



THE UNIVERSITY OF  
MELBOURNE

# Monitoring of energy efficiency and sustainability communication on volume home builder websites and social media

30 June 2022

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The research was commissioned by the Office of Energy and Climate Change (OECC), NSW Government .

## Research Summary



The key objective of the research was to evaluate the communication approaches of the top 23 volume home builders (VHBs) in New South Wales regarding the communication of sustainability, energy efficiency, net-zero energy and liveability through their websites and social media platforms. A baseline was established in 2020, with a repeat analysis being conducted in 2022. The research investigated the online communication channels of these VHBs, namely, their websites, blogs and social media accounts (such as Facebook, Instagram, Pinterest, Twitter, YouTube and LinkedIn). The investigation of these media was conducted between August and September 2020 and February and April 2022. A three-tiered data collection approach was used to identify relevant content from the websites and social media platforms relating to sustainability and energy efficiency, in addition to net-zero energy considerations, information and product offerings.

### This research investigated:

- Communication channels for visibility, depth, access and type of information
- Product offerings related to sustainability and energy efficiency (if any)
- Use of the Nationwide House Energy Rating Scheme (NatHERS), Building Sustainability Index (BASIX) or other rating tools and benchmarks
- The type of language used to communicate with consumers about sustainability and energy efficiency in the different online formats.

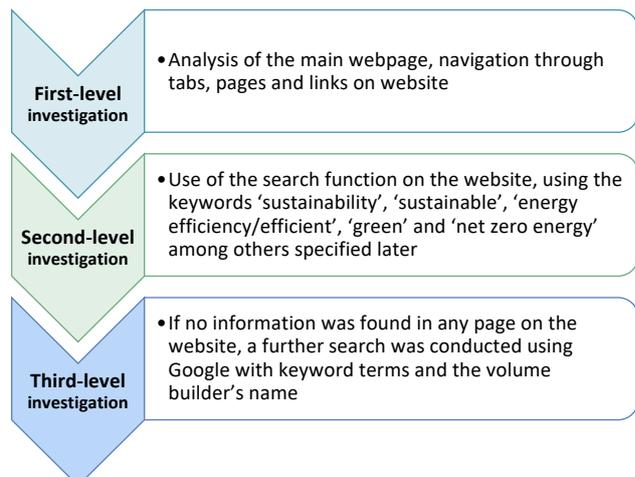


Figure 1. The three-tiered investigation procedure

## Evaluation of sustainability information available and depth.

Likert scales were used to aid in analysing the sustainability content of the VHB websites and social media presence. Likert Scales are a form of survey scale that help a researcher gather the degree of satisfaction or agreement regarding specific research enquiries. This research utilises the framework set out by Warren-Myers and McRae (2017) and comprises key areas for evaluation:

1. Visibility of sustainability messaging and product offerings;
2. Extent and format of sustainability-related information;
3. Depth and detail of sustainability-related information provided;

The Likert scale analysis provides a quantitative snapshot of the qualitative analysis of the VHB websites, as specified in the instructions from Warren-Myers and McRae (2017). The Likert scales used for each of the areas investigated have different classifications for each level. For further information and justification of the processes undertaken, please refer to the extant research. Comparisons shown are between 2020 baseline data and the data collected in 2022.

Overall, the studied VHBs do not generally provide much information in relation to sustainability and energy efficiency. For the majority, information is either non-existent or very difficult to find. If available, there is not a substantial amount of information and detail. There were however, several VHBs that did have clearly sign-posted weblinks and dedicated tabs on their websites with information about sustainability and energy efficiency. The type of sustainability messaging was often quite general in nature, and was often in reference to solar pv or star ratings. Those that were found to provide clearer messaging also had a corporate mission and a formalised approach to sustainability, which particularly in 2020 comprised much of their focus in communication channels.

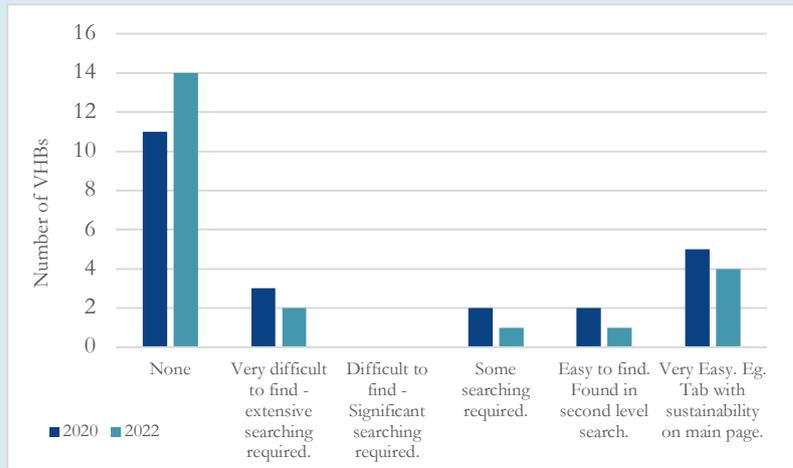


Figure 2. Visibility of sustainability messaging

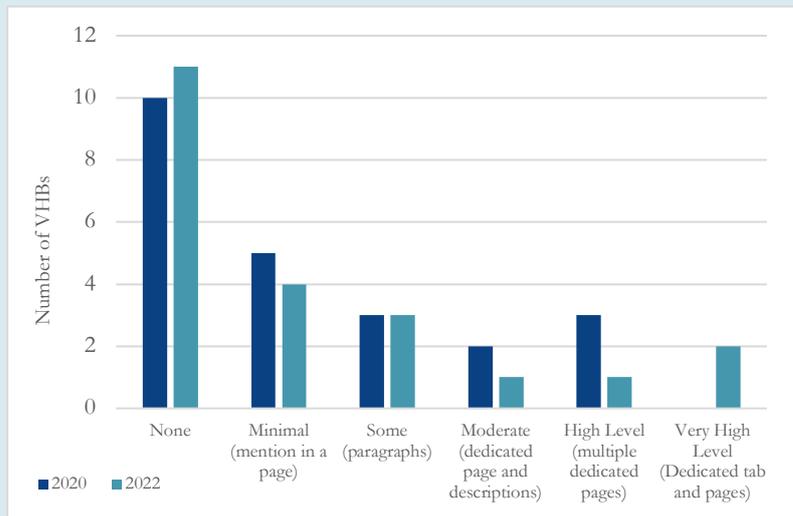


Figure 3. Extent and format of sustainability messaging

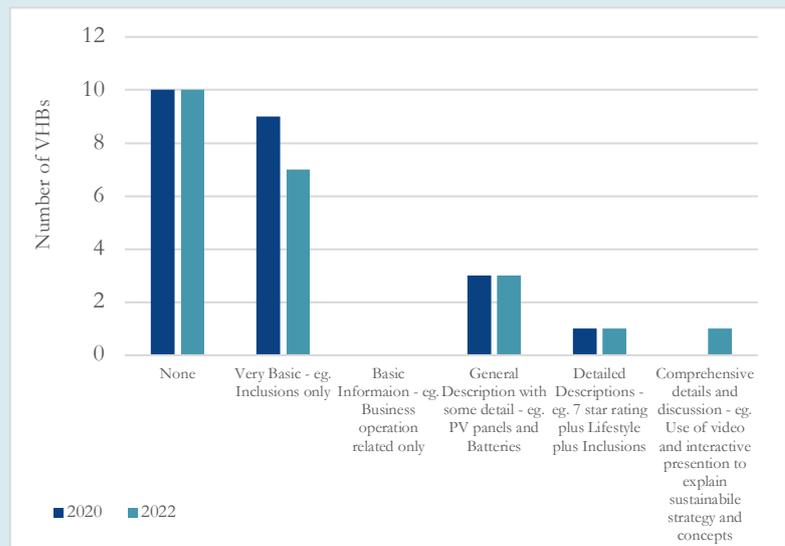


Figure 4. Depth and detail of sustainability messaging

# Evaluation of language used by VHBs

The OECC specified a series of keywords it would like to investigate as part of this study, in addition to the broader examination of sustainability, energy efficiency and net zero. These keywords included ‘sustainability’, ‘energy’/‘energy rating’, ‘energy efficiency’, ‘BASIX’, ‘net zero’, ‘eco’, ‘NatHERS’, ‘positive energy’, ‘above code’ and ‘carbon ready’. The number of VHBs using each keyword is presented below, followed by the total number of keyword mentions across all websites. The use of Nvivo software allowed further interrogation of the data, such as detailed analysis of the frequency and context of commonly used words.



Figure 5 Website Word cloud 2020

Word clouds generated by Nvivo allowed for focused investigation of frequency of word use across the websites and blogs. Changes between years were noticed in the increase in the terms ‘design’ and ‘quality’, whilst terms ‘energy’ and ‘sustainability’ declined.



Figure 6 Website Word cloud 2022

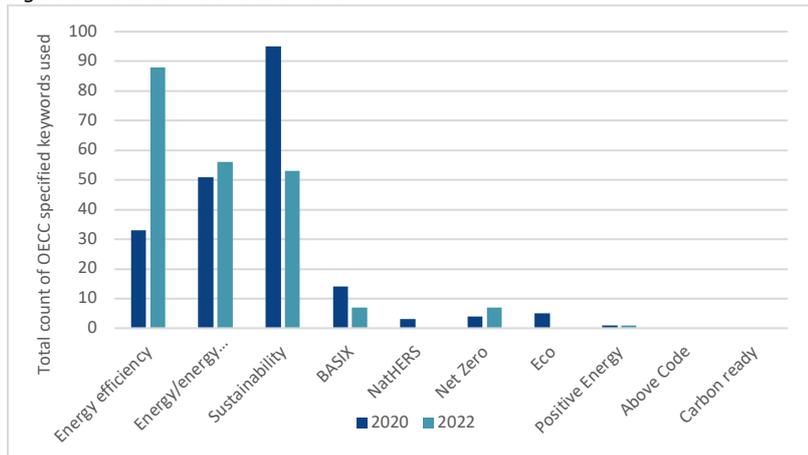


Figure 7 Frequency of keyword (as specified by OECC) use on websites

In the initial 2020 survey, the most common keyword (based on the number of times it was counted on the main websites of the VHBs) was ‘sustainability’, with over 90 uses by 13 of the VHBs. This has decreased in 2022 to 53 mentions by only nine VHBs. ‘Energy efficiency’ is now the more frequently used term and was used 88 times by 13 VHBs. The next most common terms were ‘energy’/‘energy rating’. ‘NatHERS’ is no longer a term used by VHBs on their websites.

Only five of the studied VHBs in 2022 actually had a dedicated housing product that was considered more sustainable or energy efficient than minimum regulations. VHBs mentioned the operational energy of the homes in terms of energy efficiency or net-zero energy homes. None of the VHBs mentioned the embodied energy of the houses. These five VHBs each had one or two dedicated house designs that provided their customers with more sustainable features than their other designs; however, the cost of this sustainability range was not provided. Further, the lack of detail and description of what made these homes more sustainable or energy efficient was concerning. For some VHBs, the claimed sustainability inclusions were actually items like ceiling and wall insulation and sarking, which would typically be standard for meeting NCC minimum energy efficiency requirements (depending on the state). In other cases, it appears that VHBs relied on the term ‘sustainable’ being enough for their customers, suggesting that no further questions were likely to be asked regarding the home’s sustainability features and credentials.

Information specific to sustainability inclusions provided by VHBs continued to be difficult to find on the 2022 websites. Some VHBs had very basic to no inclusions listed, and others provided ranges depending on the purchaser’s budget. Fewer VHBs provided details of the NatHERS ratings in 2022. Insulation continued to be listed as a sustainability-related inclusion on 2022 websites, with thermal performance ranging between R2.5 and R4.1 for ceilings and R1.5 and R2 for the walls. An increased number of VHBs promoted solar PV and batteries as an optional extra (5 in 2020, 7 in 2022), and the size of the solar PV system increased with ‘up to 10.5kW’ systems available. Battery size was 10kW, and increased from 2 VHBs offering to 3. Electric vehicle charging was a new inclusion offered by 2 VHBs in 2022.

## Social Media Analysis

In 2020, the most common social media format for VHBs to communicate sustainability was Facebook and the individual blog. Interestingly, in 2022 the utilisation of these platforms dropped, with Instagram and Twitter seeing a slight rise in the 2022 analysis.

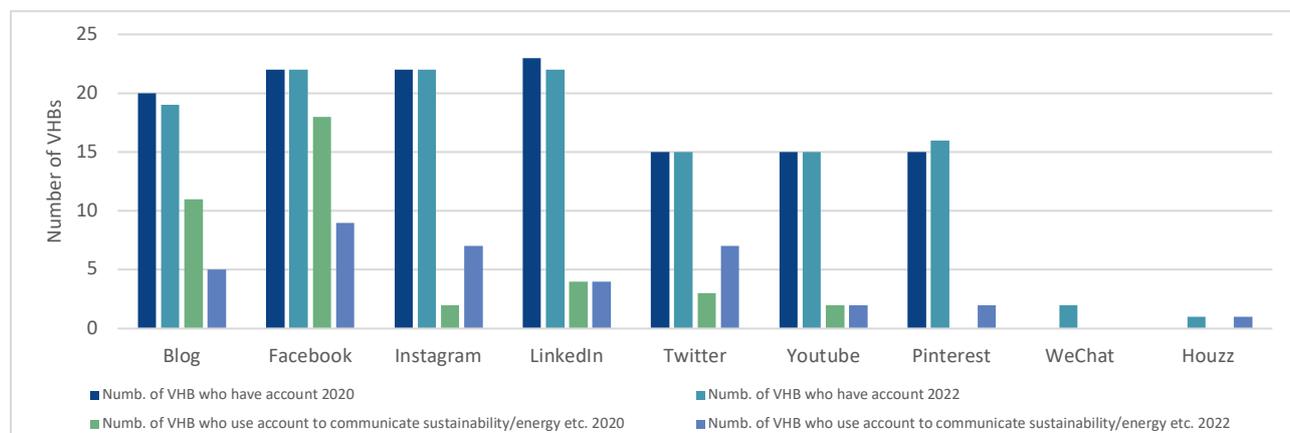


Figure 8 VHB Social media accounts and VHBs who use it to communicate sustainability messaging

## Key findings

The repeat analysis found that most VHBs still did not have a visible sustainability message or product offering. It appears, over the two years since the initial baseline study in 2020, that the industry has essentially retracted much of the sustainability information and communications on their websites. The 2022 analysis identified there were more details around actual product offerings from several builders. However, specific detail about what made these homes net zero, more energy efficient, more sustainable, etc. (on websites, blogs and social media) was rather scarce. Wording was often quite general, such as ‘sustainable building practices’, rather than any specific listing of sustainability features. This inferred that consumers would need to ‘trust’ that the builder knew what these were. Another example was claiming ‘net zero’ but only referring to isolated features such as solar PV and battery, or a 7-star NatHERS ratings, rather than other initiatives that might contribute to the house attaining a net-zero status.

The analysis conducted (and detailed in the OECC report) found that the examined VHB websites demonstrated a range of deficiencies in their communication with consumers. However, this does illustrate opportunities for VHBs to improve their communication relating to energy efficiency and sustainability. The purpose of this research was not to identify the best practice actions of the VHBs; rather, it was to ascertain a baseline and undertake a comparison over several years of what activities were being undertaken and how. In this regard, observations of VHBs that have enhanced their profile and offerings noted in this study provide opportunities for other VHBs to engage.

Below is an **Action list** of key opportunities for VHBs, generated through the observations and analysis of this study from the different practices displayed and how VHBs may adopt these to enhance their communications of sustainability and energy efficiency with consumers via their online platforms. These suggestions and identification of opportunities for VHBs and the associated summary action list that may assist in better communication and hopefully improved housing outcomes. The suggestions made here are only a first step, based on the analysis of key messaging on VHBs websites and social media. It is hoped that through this research, the VHBs can be made aware of the gaps in their communication and messaging of sustainability and energy efficiency and realise the opportunity that exists in making homes more sustainable. Whilst there is likely an early adopter cost consideration, the competitive nature of the volume housing industry should see economies of scale being achieved, particularly if VHBs continue the competitive environment in a sustainability and energy efficiency context.

### Get in touch

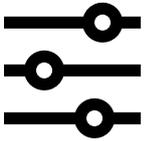
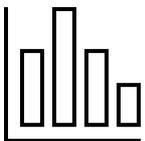


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# Sustainability Communication Action List for VHBs

<p>Visibility</p> 	<ul style="list-style-type: none"> <li>➤ Clear and simple information and language should be used to communicate sustainability and energy efficiency information, objectives of the organisations, home offerings and any inclusions/specials/packages.</li> <li>➤ In all communication portals – clearly identify on home pages, in menus and title bars, appropriate links to information relating to organisation’s corporate position, housing inclusions and options, and housing ranges.</li> <li>➤ Websites should have clear links, preferably in plain language (rather than obscure statements or language) to enable consumers’ to easily identify and find their way to relevant sustainability and energy efficiency information.</li> </ul>
<p>Information</p> 	<ul style="list-style-type: none"> <li>➤ Information needs to be clear, accurate and simple with plain language explanations and examples.</li> <li>➤ Enable access to more detailed information should consumers wish to know more.</li> <li>➤ Provide clear messaging about benefits, in particularly aspects related to savings, payback and other benefits.</li> </ul>
<p>Options availability</p> 	<ul style="list-style-type: none"> <li>➤ Clear articulation and communication of any sustainability, energy efficiency or liveability features and initiatives.</li> <li>➤ If possible, include cost information and the range of benefits of different sustainability, energy efficient or liveability features or initiatives may provide.</li> <li>➤ If possible, include as many sustainability and energy efficiency options as standard – ensure this is communicated to consumers clearly, so that they make comparisons with other builders.</li> <li>➤ Create a sustainable housing range, where all houses in the range have clear sustainability, energy efficiency and liveability options included, and as aforementioned include cost information (if possible) and ensure the benefits are clearly articulated (particularly savings).</li> </ul>
<p>Campaigns</p> 	<ul style="list-style-type: none"> <li>➤ Develop a dedicated sustainability campaign</li> <li>➤ Create demonstration projects that link to products or features/initiatives that are available to consumers</li> <li>➤ Promote through various media including websites and social media, and also engage other forms of external media (newspapers, housing organisations, television news providers and others) to also promote and communicate the campaign and demonstration products.</li> </ul>
<p>Expansion of language</p> 	<ul style="list-style-type: none"> <li>➤ Ensure initial clear messaging and signposting of sustainability and energy efficiency on websites and other media, so consumers know where to go to on websites when looking for information.</li> <li>➤ Describe the various benefits of sustainability or energy efficiency initiatives through expanding the type of terminology utilised, as this could be helpful in moving away from commonly utilised phrases, and engage consumers on different levels.</li> </ul>
<p>Education</p> 	<ul style="list-style-type: none"> <li>➤ Engage in a company-wide sustainability education program.</li> <li>➤ Ensure all staff interacting with consumers are educated and are across all the various sustainability and energy efficiency considerations, options available and the costs and benefits (even if they may not be offered at the time).</li> <li>➤ Undertake the offering of “Simply Selling” training, available through training providers for VHBs.</li> </ul>
<p>Measurable Outcomes</p> 	<ul style="list-style-type: none"> <li>➤ Set clear targets for sustainability communications (ensure not overwhelmed by non-sustainability communication).</li> <li>➤ Ensure consistency of messaging through communication channels</li> <li>➤ Engage in consumer market analysis – either in-house, outsourced or utilisation of a sustainability consumer demand index.</li> </ul>