applicable monitoring period.</p> <p>To avoid confusion and ensure consistency, the MR only includes parameters required under VM0008 and applied during the applicable monitoring period.</p>	
		<p><u>Verra Response</u></p> <p>Justification has been provided. This finding is closed.</p>	

3	Verified ERRs reported in verification report
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<p><u>Issue</u></p> <ol style="list-style-type: none"> Summary table in section 5.2 of verification report includes year 1 also which is not part of current verification period. Reduction VCUs have been reported as 30,756 whereas Total VCUs have been reported as 30,758 <p><u>Action Required</u></p> <ol style="list-style-type: none"> VVB shall provide consistent and correct summary of verified ERRs for the current verification period. <p><u>Program Rule(s)</u></p> <p>VCS Verification Report Template, Sections 5.2</p>	<p>Round 1</p> <p><u>VVB Response</u></p> <ol style="list-style-type: none"> The issue regarding the inclusion of Year 1 in the summary table of Section 5.2 of the Verification Report has been addressed. The table has been corrected to include only the Emission Reductions from the current monitoring period. The discrepancy in Section 5.2 of the Verification Report regarding the reported VCUs has been identified and corrected. The correct value is 30,756 VCUs, ensuring consistency across the report. <p>PP Comments:</p> <ol style="list-style-type: none"> Response deferred to VVB for correction of Section 5.2 table. Response deferred to VVB for correction of mis-reported number of 30,758. <p><u>Verra Response</u></p> <p>Values have been corrected. This finding is closed.</p>	<p>Closed</p>
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<p>4 Liability statement in verification report</p>		
<p><u>Issue</u></p> <p>VVB includes in their statement “SustainCERT disclaims any liability or co-responsibility for any decision a person or an entity might make based on this verification statement regarding the issuance and utilization of VCUs hereby verified and certified”.</p> <p>Under Section 7.2.1 of the Verra VVB Agreement, The VVB agrees that “it, and not Verra, shall accept sole responsibility...in respect of any liability...resulting from (a) the issuance of any Instruments which would not have been issued</p>	<p>Round 1</p> <p><u>VVB Response</u></p> <p>The issue regarding the disclaimer statement included in the VVB’s verification statement has been addressed in accordance with Section 7.2.1 of the Verra VVB Agreement. The statement has been removed from the verification statement.</p>	<p>Closed</p>

<p>but for the breach of Clause 3.1 by the Service Provider...” In turn, Section 3.1 of the Verra VVB Agreement states, “the service provider shall at all times conduct its performance in compliance with the relevant Verra Program Rules...”</p> <p>Therefore, the service provider has agreed that it is liable with respect to issuance of instruments that would not have been issued but for a breach of relevant Verra Program Rules.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. Verra requests the VVB to remove or amend this sentence in accordance with Section 7.2.1. of the VVB Agreement. <p><u>Program Rule(s)</u></p> <p>N/A</p>	<p><u>Verra Response</u></p> <p>Statement has been removed. This finding is closed.</p>	
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5 Geographical Location		
<p><u>Issue</u></p> <p>In section 1.8 of MR, the project location details are missing for the new project activity instances in line with Section 3.11.1 of VCS Standard.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. VVB must ensure that PP provides project location details of new PAIs included in the project activity: <ol style="list-style-type: none"> a. A geodetic coordinate for each instance, provided in a KML file; or b. Geodetic polygon(s) provided in a KML file that: <ol style="list-style-type: none"> i. Encompass all instances in the project, and ii. Delineate the smallest administrative division of land for the local government 	<p>Round 1</p> <p><u>VVB Response</u></p> <p>The PP has provided a KML file, which contains the required geodetic coordinates or polygons to delineate the project activity locations, it is shared with VERRA as well.</p> <p>The VVB has already assessed this information in Section 3.3 of the Verification Report, ensuring that the location details meet Section 3.11.1 of Verra Standard requirements.</p> <p>The project location details have now been included in the MR, and the verification assessment has been completed and documented in the Verification Report. The VVB confirms that the requirement has been satisfactorily addressed.</p>	<p>Closed</p>

<p>(e.g., if the activity takes place within six villages, the six villages must each have their own polygon).</p> <p>2. VVB shall assess the information and update verification report as applicable.</p> <p><u>Program Rule(s)</u></p> <p>VCS Standard v4.7, section 3.11.1 VCS Monitoring Report Template, v4.4; section 1.8</p>	<p>PP Comments:</p> <p>1. Confirmation text has been included in Section 1.8, confirming that new PAI locations reported in the monitoring period remain within the existing defined geographic area.</p> <p>A KML file has also been provided, which incorporates geodetic polygons that:</p> <ol style="list-style-type: none"> Encompass all instances in the project. Delineate the smallest administrative division of land for the local government. <p>Updating of Verification Report deferred to VVB.</p> <p><u>Verra Response</u> Updated kml file has been submitted. This finding is closed.</p>	
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6 Inconsistencies in SDGs		
<p><u>Issue</u></p> <p>In section 1.12 of MR, following issues have been identified:</p> <ol style="list-style-type: none"> In table 1 for SDG target 1.5 current project contributions have been reported as 27,342 low-income households, whereas contributions over project lifetime report 27,341 low-income households. Explanation is missing on how the 19 million pounds of social value was calculated for SDG target 3. <p><u>Action Required</u></p> <ol style="list-style-type: none"> VVB must ensure that PP provides correct and consistent number of households for SDG contributions. 	<p>Round 1</p> <p><u>VVB Response</u></p> <p>1. The inconsistency in MR Table 1 for SDG Target 1.5 regarding the number of low-income households benefiting from the project has been addressed.</p> <p>The table has been corrected to reflect the consistent and accurate value of 27,341 low-income households.</p> <p>Section 4.1 of the Verification Report has also been updated accordingly to maintain consistency.</p>	<p>Closed</p>

<p>2. VVB must ensure that PP provides explanation of how the 19 million pounds of social value was calculated for SDG target 3.</p> <p>3. VVB shall assess the information and update verification report as applicable.</p> <p><u>Program Rule(s)</u></p> <p>VCS Monitoring Report Template, v4.4; section 1.12</p>	<p>2. Appendix 2 of the Monitoring Report provides a step-by-step methodology for calculating the Average Social Value per Year. The calculated total social value aligns with the £19 million figure, based on verified project activity instances and as described in the PDD which has been correctly applied.</p> <p>The calculation of the £19 million social value for SDG Target 3 follows the UK Social Value Bank, developed by HACT and Simetrica, to assess the impact of energy efficiency improvements on health and wellbeing.</p> <p>The methodology uses national survey data from the English Housing Survey (EHS) and British Household Panel Survey (BHPS) to quantify the impact of energy performance improvements on life satisfaction.</p> <p>The value of a one-band improvement in Energy Performance Certificate (EPC) rating is calculated to be £1,735 per person per year.</p> <p>Calculation Process:</p> <p>Baseline SAP rating (pre-retrofit) is obtained from accredited energy assessors.</p> <p>Post-retrofit SAP rating (after project implementation) is determined to calculate the increase in energy efficiency.</p> <p>The change in SAP rating is converted into monetary value, representing the equivalent income required to achieve the same increase in wellbeing. The social value per dwelling is then multiplied by the number of adult occupants (aged 16+) in each Project Activity Instance (PAI) to calculate the total social value</p>	
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		<p>per year.</p> <p>The dataset containing SAP rating improvements and calculated social value has been provided to the VVB for sampled homes visited during the site visit.</p> <p>The explanation for the £19 million social value has been adequately provided, and the VVB confirms that the required information is now included and verified in the MR.</p> <p><u>PP Comments:</u></p> <ol style="list-style-type: none"> 1. The table has been corrected to include the correct value of 27,341. 2. An explanation of how the Social Value figure presented in the table was calculated has been added to the existing footnote (please also see Project Design Document). 3. Updating of the Verification Report deferred to VVB. <p><u>Verra Response</u> Justification has been provided. This finding is closed.</p>	
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