



livegreen 



# Tenant Engagement on Sustainability GUIDE



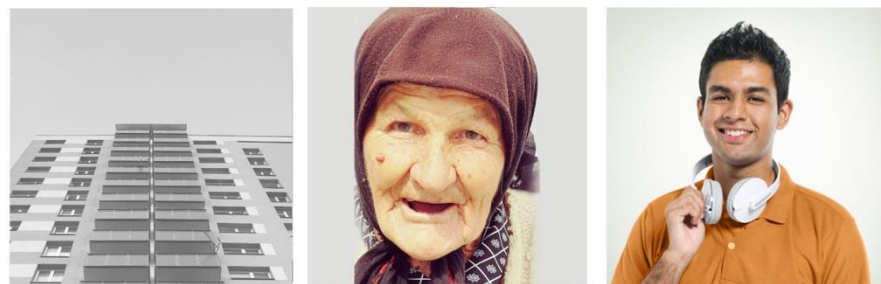
FOR SOCIAL HOUSING PROVIDERS



Focus on Waste Reduction  
and Diversion

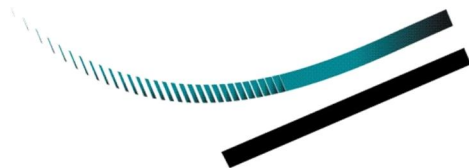


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## PROJECT PARTNER

The *livegreen* Tenant Engagement on Sustainability focusing on waste reduction and diversion was conducted by BC Housing in conjunction with the following partner:



**DILLON**  
CONSULTING

Project co-development, facilitation and tool-kit development

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## DESCRIPTION OF THE TOOLKIT

This toolkit provides information to develop and implement a tenant engagement initiative that improves the diversion of recyclable and organic materials from disposal and reduces generation. The toolkit focuses specifically on supporting behavioural changes for waste reduction and diversion and implementing activities that lead to community development. Documents within the toolkit build on the previous publication *Tenant Engagement on Sustainability (TES) – Focus on Energy Conservation* (published in 2012) developed for BC Housing by BC Healthy Communities. Both of these toolkits have been created for social housing providers who are interested in engaging their tenants on issues related to sustainability.

The *livegreen* TES – Focus on Waste Reduction and Diversion toolkit consists of the following components:

- a) **GUIDE FOR SOCIAL HOUSING PROVIDERS (I.E., THIS DOCUMENT):** This guide was developed with the intention of sharing information for engaging tenants of social housing on issues related to waste reduction and diversion. It includes practical steps on how to plan and implement an effective tenant engagement initiative (which has been tested in a pilot initiative) that results in an increase in waste reduction and diversion.
- b) **FACILITATORS' HANDBOOK FOR SOCIAL HOUSING PROVIDERS:** The handbook is designed for facilitators who will be directly implementing the *livegreen* TES initiative with a focus on waste reduction and diversion with tenants of social housing. This handbook includes social marketing materials, educational resources, and a step-by-step guide for planning interactive activity modules and tenant engagement activities.
- c) **COMMUNICATIONS MATERIALS:** These documents have been designed as a tool to help achieve increased waste reduction and diversion.

The activities described in this guide were drawn from a pilot program conducted at four BC Housing sites in the Lower Mainland. The characteristics of each site and its tenant population are described in this Guide. Housing providers can use the toolkit to apply the steps and strategies from similar tenant profiles to their own sites. Housing providers serving a very different tenant profile may need to develop their own approach, but our hope is that this toolkit will serve as a useful reference.

## LIVEGREEN TENANT ENGAGEMENT ON SUSTAINABILITY – FOCUS ON WASTE REDUCTION AND DIVERSION

### GUIDE FOR SOCIAL HOUSING PROVIDERS

This guide consists of two main sections. We recommend that these sections be reviewed in their entirety before initiating a *livegreen* TES initiative:

**PART I: Overview of *livegreen* TES:** This section introduces information on the goals of *livegreen* Tenant Engagement on Sustainability. It includes information on the foundation for this guide, why this initiative is important, and the overall goals. It also discusses the tenant engagement approach taken during the pilot and why a similar approach should be considered when implementing your own tenant engagement program.

**PART II: Management and Resources:** This section describes how to begin this initiative, including what resources are required. It describes how to assess potential barriers and benefits to waste reduction and diversion behaviours, ways to engage staff and tenants, and provides a high level overview of engagement strategies to use.

A *livegreen* TES Facilitators' Handbook for Social Housing Providers has been developed to accompany this Guide. This handbook is meant for site staff who will be 'on the ground' engaging with tenants, to equip them with methods and resources for supporting behavioural change and designing *livegreen* TES engagement activities.

## PART I: OVERVIEW OF *LIVEGREEN* TENANT ENGAGEMENT ON SUSTAINABILITY

### 1. INTRODUCTION

This guide is based on a pilot initiative conducted by Dillon Consulting Limited (Dillon) at four BC Housing sites, referred to as the *livegreen* TES — Tenant Engagement on Sustainability (TES) focusing on Waste Reduction and Diversion initiatives. The document builds on the previous publication TES – Focus on Energy Conservation (published in 2012) developed for BC Housing by BC Healthy Communities and is available from BC Housing. The TES Energy Conservation Guide focuses on the reduction of energy use and related utility costs while engaging tenants and strengthening community development.

The *livegreen* TES focusing on Waste Reduction and Diversion is also built off of Dillon's extensive experience in recycling and waste diversion strategies. This includes strategy implementation, stakeholder engagement (including building management and residents of multi-family buildings), Community Based Social Marketing (CBSM) and knowledge of best practices from other residential programs focusing on waste reduction and diversion.

#### 1.1 Objectives of *livegreen* TES

In 2010, BC Housing established a sustainability policy to guide decision making and planning. Since making the formal commitment to sustainability through the launch of the *livegreen* Sustainability Plan, BC Housing has made conscious efforts to communicate environmental and social benefits to clients and the broader community while reducing BC Housing's environmental footprint.

#### 1.2 Background of the *livegreen* TES Pilot Buildings

BC Housing's sustainability pilot initiatives target such topics as energy conservation and waste diversion. Not only are these initiatives important contributors in reducing BC Housing's environmental footprint, they also have many other benefits to social housing providers. Other benefits of implementing sustainability initiatives include:

- Savings in long term utility costs;
- Creating healthy communities by providing high quality and secure living environments;
- Strengthening communities by engaging tenants in environmental initiatives; and
- Leading the way for sustainability initiatives in the social housing and residential development community.

Following the success of the TES *livegreen* energy pilot initiative, the TES *livegreen* pilot with a focus on waste diversion was implemented as a similar initiative under the *livegreen* Sustainability Plan. Another driver of this waste diversion initiative for sites located within Metro Vancouver was the anticipation of the Regional Organics Ban (effective January 2015). As a result of this ban, food waste in the garbage stream will be considered contamination at waste facilities within the region. Incoming loads of garbage

at Metro Vancouver's waste facilities that contain organics above a certain threshold could result in a 50% surcharge on the fees paid to dispose of this waste. For social housing providers this could mean increased waste disposal fees.

Many jurisdictions, both locally and globally, are moving towards zero waste initiatives. These include introducing regulatory measures such as banning organics from landfills and adopting aggressive diversion targets. Organics is a waste stream that can be diverted and often comprises a substantial amount of municipal solid waste. Diverting organic waste and other recyclable materials from landfills is important as landfill space is finite and such materials can be used to create other resources such as compost and liquid natural gas. Waste diversion is also a topic in which tenants can easily be engaged since most people already participate (to some degree) in a recycling program.

This guide was developed from the lessons learned in a social housing residential waste reduction and diversion pilot program. The *livegreen* TES pilot program took place during 2014 and 2015, with four social housing sites managed by BC Housing, located in the Lower Mainland. The purpose of this pilot program was to design, implement, and evaluate strategies that engaged the tenant population on sustainability, focusing on increased waste reduction and diversion of waste from going to landfills.

The characteristics of the pilot program sites are provided here so that housing providers can compare the building and tenant characteristics with their own housing types ([Table 1](#)).

Some important characteristics of the pilot program sites are:

- Three out of the four sites have a common indoor space where tenants can meet. The site without a common indoor space used the site's outdoor grounds for engagement activities.
- The level of staff support provided varied across the four sites, from part-time to no staff support.
- Three of the four sites had a program in place to collect food scraps and other organic waste. One site did not initially; however, a program was set up during the pilot program.



Table 1: Characteristics of Pilot Site

Characteristics	Pilot Site #1	Pilot Site #2	Pilot Site #3	Pilot Site #4
Year built	1973 (renovations in 2010)	Between 1970 and 1975	Between 1970 and 1975	~1985
# of Units	127	176	138	98
Number of Floors	Townhouses	2 Towers, 7 floors each	Townhouses	1 Tower, 16 floors
Adult / Family	Families	Adults	Families	Adults
On-site tenant support	Part time	No	No	Part time
Common space for activities	Yes	Yes	Outdoor space only	Yes
Percentage of tenants who regularly participate in existing programming	<50	<10	<5	<10
Tenant population characteristics	<ul style="list-style-type: none"> <li>Physical and mental health barriers</li> <li>Some multiculturalism</li> <li>High number of children</li> </ul>	<ul style="list-style-type: none"> <li>Multicultural site</li> <li>Physical and mental health barriers</li> <li>Mainly seniors</li> </ul>	<ul style="list-style-type: none"> <li>Highly multicultural site</li> <li>Low-income families</li> <li>Some physical/mental health barriers</li> </ul>	<ul style="list-style-type: none"> <li>Physical and mental health barriers</li> <li>Some multiculturalism</li> </ul>
Common languages and/or cultural groups	<ul style="list-style-type: none"> <li>High number of Arabic and Somali refugees</li> </ul>	<ul style="list-style-type: none"> <li>English (77%), followed by Mandarin (10%)</li> </ul>	<ul style="list-style-type: none"> <li>English (66%), followed by Mandarin (6%)</li> <li>This site had the greatest language diversity of pilot sites</li> </ul>	<ul style="list-style-type: none"> <li>English is the most common language spoken (90%)</li> <li>This site had the least diversity in languages</li> </ul>
Pre pilot program waste programs in place	<ul style="list-style-type: none"> <li>Garbage: Containers located in outdoor parking areas</li> <li>Recycling: Carts located in parking areas (multi-stream)</li> <li>Organics: Carts located in parking areas and kitchen catchers are provided to tenants. This program was implemented three months before the pilot program (April 2014).</li> <li>Waste Haulers: Garbage and recycling collection – private collection; Organics collection – municipal collection</li> </ul>	<ul style="list-style-type: none"> <li>Garbage: Garbage chute on each floor with container located in garbage room at rear of each tower.</li> <li>Recycling: Mid-size carts located at rear of property (multi-stream)</li> <li>Organics: No program in place. Program was implemented during pilot (January 2015)</li> <li>Waste Haulers: Garbage – private collection; Recycling and organics – municipal collection</li> </ul>	<ul style="list-style-type: none"> <li>Garbage: large garbage containers in common areas outdoors</li> <li>Recycling: Individual blue boxes for mixed containers, grey bins for glass, and bags for mixed paper. Tenants are responsible for setting out their recycling at the curb</li> <li>Organics: Each tenant has their own cart that they are responsible to bring to the curb. Kitchen catchers are also provided to tenants. Program roll-out was approximately a year before pilot program (June or July 2013)</li> <li>Waste Haulers: Garbage – private collection; Recycling and organics – municipal collection</li> </ul>	<ul style="list-style-type: none"> <li>Garbage: Containers are located outside at the rear of the property</li> <li>Recycling: Multi-stream recycling containers are located outside at the rear of the property</li> <li>Organics: Carts are located onsite in the same area as the garbage. Kitchen catchers are also provided to tenants. This program was implemented approximately a year before the pilot program (September 2013)</li> <li>Waste Haulers: Garbage – private collection; Recycling and organics – municipal collection</li> </ul>
Pre pilot program - other waste reduction and diversion activities	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Many tenants donate used clothing items and other items they no longer use (culture of exchange onsite)</li> </ul>	<ul style="list-style-type: none"> <li>Building manager provides constant reminders, education, and instructions regarding recycling</li> </ul>

As part of the *livegreen* pilot, background information from each site was reviewed and included the following documents:

- Reports on tenant engagement plans and strategies from BC Housing’s existing database;
- Background information from surveys, focus groups, and informational interviews with the tenants within the four buildings; and
- Existing waste audit data (follow-up waste audits were also conducted at each site upon completion of the pilot program).

## 2. THE LIVEGREEN TES TENANT ENGAGEMENT APPROACH

### 2.1 Community-Based Social Marketing

Research indicates that community-based social marketing (CBSM) can be highly effective in influencing behavioural change.<sup>1</sup> CBSM is based upon research in the social sciences that demonstrates that behavioural change is most effectively achieved through initiatives delivered at the community level which focus on removing barriers to an activity while simultaneously enhancing the benefits. A complete CBSM strategy outlines a five-step process for developing and delivering behavioural change initiatives based on the principles of social psychology.

Steps towards sustainable goals and a more sustainable way of life require a collective change. CBSM is a proven strategy used to effectively communicate new behaviours or habits required to assist in the needed collective change. This strategy aims to provide a more personal method of communication to ensure that information is correctly given and received to a targeted audience. This information can be tailored to the community and better meet individual needs, while making strides to adopt new behaviours that will support sustainable initiatives.

**1. SELECTING BEHAVIOURS:** The first step in a CBSM strategy is to identify a small number of specific behaviours to promote. For example, the goal of promoting “diverting waste from landfill” is a very broad goal. Selecting specific behaviours such as participating in a food scraps collection program and promoting proper sorting of recyclables allows for a more focused program to be developed in order to reach your goals. Also, consider the potential impacts of various waste reduction and diversion behaviours. In the *livegreen* TES pilot, behaviours were selected based on the highest level of impact and greatest probability that tenants would/could change these behaviours.

**2. IDENTIFYING BARRIERS AND BENEFITS TO A SPECIFIC BEHAVIOUR:** Research indicates that each form of sustainable behaviour has its own set of barriers and benefits. Barriers to a sustainable behaviour may be internal to an individual, such as lack of knowledge, lack of motivation or unsupportive attitude. However, barriers may arise outside the individual, as in changes that need to be made in order for the behaviour to be more affordable or convenient, such as providing an organic collection program to your building. Examples of barriers related to recycling include tenants not knowing how to properly sort their waste, not being able to access their sorting area, or the recycling area is outside while a garbage chute is conveniently located on their floor. Often, these barriers can be perceived by an individual and may be a result of personal feelings or opinions.

When you are figuring out your goals to improve the waste management programs in your building, it is important to get information on your fellow residents: what makes them want or not want to recycle? The reasons for not wanting to recycle will become your list of barriers, while the reasons for wanting to recycle will become your benefits. Some common barriers and benefits related to recycling are listed in Table 2.

<sup>1</sup> McKenzie-Mohr, D. (2011). *Fostering Sustainable Behaviour*. Gabriola Island, BC: New Society Publishers

Table 2: Barriers and Benefits to Recycling

Barriers (why they do not want to recycle)	Benefits (why they want to recycle)
<ul style="list-style-type: none"> <li>• I don't know how to separate my waste</li> <li>• I don't know where to put the waste</li> <li>• I can't get to the sorting area</li> <li>• The recycling area is outside and the garbage chute is on my floor</li> <li>• The recycling bins are always full</li> <li>• I don't have the room to sort in my unit</li> <li>• It all goes to landfill anyways</li> </ul>	<ul style="list-style-type: none"> <li>• I know what to recycle</li> <li>• It's easy!</li> <li>• I get money back for returning containers</li> <li>• Saves landfill space</li> <li>• Saves our natural resources</li> <li>• It's good for the environment</li> <li>• We all save money by having less garbage to send to landfill</li> </ul>

Your goals to engage tenants and improve the programs in your building should promote the benefits and find ways to get rid of the barriers. By knowing the specific barriers and benefits of your tenants, you will be able to tailor your communication strategy to address their unique concerns and personal motivations.

**3. DEVELOPING AND PILOTING A STRATEGY TO OVERCOME BARRIERS:** Strategies to remove the barriers and increase the benefits are often effective in bringing about the collective change needed to support sustainable initiatives. An effective CBSM strategy uses different tools and tactics to remove barriers to the behaviour being promoted (e.g., having recycling and garbage collection areas in the same location makes it just as convenient to recycle as to throw out garbage). A pilot program allows the strategy to be tested, evaluated, and then refined prior to being broadly implemented across the community. There are lots of different tools you can use to motivate tenants to recycle more in your building. Some may be more or less effective or appropriate given the different types of people that live in your building and the barriers and benefits you have identified. Use some, many, or all to develop your unique communication strategy:

- Prompts
- Norms
- Social Diffusion
- Communication
- Incentives
- Commitments

These tools are described in more detail later on in this document.

**4. EVALUATING THE INITIATIVE:** CBSM stresses the importance of evaluating implemented initiatives. Further, it emphasizes the direct measurement of behaviours, barriers/benefits, and outcomes (in this case, increased waste reduction and diversion). Continue to evaluate and refine your strategy until you are able to change the behaviour before you implement across a community.

**5. IMPLEMENTING THE STRATEGY ACROSS THE COMMUNITY:** When a pilot program has demonstrated that a behavioural change can be implemented effectively, it can be implemented across the community. Continue with ongoing evaluation to determine if any changes are required.

Beyond these steps, there are a number of tools that are successful in supporting behaviour change. These tools are described in more detail in Part II of this guide, and also in the Facilitators' Handbook.

The pilot program approach was based on working with existing community development tenant programs, collaboration with community developers and the site staff and collaboration with service providers (municipalities and/or haulers). This guide shares the practical steps, strategies, outcomes, and lessons learned from the pilot program. The amount of time (planning and coordinating) and resources (staffing and funding) for each housing site are unique; therefore, the design and strategies of the pilot program can be adapted to the context of your community and building.

## PART II: LIVEGREEN TES INITIATIVE MANAGEMENT AND RESOURCES

This section provides a description of how to initiate *livegreen* TES on your housing site, including what capacities and resources are required. It outlines how to identify barriers and determine benefits of the targeted behaviour, ways to begin engaging staff and tenants in the initiative, and provides a high level map of engagement strategies to use.

*Note:* the *livegreen* TES Toolkit also includes a Facilitators' Handbook for use by site staff who directly engage with tenants. The Handbook includes descriptions of activities and resources that can be most easily implemented once the overall engagement objectives and framework have been set.

### 1. GETTING STARTED

Before you begin a *livegreen* TES initiative at your housing site, take a moment to run through this quick checklist to ensure that you are setting yourself up for success:

- **Commitment and capacity of site staff:** Support and buy-in from site staff and building managers is critical for the success of the initiative. Since the site staff and building manager will most likely maintain the program and deal directly with tenants, it is important that staff feel included in the decision and supportive of the program. If they are supportive of the program they will also be good role models for tenants if they see site staff involved and participating in the newly implemented initiative.
- **Develop objectives, desired outcomes, and indicators of success:** It is important to develop your objectives first so you know what you are working towards (e.g., Do you want to implement tenant engagement initiatives to reduce garbage disposal costs? Do you want to develop support systems to ensure the program carries on effectively long after it is implemented?). Also, think about the desired outcome of the initiatives. For example, do you want your tenants to feel that recycling is easy to do? Once you have identified the desired objectives and outcomes of your initiative you will be able to evaluate and measure the success of the program. There are many ways to evaluate the success of an outreach program. Some of these ways include: attendance at an event, comparison in the amount of garbage and recyclables in containers, and tenant feedback.
- **Review of existing programs onsite:** Assess opportunities for how *livegreen* can be integrated into existing successful tenant initiatives and activities. For example if there are youth support programs onsite you could facilitate a sustainability themed event night involving waste diversion games or screen a film with an environmental message. Another example could include incorporating sustainability themed crafts that tie into an annual seasonal event.
- **Building spaces and systems:** You will need access to a communal indoor space to hold tenant engagement activities. Preferably the space will be onsite (indoors or outdoors) as

- this is the most convenient option for tenants (lounges or club houses work well for these types of activities). If you cannot gain access to a space onsite, a nearby community space is another option. However, factors such as the weather and time of year will have to be factored into this decision. Inclement weather may lower the attendance at your event.
- **Research existing waste reduction and diversion programs:** What existing waste collection programs are on site and how effectively are they working? If you want to implement an organics program – do you know how to do so? Connect with your local municipality first to see what information they have (if any) and what collection program options are available to your building.
  - **Know your tenants:** Understanding the characteristics of your tenants will contribute to the success of your program. Knowing whether the site consists of mainly families with young kids, or older youth, or adults will help you choose what kinds of activities you will choose to implement at an event. Awareness of the main languages spoken at the site will help you identify whether or not a translator or translated material is necessary. Conducting a barrier survey with tenants can help you identify commonly perceived barriers at a given site (whether they are actual or perceived by those residing there). Through the efforts of this survey you gain insight into how tenants are thinking about these issues; some may have the perception that they are inconvenient, while others may consider them enriching and productive.
  - **Assess staffing resources:** Does your staff have the capacity to help carry out tenant engagement activities or will some or all of it have to be contracted out? It is also helpful to identify any existing community partnerships you can leverage for your program to lean on resources that already exist.
  - **Assess your budget:** Think about whether you will have to purchase items to run games or purchase food. You may want to think about applying for donations for food and prizes if your budget is limited. Additional information on what might be needed for a budget is included in the Facilitator's Guide.

## 2. SELECTING BEHAVIOURS FOR WASTE REDUCTION AND DIVERSION

There are a number of behaviours that can lead to increased waste reduction and diversion such as participating in an organics diversion program, finding new uses for old items, and the proper sorting of recyclables. One of the first steps in designing a *livegreen* TES initiative for your housing site will be to target waste reduction and diversion behaviours that will have a high impact and high probability of people engaging in that activity. For example, encouraging tenants to dispose of their food scraps and other organic waste into a separate cart can significantly reduce the amount of garbage set out for collection as organics can make up over 40% of household waste. The probability of this behaviour will greatly depend on the specific tenant population and site. For example, tenants with very high barriers such as drug addiction and mental or physical disability will be less likely to engage effectively in this behaviour than tenants without such barriers.

Knowledge of your tenants and the review of background information for your site will help you determine the behaviour(s) to target. For example, a targeted behaviour could be to increase participation in the recycling program. To understand why participation is low, a feedback and information session could be held to hear from tenants what are the barriers to participating, to understand the complaints and frustrations (*e.g.*, recycling carts are always full and overflowing, moving recycling closer to the building or indoors would make it easier, etc.), and to inform tenants on how to participate effectively. If available, reviewing and communicating waste audit information is also helpful in identifying which waste streams have contaminants and to also identify materials in the garbage that could be diverted.

Specific behaviours targeted in the *livegreen* TES pilot program and strategies to target changes to these behaviours included the following:

- Participation in an organics program – Barriers to participation were identified and removed (such as coordinating the collection of recyclables and organics on the same day to decrease confusion over pick-up). An organics program was also implemented at one site that previously did not participate in organics diversion.
- Proper sorting of recyclables – Information discussions, booths, and/or waste diversion related games were present at each of the events at each pilot site in an effort to increase waste diversion at each site.
- Reuse of common household items – Craft stations with items which would otherwise be destined for the landfill were effective in teaching children the importance of finding multiple uses for various types of items found throughout their homes.



### 3. IDENTIFYING WASTE REDUCTION AND DIVERSION BARRIERS

#### 3.1 Program Planning Surveys

When implementing strategies for sustainability you will find that there are some that are easy to implement and others that are more challenging. They can be challenging for different people, and in order for the program to have long-lasting success, barriers must be addressed and overcome, and the benefits clearly understood

To start with, some research should be completed to understand potential barriers. We recommend that you complete the *Residential Barrier Survey* (Appendix A) with a number of tenants in your building. This survey helps to identify specific barriers that tenants are facing as well as identifying positive recycling behaviours from tenants who actively participate in waste diversion. Gaining insight into what works well for the tenants who do recycle can help you provide tips or suggestions for tenants who do not recycle. When possible, include any additional comments to supplement answers.

To assist in determining challenges and barriers at your multi-family building a *Waste Collection Survey* (Appendix B) has been prepared for you. This should be completed prior to completing any engagement activities.

#### 3.2 Common Challenges and Solutions at Multi-Family Buildings

Even though each housing site and community will feature its own unique qualities, we expect that many buildings will experience similar behaviours for waste reduction and diversion. A number of common challenges and solutions at multi-family buildings are outlined in Table 3. Tips for improving organic and recycling programs are included in Appendix C.

Table 3: Common Challenges and Solution at Multi-Family Buildings

Common Challenges	Common Solutions
<ul style="list-style-type: none"> <li>• Inconvenience – some buildings store recyclables, organics and/or garbage at different locations within the building complex and one program may be easier to access than the others (e.g., garbage chute on each floor but outdoor area for recycling and organics).</li> <li>• Infrastructure – some complexes have designated storage areas that have space constraints (e.g., parking stalls or centralized waste collection room/area either above ground or within underground parkades for storing waste containers).</li> <li>• Temporary tenants – People that live in apartments and condos tend to move more than people that live in houses. Waste collection programs in each building can be different so it takes some time for tenants to learn how to properly manage their waste.</li> <li>• Different cultures and/or languages – Some tenants may not have recycled in their home countries or may not understand posters and information written in English.</li> <li>• Secrecy – Neighbours may not know if each tenant recycles or separates organics regularly compared to single-family neighbourhoods where you can see which houses are setting out different waste containers.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and come up with ways to make it easier for tenants to participate in organics and recycling collection programs by observing how programs are working and speaking with tenants.</li> <li>• Designate centralized location within the building complex so that there is a one-stop area for all waste materials.</li> <li>• Work with property management/Strata board and janitorial staff to identify and improve waste storage areas.</li> <li>• Promote waste reduction to help reduce the amount of garbage generated in your building by making organics diversion and recycling easier for tenants. This may require decreasing the size of your garbage dumpster to create more space in designated waste storage area which will also save the building money by reducing disposal fees.</li> <li>• Deliver educational materials to new tenants of the building.</li> <li>• Put large and updated signs on and near the recycling carts that use images to explain what can and cannot be recycled. Ensure that signs are laminated or protected from elements and posted in well-lit areas.</li> <li>• Stay informed of changes to regional/municipal programs (e.g., sign up for email distribution lists).</li> <li>• Be available or set up a way to answer questions about waste management.</li> <li>• Build a sense of community in your building.</li> </ul>

## 4. DEVELOPING AND IMPLEMENTING THE TENANT ENGAGEMENT STRATEGY

The previous sections provided direction on how to select the targeted behaviour(s) and how to identify potential barriers and benefits to achieving the behaviour(s). This section describes the strategies that were designed and used in the *livegreen* pilot initiative to provide you with ideas on what you can do. However, note that each tenant population and site are different and most likely you will need to adapt and enhance these strategies to meet the unique needs and capacities of your housing site. Throughout the *livegreen* pilot program, we designed engaging activities that aimed to strengthen relationships, build confidence, and encourage having fun. Activities included facilitated games, interactive crafts and colouring sheets, watching sustainability themed films, education sessions, and neighbourhood block parties. The Facilitators' Handbook includes detailed descriptions of these activities, and instructions on how to implement them on any housing site.

### Strategy 1: *Raise Awareness*

The following activities can be used to create awareness of the initiative:

- Educational posters that display which items are and are not acceptable in a particular waste collection program;
- Information sessions;
- Community events (block parties and movie screenings);
- Facilitated games such as waste bingo or a waste sorting guessing game; and
- Communicating with the staff team.

Keep the branding of all your outreach material consistent so that tenants will recognize the *livegreen* campaign. The *livegreen* brand was used throughout the pilot program and is now recognizable among tenants. An example of this is BC Housing's *livegreen* mascot Sparkie (Figure 1), who was incorporated into the promotional and educational materials used throughout the pilot (these materials can be found in the appendices of this guide). Along with branding, it is also important to consider how you will promote your events and education sessions. Placing posters in common and high traffic areas (e.g., elevators, mail room, front entrance, and on communal posting boards) is a great way to ensure your outreach materials are visible. Personally handing out door-to-door invitations to tenants is a great way to encourage people to attend.

Figure 1: BC Housing's *livegreen* mascot Sparkie



Effective communication will play a large role in allowing a clear understanding of the behaviour that requires change. When preparing your communication materials such as posters, pamphlets and surveys, try to cut down on writing and use more pictures and images to help get your message across. Make sure the font type and size are readable and keep in mind that people may not have time to read

long messages in an elevator or mail room. You may consider getting the message translated into other languages that are common in your building.

Because your building is full of different people you need to find different ways to engage with them. Some might respond better to talking directly with them. Others might prefer getting a printed copy of information that they can put on their fridge. Either way, it is good to keep whatever you are doing as simple as possible and change it up to cater to all the different communication needs. If there is too much information, it might cause people to feel overwhelmed and prevent them from participating in recycling and composting programs.

*Tip: Use Google Translate to assist with translating your communication materials.*

*<https://translate.google.ca/>. If you know someone who speaks the language that you are trying to translate into, have them read the educational material to check it over.*

Things to remember when communicating with tenants:

- Use captivating information
- Know your audience and craft your message for them
- Make your message easy to remember (e.g., Bring Your Own Bag – BYOB)
- Use a credible source for provided information
- Provide personal or community goals/targets
- Provide feedback – let tenants know the effectiveness of their actions, provide updates

### Strategy 2: Prompts and Norming

**Prompts:** Numerous behaviours that support sustainability require one main trait: remembering! The use of prompts help to remind people of the action required to support the sustainable behaviour. An example that is commonly seen now is in grocery store parking lots that have signs that say “don’t forget to bring your reusable bags!” For the TES pilot program, signage was provided by municipalities to some of the pilot program sites either in the form of posters to hang in common garbage areas or stickers attached to the organics cart that act as a reminder of what can and cannot go into the cart.

**Norms:** “Norming” guides how we should behave. If we observe members of our community acting sustainably, we are more likely to do the same. At one pilot program site, tenants roll their organics carts out to the curb for collection. Tenants at this site received stickers which incorporated the *livegreen* mascot design with a blank space for their unit number. They were instructed to place this sticker on their green cart to not only identify their own carts, but to also show they participated in organics diversion in their complex.

### Strategy 3: Personal Commitments

When people make a verbal or written commitment to a behaviour they are more likely to follow through with that behaviour. When possible ask for a commitment (written is stronger than verbal) for tenants to follow through with the desired behaviour. Directly asking tenants to commit to cutting down their waste production can be very effective. For example, in the pilot program commitment forms were signed by adults attending an event in order to encourage the correct use of the waste collection system in their building. The pledges were written out by each participant and taken home to serve as a

reminder of their commitment. Children also participated in a commitment related activity by writing a pledge about an action they would take to live a more sustainable life. To see the copy of the pledges used in the pilot refer to the *Facilitator's Handbook for Social Housing Providers*.

#### Strategy 4: Incentives

Providing an incentive can substantially impact a variety of sustainable activities including waste reduction, energy and water efficiency. If tenants can see that they will get something in return for doing the right thing, it can provide an incentive for people to reduce their waste production and act more sustainably.

Although providing incentives can be a great way to capture tenant's interest, it should not be used as the only tactic to motivate tenants. Promoting family friendly and community oriented themes at your event is another great way to draw people to a sustainability related gathering. Creating a sense of belonging, offering knowledge, and providing a space for tenants to get to know their neighbours can create a strong sense of intrinsic motivation towards participating in environmental initiatives.

Free food (whether it was light refreshments or a more substantial meal) was provided throughout the pilot program as an incentive at every event to encourage attendance. This was also communicated on all material promoting the event including posters and invitations. Many tenants commented that this was one of the incentives that drew them to the event. Food was either bought or sought out through donations from local stores and supermarkets. Gathering around food can also be seen as a social incentive as there is the encouragement to interact with others and the experience of sharing food.

Prizes were also handed out at the end of each event to encourage tenants to stay until the event was finished. For adults, prizes included gift cards, healthy recipe books, gift baskets, and potted flowers. Adults could be entered into a draw by filling out a feedback survey and handing it back to the facilitator who would then enter their name into the draw. Children who attended an event were given small prizes such as stickers, erasers, or pencils once they completed all the activities at the event.

#### Strategy 5: Social Diffusion

Note that this strategy was not used during the *livegreen* TES pilot focusing on waste reduction and diversion; however, it is an additional strategy used in CBSM. When leaders or a group in a community adopt a behaviour it influences others to adopt the same behaviour. If you are a leader within your building/community, you have a unique ability to help affect positive change. An example of this is when a well-respected and well-liked entertainer states the importance of composting and their dedication to this behaviour. As a result many adopt the behaviour and start composting because they trust and believe that what this person says and believes it is a correct and positive action.

### 4.1 Support Systems and Tools for Sustaining Continuous Tenant Engagement

While tenant engagement activities play an important role in educating tenants, the effectiveness of the messaging from these activities may become diluted and fade from tenant's memory over time. In lieu of fostering continuous long term tenant engagement, a document outlining "Tenant Engagement on Sustainability Focusing on Waste Reduction and Diversion: Support Systems and Plans to Sustain Tenant

Engagement” was developed. The goal of this framework was to continue to encourage and build sustainable behaviours within the four *livegreen* waste reduction and diversion pilot sites that can also be implemented at other social housing sites. Steps that you can take to encourage continuous tenant engagement are outlined below.

### Sustaining Engagement Programs

Sustainable behavioural change is most effectively attained through a framework that creates normative behaviours within the community. For example, the implementation of an organics collection program will not automatically result in the diversion of organics from the waste stream; therefore, normative behaviours towards waste diversion must be developed. In this example, to create the normative behaviours desired for waste reduction and diversion there should be a number of components to the framework. This includes:

- Education to support waste system changes;
- Continued reminders (prompts) of the desired waste diversion behaviours;
- Commitments from tenants to use the new organics collection program; and
- The creation of a community where participating in the organics collection program is a part of daily life.

The success of continued tenant engagement is dependent on a variety of factors; however, a network of partnerships reinforcing the social norm of waste diversion will compliment any continuous tenant engagement strategy. Key aspects of such a network are described in the subsections below and include the following:

- Building social capital;
- On-site staff support;
- Community partnerships; and
- Tenant involvement.

### Building Social Capital

When a neighbourhood has a high degree of social capital, there is a greater potential for action derived from those social networks and social structures. Social capital is a theory by which social norms, partnerships, and building and strengthening networks among people within a society help to shape social interactions. To encourage behavioural change through continued tenant engagement, the development of social capital within housing sites could greatly improve tenant participation and sustainable action. There is a connection between a community having high levels of social capital and demonstrating a strong concern for the environment.

Building a social capital network within social housing communities through strategic and continuous engagement is vital to the adoption of desired behavioural changes such as the waste diversion and reduction program. Steps to building social capital are described below:

1. Identify actions needed to address barriers to community participation on-site;
2. Evaluate existing social networks within housing sites to identify trusted networks and tenant connectivity points;
3. Encourage on-site staff and local partners to hold frequent community meetings and activities; and
4. Continuously provide support for securing funding and partnership options for social activities to take place on-site.

### On-Site Support Staff

On-site staff play an important role in creating a sustainable social capital network for tenants. On-site staff have direct contact with the tenants and have a better understanding of their day-to-day needs and the existing barriers to community participation. When on-site staff understand the sustainable message and feel supported in their actions, they are more likely to actively promote the desired behaviours throughout their housing site. If on-site staff are able to see the positive aspects of sustainable behaviours (such as cost savings on garbage disposal fees due to increased organics diversion and recycling) they are more likely to take the time to promote those behaviours within their housing site. Steps to create a support network for on-site staff are outlined below:

1. Develop a clear sustainability plan with tangible short and long-term goals to be shared with all housing sites.
2. Offer support for the implementation of the sustainability goals on a site specific basis.
3. Provide easily accessible resources for on-site staff to utilize (such as the toolkits developed as part of this series).
4. Ensure that on-site staff are connected through a shared network (*e.g.*, an informational email group, blog site, Facebook page).

### Community Partnerships

Community partnerships are an effective strategy for encouraging tenant involvement, building social capital, and providing access to additional resources. An example of community partnership is BC Housing's partnerships with organizations such as the Canadian Mental Health Association (CMHA). It is suggested that these types of relationships continue and other new partnerships be formed to support the desired continued tenant engagement. Partnerships with local municipalities and crown corporations could be another resource to assist with community inclusion and civic participation. Research and contact local organizations in your community that you feel could meaningfully contribute to the goals of your tenant engagement initiative. Inform them of the goals of your initiative and invite them to attend your outreach event or to be involved with on-site programs.

### Tenant Involvement

Creating partnerships between tenants is an important aspect of creating a sustainable social capital network. Providing tenants with opportunities to become involved in their housing site's sustainability goals encourages responsibility and allows tenants to contribute to their neighbourhood in a positive

way. Building social capital through tenant involvement in green initiatives ensures that tenants have the opportunity to become engaged. Involvement also promotes a sense of belonging through increased volunteerism. It has been shown that volunteerism increases physical and social health, lowers rates of depression, and increases a person's self-worth. A continuous tenant engagement strategy should provide opportunities for tenants to become involved in the greening of their community.

The platform in which tenants can become involved in their housing site's sustainability goals will be different from site to site. It is important to offer options of how tenants can become involved in different ways. Examples of these options include a Green Neighbours Program, a Green Youth Project, and Green Activities which are outlined below.

- Green Neighbours Program – Consists of tenants who are interested in assisting their community's sustainability initiatives. Participants would be responsible for ensuring that activities held within the housing site were being carried out in a sustainable manner. Participants would also be responsible for bringing any issues (such as waste contamination) to the attention of on-site staff. Creating a Green Neighbours Program would allow for environmentally conscientious tenants to connect with one another and encourage the development of environmentally focused social normative behaviours within the housing site. This model focusing on assisting with environmental initiatives could encourage tenants to lead by example without creating the tension associated with selecting one champion or team that other tenants may perceive as favoritism (this program differs from a formal Green Team where participants are in charge of developing sustainability initiatives in their housing site).
- Green Youth Project – Many BC Housing sites have tenants that are children and youth. Creating a project where youth can become more regularly involved with green issues in their community would serve to build social capital in younger BC Housing tenants. Green Youth participants could also provide a resource to assist with the implementation of sustainable initiatives and Green Activities. Providing youth with the opportunity to come together and positively contribute to their neighbourhood builds social cohesion between families living at the housing site. Collaborating with local outreach programs could provide the support needed to start-up and maintain a Green Youth Project. Utilizing materials created through the *livegreen* program could provide the educational support needed to initiate Green Youth goals and future focuses.
- Green Activities – holding green themed activities within housing sites will support the tenant engagement level and increase social cohesion through shared experiences. Green Activities could be partnered with existing projects operating onsite, or act as standalone activities to help with the housing site maintenance. Suggestions for Green Activities include:
  - Hold a property clean-up day: Encourage tenants to get together to pick-up waste in the common areas of the property, provide snacks and prizes to encourage participation. Ensure that all waste collected is properly sorted upon disposal.



- Schedule a springtime planting activity: Partner with a local business or foundation for the donation of plants, and work with existing garden maintenance companies to schedule a “community planting” day. This type of activity encourages tenants to take part in beautifying their community which promotes community stewardship. Provide snacks and prizes as encouragement.
- Plan an environmental movie night: Encourage environmental education through showing an environmentally themed movie or documentary.
- Facilitate an environmentally themed activity: Partner with local sustainable organizations to hold an environmentally themed activity such as an educational workshop, a healthy eating class, a gardening class, or a waste diversion workshop.
- Celebrate Community Progress: Display the housing site’s sustainable progress in a common area such as the lobby of a building, in the elevator, or in a recreation room.

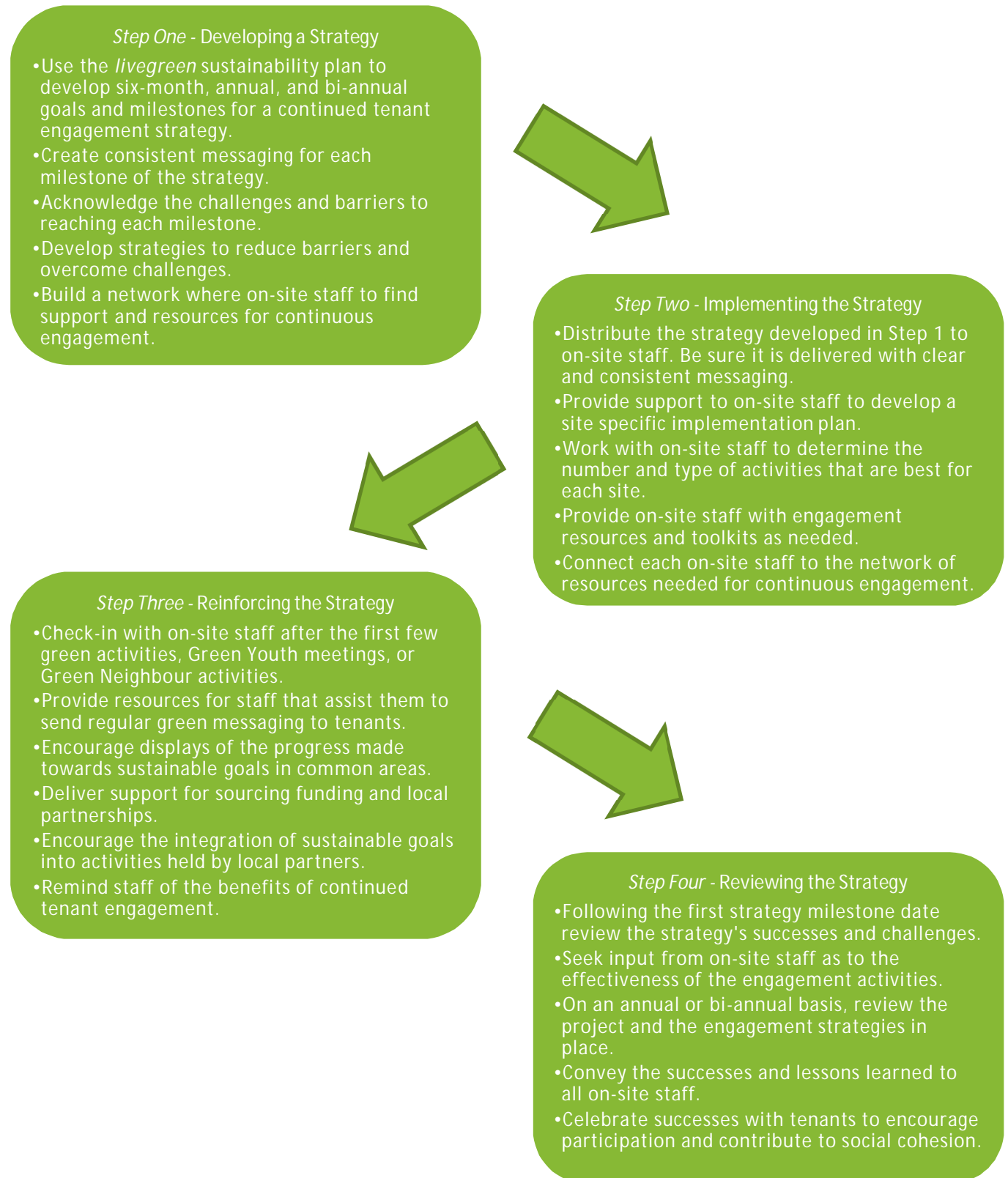
These activities could be facilitated with the assistance of existing partnerships, new engagement partners, and funding partners. Participants within the Green Neighbours Program and Green Youth Project could be a useful resource to assist with facilitating the activities.

In addition to creating green community partnerships, developing relationships with local business partners could be mutually beneficial to both the businesses and tenants. During the *livegreen* TES pilot program, many community partners were willing to donate materials such as gift cards and fresh food. These partners have the potential to become ongoing partners through commitments to sustained community donations. Many of the businesses that donated to the activity have programs that support charities and non-profit organizations on a regular basis.

#### Continuous Tenant Engagement Roadmap

Developing a continuous tenant engagement strategy is a challenging task; however, with a well-planned roadmap sustained engagement can be achieved. A continuous tenant engagement roadmap is outlined below, which has been developed to be a high-level guide to support you with developing and implementing your own programs.

### Continuous Tenant Engagement Roadmap



## 4.2 Setting up New Recycling Programs:

New recycling programs such as an organics collection programs or blue cart recycling, can assist with achieving goals and may go hand-in-hand with your waste reduction and diversion engagement activities. Some practical considerations for setting up a new recycling program include:

- Researching what resources are available with your local jurisdiction. Check to see if the jurisdiction provides the recycling service you are looking for or if you have to contract a private hauler. You can either phone the jurisdiction to speak directly with them or review their website (most jurisdictions list waste and recycling services that they offer on their website). It is important to note that jurisdictional waste services and programs and the items accepted into each waste collection program may vary among each jurisdiction.
- Seeking resources available for educational material for your new recycling program. You can contact your jurisdiction or hauler for educational materials to use in the development of your program. You can also check Metro Vancouver's websites to access free recycling signage and campaign posters: <http://www.metrovancouver.org/services/solid-waste/recycling-signage-campaigns/Pages/default.aspx>. Make sure when creating your own education materials that you check and double check that the information is correct.
- Informing tenants about the changes to the recycling program at their complex. This is best done by hosting an information session for tenants to explain the changes and answer any questions or concerns they may have. Instructions on how to plan and implement an education session can be found in the *Facilitator's Handbook for Social Housing Providers*.
- If you have the resources, schedule a survey to be conducted door-to-door a few months after the program begins in order to gauge how tenants are feeling about the program and to help address any barriers they have encountered. If there are existing tenant programs on-site then those scheduled times can be a great opportunity to collect quick feedback from tenants. Alternatively, a table could be set up in the lobby or central area and passer-by's could be requested to complete the survey. Examples of questions to ask the tenants include:
  - Are you regularly participating in the program? Why or why not?
  - Are you using your kitchen catcher? Why or why not?
  - Is the location of the containers convenient?
  - Have you had any issues with the building's containers?
  - Did you find the information package provided to you at the beginning of the program helpful?

### 4.3 Organics Program Implementation

Your site may be looking to implement an organics program which may be new to many of your tenants. The tips and tools in this section are specific to implementing and educating tenants on an organics program. Tenants should be provided with information prior to the program roll out.

#### Jurisdictional Background Review

Research whether the jurisdiction in which you reside provides an organics collection or if you have to contract a private hauler to provide collection.

#### On-Site Logistics

Think about how many carts you will need. Speak to your jurisdiction or hauler who will provide you with a communal organics cart (or multiple carts depending on the size of the building or complex). Tenants will dispose of the collected organics in the cart(s). Since the carts are in a communal space it is important to keep the area around the cart(s) clean to encourage use. Think about whether there is an on-site caretaker who will clean the carts, whether your jurisdiction offers cart cleaning with their collection service, or if you have to contract this service out. Tips on keeping the communal organics cart clean can be found in Appendix D. Placement of the carts is also important; if they are not easily accessible it is less likely that tenants will participate in organics diversion. Inform tenants of the implementation of an organics program.

After you determine whether your local jurisdiction or a private hauler can pick up the organics (and decide who will provide the service) and where your communal cart(s) will be placed, tenants will need to be informed of the new program. Talk to your hauler or jurisdiction to see what educational materials they have already. Informing tenants about implementing an organics program can be done by hosting an information session to explain the changes and answer tenant questions or concerns. Instructions on how to plan and implement an education session can be found in the *Facilitator's Handbook for Social Housing Providers*. Information sessions are also a great time to hand out kitchen catchers along with informational material (outlined below).

#### Obtaining Educational Material and Kitchen Catchers

In order to keep messaging consistent it is best to ask your local jurisdiction or private hauler (whoever is providing waste/garbage collection to the building) if they are able to provide informational materials and kitchen catchers (a container used by tenants residing in a unit to transfer organic waste from their unit to the communal cart). If they do not provide multi-family buildings with tools to implement an organics program then you can print information off of the jurisdictional website and obtain kitchen catchers through other means (*e.g.*, local hardware stores). However, you can also encourage tenants to reuse containers they most likely already have at home (such as ice cream buckets, large Tupperware containers) so that they do not have to purchase a kitchen catcher.

### Planning For Kitchen Catcher Distribution

The most effective way to inform tenants about the program and distribute kitchen catchers is through face-to-face contact. Even though an information session and door-to-door outreach may initially take more time, it may save time in the long run. Through these forms of outreach, tenants will be more informed of how the program works, where the new organics carts are located so that they can participate, and will be educated on acceptable and unacceptable items which will hopefully decrease contamination.

Instructions for distributing kitchen catchers through both these methods are provided in the *Facilitator's Handbook for Social Housing Providers*.

### Follow Up

Periodically monitor the organics cart(s) for contamination. Any common contaminants observed in the cart(s) can be incorporated into educational materials on-site that raise awareness regarding these specific items. This can be in the form of signage in common or garbage areas that serve as reminders of what can and cannot go into the organics cart.

If resources allow, you can also follow up with a survey that asks tenants whether they are having issues with the new program and ask for suggestions about how you may be able to address any further questions and concerns from tenants.

## 5. EVALUATION

Evaluating tenant engagement activities in terms of their ability to achieve the objectives was one of the main objectives of the *livegreen* pilot program. Feedback forms were collected at the end of each activity and the feedback was recorded into a database. An evaluation matrix was created to rank the overall effectiveness of each activity at the end of the pilot program. BC Housing also initiated a series of waste audits at each of the four sites when the pilot program was complete. The results from these audits will offer a quantitative analysis of the effectiveness of the outreach activities based on changes to diversion rates at each site. The following sections include information on how to measure the success of an activity and how to measure ongoing success (e.g., conducting waste audits).

### 5.1 Measuring Tenant Activity Success:

The following section contains information on how to evaluate the success of your event through providing examples of how events were evaluated throughout the pilot program.

#### 1. Conduct Surveys

In order to obtain feedback to evaluate the engagement activities, feedback forms were distributed near the end of each event and collected as soon as the participant completed them. Four feedback forms were developed for the following participants:

- Adults at complexes with a high number of families;
- Adults at complexes with only adults;
- Children; and
- Site staff.

Blank templates of each type of survey can be found in Appendix E. Feedback forms included question regarding the topics covered by the engagement activity as well as how the activity was planned and run. In most cases adults were able to complete a survey on their own. Facilitators asked adults who appeared to have difficulties reading or writing if they would like assistance with completing the survey. Children were not given a formal survey to complete. Instead, Facilitators asked them a few questions at the end of the activity. Feedback, observations, and number of participants for each engagement activity were documented by the Facilitators and incorporated into the analysis.

Incentives were also an important component of having adults participate and provide feedback. At the bottom of each feedback form was a slip where tenants could record their name and unit number which was then handed back to activity staff and entered into a draw to win a prize (mainly gift cards). Children were also given incentives in the form of small prizes such as pencils, stickers, and erasers. Children were able to collect a prize once they completed all the activities at the activity and answered a few questions about whether they had fun, what they liked, and what they disliked.

## 2. Select Evaluation Criteria

The responses from the feedback forms and other observations made during the activity were used to analyze and evaluate the effectiveness of each activity. Evaluation criteria were developed to analyze both the process and the outcome of the engagement activities. These criteria contain both qualitative and quantitative measures of success. The criteria used to complete the Facilitator's evaluation are identified in Table 4.

Table 4: Evaluation Criteria

Evaluation	Criteria
Process	<ul style="list-style-type: none"> <li>• Participation rate – Number of participants compared to number of possible participants (e.g., tenants at activity compared to total number of tenants at the site)</li> <li>• Quality of participation – The degree at which tenants are engaged in an activity</li> <li>• Representativeness – The level of how well or how accurately the sample of tenants that attended the event reflects the demographics at the particular site (e.g., ethnicity and age)</li> <li>• Continuity – The quality and consistency of an activity that does not stop or change over a period of time. This includes comparisons of attendance, weather, the day activity is held, the types of activities, and changes in staffing</li> <li>• Convenience – The ease or comfort of completing the process</li> <li>• Satisfaction – Fulfillment of the expectations of the participants</li> </ul>
Outcome	<ul style="list-style-type: none"> <li>• Social impact – Net effect of the activity on the community and well-being of tenants</li> <li>• Effect on tenants support – How well tenants agree with or approve of the activity</li> <li>• Cost effectiveness – Benefits and usage are worth the costs associated with planning and implementation</li> </ul>

## 3. Approach to the Analysis of Engagement Activities

For the purpose of this analysis, the criteria outlined in Table 4 were further broken down into sub-categories. This allowed the Facilitator to apply more specific criteria to the activities in order to create a consistent evaluation. A breakdown of the sub-categories is provided below (Table 5).

Table 5: Evaluation Criteria Sub-Category Breakdown

Evaluation	Criteria	Sub-Categories
Process	Participation rate	<ul style="list-style-type: none"> <li>Attendance</li> <li>Percentage of tenant population</li> </ul>
	Quality of participation	<ul style="list-style-type: none"> <li>Very good - high level of engagement</li> <li>Good - a mixture of tenants who felt engaged and some who did not feel as engaged in the activities</li> <li>Moderate - interest in the activities at the activity; however, with some barriers to engagement</li> </ul>
	Representativeness	<ul style="list-style-type: none"> <li>Tenant type typical of the site (either families or seniors)</li> <li>Ethnicity</li> </ul>
	Continuity	<ul style="list-style-type: none"> <li>Comparison of the attendance at each activity, weather, day of week, types of activities and staffing</li> </ul>
	Convenience	<ul style="list-style-type: none"> <li>Language (both spoken and written) - whether or not it was easy for participants to understand the information and fill out a survey</li> <li>Time of day - whether tenants worked or went to school</li> <li>Location - whether the location of the activity was easily accessible</li> </ul>
Outcome	Satisfaction	<ul style="list-style-type: none"> <li>Space size - whether the tenants felt comfortable in the space the activity was being held</li> <li>Feedback - based on feedback forms and anecdotal comments heard throughout the duration of the event</li> <li>Quality of information - whether tenants felt the information available at the activity was useful to them</li> <li>Staffing - whether tenants felt like there were a number of options in terms of activities, and that a staff member was available if they had a question/needed assistance during an activity</li> </ul>
	Social impact	<ul style="list-style-type: none"> <li>Tenant interaction - meeting new people (for both adults and children)</li> <li>Community partners in attendance - extending the sense of community beyond the site</li> </ul>
	Effect on tenant support	<ul style="list-style-type: none"> <li>Adults - whether adults were supportive of the project</li> <li>Children - whether children were supportive of the project</li> </ul>
	Cost effectiveness	<ul style="list-style-type: none"> <li>Start-up costs - materials for games, plates, cups, napkins, and information materials</li> <li>Donations - received in the form of food, gift cards, and other prizes</li> </ul>



#### 4. Analysis of Engagement Activities

A detailed evaluation based on the sub-categories of each criterion was analyzed and a matrix was created during the pilot program to illustrate these findings (Table 6 provides an example of a completed evaluation). A detailed comparison (with comments from all the activities included in each box) was also created. The criterion under each activity was also assigned a color code depending on the effectiveness of the activity (green = very good [highly effective], orange = good [effective], and red = moderate [not very effective]). You can use the criteria and matrix provided in this section to help you evaluate your event. Pick, choose, or alter the criteria to fit your event. A blank template of this event evaluation matrix is provided in Appendix F. Make sure to highlight areas for improvement along with highlighting your successes. Also include the results of this feedback from tenants and site staff into your analysis.

Table 6: Activity Evaluation Comparison Summary Chart

■ Very good ■ Good ■ Moderate

Criteria		Site	
		Building Name: ( __ units, tenant capacity__)	
Event		1	2
Date of Event			
Process	Participation Rate	<ul style="list-style-type: none"> <li>-80 attendees</li> <li>~17% of tenant capacity</li> </ul>	<ul style="list-style-type: none"> <li>40 attendees</li> <li>~8% of tenant capacity</li> </ul>
	Quality of participation	<ul style="list-style-type: none"> <li>Very good – there were a large number of staff to be able to engage a large turnout</li> </ul>	<ul style="list-style-type: none"> <li>Good – Adults were less willing to participate than the first event</li> </ul>
	Representativeness	<ul style="list-style-type: none"> <li>Mix of adults and children (families)</li> <li>Attendees were representative of demographic at site (age and race)</li> </ul>	<ul style="list-style-type: none"> <li>Mostly children</li> <li>Event targeted towards younger demographic (age and race)</li> </ul>
	Continuity	<ul style="list-style-type: none"> <li>Attendance was lower during the second event</li> <li>Event held at the same time period and on a weekday for both events</li> <li>Less staffing was available at second event (Other community partners were able to attend first event)</li> </ul>	
	Convenience	<ul style="list-style-type: none"> <li>Location of event was convenient (held outside at the Clubhouse onsite)</li> <li>This event was held in the afternoon after school/work</li> </ul>	<ul style="list-style-type: none"> <li>Location of event same as first event</li> <li>This event was held in the afternoon, a good time for families to attend (after school/work)</li> </ul>
	Satisfaction	<ul style="list-style-type: none"> <li>From the feedback received, both adults and children were happy with the number of activities at the event</li> <li>Adults were also happy with the information available to them</li> </ul>	<ul style="list-style-type: none"> <li>Feedback from the children at the event was that they enjoyed the activities</li> <li>Adults would have liked to see more activities aimed towards an older audience</li> </ul>

Criteria		Site	
		Building Name: ( __ units, tenant capacity__ )	
Event		1	2
Outcome	Social Impact	<ul style="list-style-type: none"> <li>There was positive interaction between adults and children</li> <li>Several community partners participated in this event, which added to the sense of community</li> </ul>	<ul style="list-style-type: none"> <li>More children than adults attended this event, and they were engaged with the activities related to waste diversion</li> </ul>
	Effect on Tenant Support	<ul style="list-style-type: none"> <li>Parents at the event were supportive of the different types of activities that allowed their children to learn about sustainability</li> <li>Children were also happy with the number of activities available to them and had fun learning while they played</li> </ul>	<ul style="list-style-type: none"> <li>The adults indicated that they were supportive of the theme of the event but would have liked to see more types of activities for their children</li> <li>The children at the event indicated they enjoyed the activities and asked if there would be more like this one</li> </ul>
	Cost Effectiveness	<ul style="list-style-type: none"> <li>A large donation for food (\$250) was received for this event</li> <li>The event was low cost because of the donations (~\$84)</li> </ul>	<ul style="list-style-type: none"> <li>This event was low cost (\$85)</li> <li>Children had fun creating crafts from materials which were reused from previous events</li> <li>The low cost of the activities allowed for more budget to spend on food and prizes</li> </ul>

### Ongoing Evaluation

Once your new recycling programs are implemented and/or all your outreach activities are complete, the best way to monitor your success is through waste audits. By conducting waste audits you are able to obtain quantitative data on the success of your program by knowing the percentage of recyclables and organics that are being diverted from the garbage and if there are still contaminants in the waste stream. The audit results will also help you to identify contaminants that are common in the site's various waste streams. This will allow you to target your education and signage to specifically address items that are placed in the wrong containers (*e.g.*, plastic bags in the compost cart) and what other items that can be diverted from the waste stream. You can contract a company out to conduct waste audits for you or you can carry out an audit yourself. Instructions for how to conduct a waste audit can be found in Appendix G. If you would like to contract out a waste audit, research which consulting companies or haulers in your area are able to provide this service. Another way you can continue to evaluate progress is through visual observations of contaminants in waste receptacles (periodic spot checks).

Note that the price of an audit depends on the scope of the audit (*e.g.*, the number of days to audit, the number of categories to sort the waste into). One site may cost between \$1,000 and \$5,000 for one day of auditing and the provision of a summary report.

## 6. OVERVIEW OF CHALLENGES AND OPPORTUNITIES FROM TES *LIVEGREEN* PILOT

Many lessons were learned throughout the *livegreen* TES pilot program. Both the successes and areas for improvement were documented upon the completion of each event and are outlined in the following section.

Benefits of the *livegreen* TES initiative include:

- Creating a sense of community within the site;
- Building and fostering partnerships with local community groups to further strengthen the sense of community at the site;
- Empowering tenants with the knowledge to live sustainably; and
- Providing opportunities for tenants to feel good about contributing to socially and environmentally positive initiatives.

Successes of the *livegreen* TES initiative:

Outreach strategies that worked well on a consistent basis across all activities included:

- **Attracting Children to the Activity:** Focusing activities to attract children at locations where families made up the majority of the tenant demographic at the site helped to draw adults to the activity since many of them would attend the activity with their family. Children can also educate their family members at home.
- **Incentives:**
  - Having food as an incentive to attend the activity attracted more people (more substantial food such as barbeques drew more attendees than activities advertised as having light refreshments);
  - Offering gift cards or other small prizes for adults who completed a feedback survey assisted with willingness to complete a feedback form; and
  - Having one station with prizes for children who completed all the activities at the activity was an effective way to obtain feedback from them and ask their opinion of the activity. Children were happy with small prizes such as pencils and erasers and did not need big prizes to encourage them to participate.
- **Door-to-Door Invitations:** Conducting door-to-door outreach a few days prior to an activity was more effective at generating a better turn out than going door-to-door a week ahead of time. This is due to tenants tending to forget the date of the activity if it was not held during the same week of the door-to-door invitations.

- Door-to-Door Reminders: Conducting a second round of door-to-door outreach on the same day as the event to remind tenants of an activity was a very effective way to increase the number of attendees who may have forgotten about the activity.
- Activity Scheduling: Scheduling activities consecutively after each other at multiple sites allowed for any leftover food from one activity to be used at the next activity. This assisted with saving costs. For activities that were not scheduled consecutively, any food left over at the end of the activity that would spoil before the next was given away to tenants.
- Low Cost Activities: The craft stations aimed towards families were a great success. Children were given items destined for the garbage and were very imaginative in creating crafts out of what they were given. It was not necessary to purchase any expensive materials for them to have fun.



Challenges of the *livegreen* TES initiative included:

- Language barriers encountered during outreach activities and events;
- Weather may have contributed to decreased attendance at one site where only an outdoor common area was available for use; and
- Existing tension among tenants (some tenants refused to participate in common areas because of existing personal issues with other tenants).

Lessons learned from the *livegreen* TES initiative:

- Donation Requests: Many grocery stores need at least two weeks and a letter of request in order to provide donations. The amount of time necessary to obtain donations varied at certain locations, even within the same chain. Donation requests should be undertaken as soon as possible when planning an activity.
- High Turnout of Children: At one activity (the WALL-E movie screening), having a large number of children in attendance was counterproductive as they have a tendency to become loud and excitable when there are not a variety of different activities for them to participate in. Possible recommendations include: splitting the children into different age groups and conducting more age specific activities, and involving the Youth Services staff or onsite staff (where available) in the early stages of planning to discuss what may or may not work at that site.

- **Outdoor Activities:** At activities held outdoors, many tenants suggested that if possible the activities should be held in the spring or summer when nicer weather would draw more people to the activity. The activities during this project were held in the winter (based on project schedule) and it was often cold, rainy and dark which could have deterred some people from attending. However, the location was in the middle of the complex where everyone could see, which could have attracted more people than if the activity had been held offsite.
- **Diverse Options:** Activities where there were many different options available with a large number of staff in attendance were the best attended. Developing partnerships with local community groups and having them participate at the activity increased tenant satisfaction as well as strengthened the sense of community at that location.
- **Staffed Activities:** Activities with a large number of staff and activities were often the most engaging; however, this came at a higher cost in both staff time and expenses.

## 7. GLOSSARY

**Barriers** – Barriers to a sustainable behaviour may be internal to an individual, such as lack of knowledge, lack of motivation or unsupportive attitude. However, barriers may arise outside the individual, as in changes that need to be made in order for the behaviour to be more affordable or convenient, such as providing an organic collection program to your building.

**Community Based Social Marketing (CBSM)** – CBSM is based on research in the social sciences that demonstrates that behavioural change is most effectively achieved through initiatives delivered at the community level. This focuses on removing barriers to an activity while simultaneously enhancing the benefits. A complete CBSM strategy outlines a five-step process for developing and delivering behavioural change initiatives based on the principles of social psychology.

**Contamination** – When recyclable items are placed in the incorrect recycling bin (*e.g.*, plastic bottles are placed in the mixed paper stream) or when non-recyclable items are mixed into a recycling stream (*e.g.*, Styrofoam meat trays are placed in the organics stream).

**Food waste/kitchen waste** – Food waste such as fruits, vegetables, meat, bones, egg shells, etc.

**Food soiled paper** – Paper soiled by food such as paper towels, paper bags, newspaper used to wrap food scraps, pizza boxes, parchment paper, wax paper, fast food wrappers, and paper plates.

**Kitchen catcher** – A container used by tenants residing in a unit to transfer organic waste from their unit to the communal cart.

**Landfill** – A place to dispose of waste material through the process of burying it and covering it with soil in a way that is isolated from the surrounding environment (such as rain, air, and groundwater).

**Organic waste** – In the context of recycling programs, organic waste refers to food waste and leaf and yard trimmings.

**Waste audit** – An analysis of the waste stream at a given site. A waste audit identifies the types of recyclable and non-recyclable materials generated on site. This can be used to determine what items can be diverted and what cannot.

**Waste diversion** – The reduction of waste through the acts of reducing, reusing, recycling, or composting.

**Waste facility** – A place authorized to manage waste which can include garbage, recycling, and organics.

**Waste hauler** – A company that is employed to collect and dispose of recycling or garbage at a site.

**Waste reduction** – The reduction of waste at its source which involves minimizing the amount of waste produced by society. This is achieved through better product design, promoting sustainable best practices, and changing societal behaviour regarding consumption.

## APPENDIX A

### *Residential Barrier Survey*





## Residential Barrier Survey

### Site Information

Date: \_\_\_\_\_ (MM/DD/YYYY); Time: \_\_\_\_\_

Person Contacted: \_\_\_\_\_

Number of Residents: \_\_\_\_\_

First Language: \_\_\_\_\_ Second language: \_\_\_\_\_

Length of residency: \_\_\_\_\_

Are you aware of how much waste you produce per week?    Y    N

(e.g., 2 bags of garbage, 1 bag recyclables, 1 container organics)

Do you sort your waste for recycling?    Y    N

### If You Do Not Recycle, Please Identify the Reason(s) that Hinder You from Recycling

- Lack of space to store recycling within unit
- Recycling bins are not conveniently located
- No place to recycle in building
- Garbage is more convenient
- I do not really know how
- Not interested (please explain further)
- Too time consuming (please explain further)

Is there anything that would make recycling easier for you to do?

### If You Recycle:

What do you use to store your recycling within your unit?

What do you use to transport the recyclables to the central containers?

Where do you sort your recyclables?

How often do you take your recyclables out to the central containers (check all that apply)?

- |                                                           |                                                         |
|-----------------------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> When my container is full        | <input type="checkbox"/> Once a week                    |
| <input type="checkbox"/> When I'm on my way out somewhere | <input type="checkbox"/> When I think of it             |
| <input type="checkbox"/> On collection day                | <input type="checkbox"/> Other (please explain further) |

### Additional Comments



## APPENDIX B

### *Waste Collection Survey*



## Waste Collection Survey

### Instructions:

1. Please complete this form prior to starting your waste diversion program.
2. Do a walkthrough with a building manager. This will take about 30-45 minutes to complete.
3. Make copies of the completed form for the program coordinator, building staff and yourself.

\*\* Note: Some information must be obtained from building management

### Assessment Information

Building Address: \_\_\_\_\_ Date: \_\_\_\_\_

Number of Floors: \_\_\_\_\_ Number of Units \_\_\_\_\_

Does the building have a tenant committee or green team in place? Y / N

### Questionnaire

How garbage is collected (chute, chute and bin, central bin only)

How recycling is collected (bin, toter)

Days garbage is collected \_\_\_\_\_

Days recycling is collected \_\_\_\_\_

Is there a designated centralized garbage, recycling and organics disposal area? Y / N

If no, what which waste streams are separated into different locations within your building complex?

Additional materials collected? Y / N

If Y – what are the materials?

### Observations

Tidy: Y / N

Well-lit: Y / N

Inviting: Y / N

ACCESSIBILITY G = Good, M = Moderate, P = Poor

Janitorial: G / M / P

Garbage Crews: G / M / P

Tenants: G / M / P

Other:

Concerns/Issues		
More pick up needed: Y / N	Sufficient space available: Y / N	Sufficient education: Y / N
High turnover rate: Y / N	Chute Clogs: Y / N	Odour: Y / N
Multi-lingual info: Y / N	High participation: Y / N	Infrastructural challenges: Y / N
Messy garbage area: Y / N	Messy recycling area: Y / N	
Unacceptable materials: Y / N If Y List:		
Materials placed in wrong containers: Y / N If Y List:		
Other:		
Promotion and Education		
Location of any education materials onsite:		
Elevators: Y / N	Sorting Station: Y / N	Mail boxes: Y / N
Beside bins: Y / N	Directly on bins: Y / N	
Other:		
Types of materials:		
Poster: Y / N	Signage: Y / N	Brochure: Y / N
Flyer: Y / N	Sticker: Y / N	
Suggestions for Improvement:		
More education for staff: Y / N	Increased tenant education: Y / N	
Increased onsite staff education: Y / N	Increased space for recycling: Y / N	
Prompts to remember to recycle: Y / N	Recycling kits for new tenants: Y / N	
Expansion of more types of materials: Y / N	Mandatory recycling bylaw awareness: Y / N	
Other:		
Photos Taken		
Collection route: Y / N	Garbage or recycling education: Y / N	
Garbage and recycling area: Y / N	Garbage and recycling bins: Y / N	
Additional Comments		

## APPENDIX C

*How to Improve Organics  
and Recycling Programs*





## How to Improve Organic and Recycling Programs

After you become familiar with your building, take a look at this sheet to give you ideas on how to fix some of the problems you have identified. Here are three common problems in apartment buildings and some potential solutions that might work in your building. Remember, you are the eyes and ears of your building's recycling program – consult with others and do what you think is best!

### Improvement #1 – Create a Better Garbage, Organics and Recycling Area

- Identify and come up with ways to make it easier for tenants to dispose of organics and recyclables.
- Designate centralized location within the building complex so that there is a one-stop disposal of all waste materials.
- Work with onsite staff to identify and improve or reconfigure waste storage areas;
- Consider reducing the size of your garbage bin if it is too large for your buildings garbage disposal needs.
- Promote waste reduction to help reduce the amount of garbage generated in your building by making organics diversion and recycling easier for tenants. This may result in decreasing the size of your garbage dumpster to create more space in designated waste storage area and save the building money on disposal fees.
- Put large and updated signs on and near the recycling carts that use images to explain what can and cannot be recycled. Ensure that signs are laminated or protected from elements and posted in well-lit areas.

### Improvement #2 – Educate Tenants in Different Ways

- Provide new tenants with a Waste Management kit in the welcome package.
- Put large and updated signs on and near the recycling carts and garbage bin that use images to explain what is accepted. Ensure that signs are laminated or protected from elements and posted in well-lit areas.
- Discuss new and existing recycling programs with building management.
- Ensure that any signage located outside is laminated to avoid damage.
- Provide signage that is clear and visual with large text at collection points on each floor.
- Improve and update the stickers that are directly on the recycling carts.
- Provide updated recycling and garbage guidelines to tenants to assist in the prevention of contamination issues and the proper sorting of materials.
- Provide concise information on how to recycle other materials (*e.g.*, bulky items, ewaste, medical waste, household hazardous waste).
- Provide information that use illustration to ensure we reach those with language barrier.

- Conduct door-to-door visits to educate tenants on waste reduction and diversion, and consider having volunteers to assist with translating.
- Explore alternative methods to engage onsite staff and tenants in recycling program.
- Ensure that waste diversion and reduction reminders are posted in common areas.
- Inform tenants of any changes to garbage, recycling and organics.
- Consider a training session for staff.
- Host information session(s) in high traffic areas, such as front lobby.

### Improvement #3 – Get Tenants to Separate and Place Recyclables and Organics Regularly

- Provide regular tips and tricks on organics and recycling to tenants.
- Consider constructing a rain shelter over waste areas or relocating outdoor waste areas to an indoor location.
- Offer aid to elderly tenants having difficulty transporting recyclables and organics down to the main collection bins.
- Consider collecting and returning refundable materials (e.g., bottles) and use cash for social events in the building.
- Provide building with feedback and statistics on their recycling performance.
- Provide incentives to encourage tenants to recycle.
- Offer aid to elderly tenants having difficulty transporting recyclables down to the main collection bins.

## APPENDIX D

### *Cart Cleaning Tips*



## Cart Cleaning Tips

Keeping the communal cart clean is an important aspect of sustaining a successful organics program. A dirty cart with overflowing organics or one that is swarming with insects is a deterrent for participation. Tenants will often state this problem as one of the main reasons they do not participate in the organics program at their multi-family building. The following tips will help you reduce cart odours and deter pests:

- Use a yard waste bag to line your cart to reduce the mess.
- Wash your cart out weekly with water (or as often that you feel it is necessary). If you choose to use a mild soap solution do not pour this down the storm drain. Let the water filter through a grassy or gravel area to protect your local aquatic ecosystems.
- Sprinkle baking soda in the cart to help reduce odours.
- Put up signs in the garbage area to encourage tenants to drain as much of the liquid as possible from their organics and wrap their food waste in multiple layers of newspapers before placing them into the organics cart. Remind tenants to keep the area clean and that spilling organics on the floor will attract pests.
- Inform tenants to keep the lids closed after dumping their organics to prevent pests from entering the cart.
- Occasionally put a layer of newspaper or yard waste on top of the organics in the cart to create a barrier between the organics and flies.
- Hang up fly traps if there is space to do so in your garbage area.



## APPENDIX E

### *Feedback Forms*





## Feedback Form Information

This appendix outlines the type of survey that will work best for various types of events:

- **Event Feedback Form #1** – This form is best used for sites which are mainly comprised of families. The options for the questions includes content regarding children *e.g., I heard about this event from my children.*
- **Event Feedback Form #2** – This form is for sites with an older demographic such as a site comprised mainly of seniors.
- **Event Feedback Form #3** – This is a modified version of Event Feedback Form #2. Use this form for tenants who may require assistance answering questions either because of physical, language, or other types of barriers.
- **Staff Event Feedback Form** – This form can be used for any type of event. Distribute this survey to all Social Housing staff who attend your event in order to gain helpful feedback for future events.
- **Children Event Feedback Form** – Use this form at sites which are mainly comprised of families. This form can be used in conjunction with Event Feedback Form #1.

Event Feedback Form #1 - Please fill out the following information:

How did you hear about this event?

- Personal visit from BC Housing
- From my neighbours
- Invitation left at my door
- From my children
- I walked by and saw that it was going on and decided to stop by
- Other (Please explain) \_\_\_\_\_

Why did you decide to attend this event?

- My kids are here
- I am interested in learning more about sustainability
- I have questions about organics, garbage and recycling
- Other (please explain) \_\_\_\_\_

Please rate your level of satisfaction with the event (place X in the column)

	Unsatisfactory	Satisfactory	Excellent
Number of activities			
Opportunity to get involved			
Number of staff/volunteers in attendance			
Knowledge of staff/volunteers			
Opportunity to ask questions			
Overall organization of the event			

What did you like about today's event?

What can we do to improve future events?

Additional comments or suggestions

Thank you for providing your feedback. Please enter your name and unit number here to be entered into our prize giveaway!

Name: \_\_\_\_\_

Unit: \_\_\_\_\_

## Event Feedback Form #2 - *Please fill out the following information:*

How did you hear about this event?

- Personal visit from BC Housing
- Invitation left at my door
- From my neighbours
- I walked by and saw that it was going on and decided to stop by
- Other (Please explain) \_\_\_\_\_

Why did you decide to attend this event?

- My neighbours are here
- I am interested in learning more about sustainability
- I have questions about organics, garbage and recycling
- Other (please explain) \_\_\_\_\_

Please rate your level of satisfaction with the event (place X in the column)

	Unsatisfactory	Satisfactory	Excellent
Number of activities			
Opportunity to get involved			
Number of staff/volunteers in attendance			
Knowledge of staff/volunteers			
Opportunity to ask questions			
Overall organization of the event			

What did you like about today's event?

What can we do to improve future events?

Additional comments or suggestions

Thank you for providing your feedback. Please enter your name and unit number here to be entered into our prize giveaway!

Name: \_\_\_\_\_

Unit: \_\_\_\_\_

## Event Feedback Form #3

Use this form for tenants who may require assistance answering questions (either because of physical, language, or other types of barriers). Place a check mark or tick for each response under Question #1 and beside any repeat answers for Questions #2 to #5. The intent is to enter the feedback from multiple tenants onto this form and then to count the number of tenants who have a similar response.

1) Did you have fun today?

Yes

No

2) Why did you come today?

3) What did you like the most?

4) What did you like the least?

5) What can we do to improve?

Thank you for providing your feedback. Please enter your name and unit number here to be entered into our prize giveaway!

Name: \_\_\_\_\_

Unit: \_\_\_\_\_

## Staff Event Feedback Form

Please rate your level of satisfaction with the event (place X in the column)

	Unsatisfactory	Satisfactory	Excellent
Number of activities			
Opportunity for adults to get involved			
Opportunity for children to get involved			
Opportunity for teenagers to get involved			
Number of staff/volunteers in attendance			
Knowledge of staff/volunteers			
Opportunity for tenants to ask questions			
Overall organization of the session			
Met overall objectives of the project			
Overall satisfaction of the event			

What did you like about today's event?

What can we do to improve future events?

Additional comments or suggestions

## Children Event Feedback Form

This feedback form was developed since children are usually active at events and do not want to sit still long enough to answer a formal survey. Ask these questions to each child near the end of the event or upon completion of a series of activities. Place a check mark or tick for each response under Question #1 and beside any repeat answers for Questions #2 and #3. The intent is to enter the feedback from multiple children onto this form and then to count the number of children who have a similar response. *Tip: offering a small prize after they complete the survey provides great incentive for them to provide feedback.*

1) Did you have fun today?

Ages 4 to 12		Ages 13+	
Yes	No	Yes	No

2) What did you like the most?

Ages 4 to 12	Ages 13+

3) What did you like the least?

Ages 4 to 12	Ages 13+

## APPENDIX F

### *Evaluation Matrix*





### Evaluation Matrix

Criteria		Site		
		Building Name: ( _____ units, tenant capacity _____ )		
Event Date of Event		1	2	3
Process	Participation Rate			
	Quality of participation			
	Representativeness			
	Continuity			
	Convenience			
	Satisfaction			
Outcome	Social Impact			
	Effect on Tenant Support			
	Cost Effectiveness			



## APPENDIX G

### *How to Conduct a Waste Audit*



## How to Conduct a Waste Audit

The purpose of a waste audit is to understand what is in your waste. It involves sorting through waste (garbage, organics, and recycling) to see how much and what types of waste are being produced in your building. It can give you a quick snapshot of how well the waste programs are working and ideas on how to improve them. For example, if you notice that there is a lot of Styrofoam in the recycling bins (which should be in the garbage) you could put up posters to tell your fellow tenants that Styrofoam belongs in the garbage.

### So, How Do I Get Started?

#### 1. PLAN

Set your goals – Setting goals can prepare you for the waste audit and the results will help you develop recommendations for improvement to garbage and recycling programs. Your goals might be to:

- Understand how much waste is produced in the building;
- Understand what materials make up the waste (*e.g.*, food waste, plastic bottles);
- See if there is a lot of materials in the garbage that could be recycled or composted; and
- Identify where improvements can be made.

Talk to the onsite staff about why you want to do an audit and ask for their help and support in getting one done.

Understand the existing programs – Go through the garbage and recycling area checklists to understand the existing recycling programs and approximately how much waste is produced in your building. This can help you figure out how much waste you should audit.

Prepare for the audit and think about:

- Talking to building staff – Coordinate with staff to get a sample of waste to audit and a space to sort through it. Also coordinate a date and time to do it. Consider scheduling the audit just before waste collection day;
- Finding volunteers – Find two or more people to help you do the waste audit. You should tell them about the goals and how to do an audit; and
- Getting equipment – You will need some simple equipment to do the audit including garbage bags, a weigh scale, gloves, face masks, sorting bins and plastic sheets.

#### 2. COLLECT

Collect samples of waste over a minimum of two days so that you can capture day-to-day changes in waste production. You can ask janitorial staff to set aside a few random bags of garbage and/or recycling carts each day.

Label bags to show the date, waste type (garbage, recycling), and location (*e.g.*, central area, mail room).

### 3. SORT

Prepare the sorting area – cover your sorting area with plastic sheets before you open up the waste. Set up the scale and label sorting bins for each waste stream (*e.g.*, organics, recyclables, garbage). Make sure all auditors are wearing puncture resistant gloves, closed-toed shoes, and face masks. Keep a first aid kit handy just in case.

Sort each bag individually. Starting with the first bag, follow these steps:

- Weigh each sorting bin so that you can subtract its weight from the total weight.
- Weigh each bag.
- Open the bag using tongs and spread the waste on the sorting area.
- Sort the waste into the chosen waste streams (*e.g.*, recyclables, organics and garbage). You could keep your jurisdiction's sorting guide handy.
- Count and weigh the materials in each sorting bin.
- Record findings, take pictures and make note of any trends or observations.
- Repeat for all bags.

Once you have sorted through all the bags, clean up the sorting area and equipment and put recyclables and garbage in the appropriate bins.

Write down any other observations from the waste audit.

### 4. EXAMINE THE RESULTS

- Use the waste audit worksheet to help you examine the results.
- Write down a few recommendations.
- Summarize the results and recommendations in a way that will make sense to building staff and tenants.
- Communicate the results to your building.
- Start setting new goals based on your recommendations!

#### Some Waste Audit Tips!

If you want to see how well the recycling program is working you could start off by auditing the garbage only and sorting into three categories: recyclables, organics and non-recyclables.

To help you with your recommendations, ask yourself these questions:

Question	Possible recommendation
Was there any garbage in the recycling bins?	If there was a lot of the same material in the garbage, you could communicate to tenants that the material is not recyclable.
How much organic waste is in the garbage bin?	If most of the garbage is organic waste, tell building staff that the building should consider starting an organics collection program.
Was there electronic waste or hazardous waste in the waste?	Communicate to tenants that these materials cannot go in the garbage and tell them about the places you can take these types of waste to for safe recycling or disposal.
Were there a lot of plastic water bottles in the recycling bin?	Let tenants know that you found a lot of water bottles and promote reducing waste by using a reusable water bottle or tap water.

## Sample Waste Audit Worksheet

Building Address:

Date Waste was collected:

Date of Audit:

Material Type	Column A Weight in Recycling Bins (kg or lb)	Column B Weight in Organics Bins (kg or lb)	Column C Weight in Garbage Bins (kg or lb)	Column D Total Weight of Waste (kg or lb) (Column A + B + C)	Percent of Material Type (e.g., D1 / D4 x 100%)
<u>Row 1</u> Recyclables	A1	B1	C1	D1	
<u>Row 2</u> Organics (food waste, yard trimmings, soiled paper towels and tissues)	A2	B2	C2	D2	
<u>Row 3</u> Garbage / Non- Recyclables	A3	B3	C3	D3	
<u>Row 4</u> Total Weight of Waste (e.g., A1 + A2 + A3)	A4	B4	C4	D4	

Comments:



## APPENDIX H

*Garbage Chute Information  
Sheets for Tenants*



## Garbage Chute Informational For Tenants

### Benefits to Shutting Down a Garbage Chute

Although garbage chutes may provide convenience to tenants within a multi-family building there are many benefits associated with shutting down a building's garbage chute which outweigh the convenience.

Advantages of shutting down a garbage chute include:

- Increasing recycling participation – Tenants are often unmotivated to sort their waste if they have the option to throw all types of materials down a garbage chute. Placing recycling containers near the garbage container will remind and encourage tenants to separate their trash.
- Increasing cleanliness – Untied and non-bagged waste can create a mess in the chute and garbage room. Locating waste containers in a common space encourages people to bag their waste in order to transfer it to the garbage area.
- Increasing health and safety standards – Accumulated grease and sludge along the chute generated from garbage could become a fire hazard. Recyclables such as paper and plastics are highly flammable and large quantities stuck in the garbage chute could also be a fire hazard. Eliminating the use of garbage chutes also removes these potential health and safety risks.
- Increasing the success of garbage and recycling related education – Placing all the waste containers in a common area allows for the placement of signage in this common space which all tenants will be able to see while disposing of their waste.
- Decreasing staff time and cost spent on maintenance – Regular maintenance including cleaning and unblocking chutes is often. Closing down the chutes will help save money on maintenance costs.
- Decreasing unpleasant odours generated from garbage chutes – Locating waste in a common area isolates odours to one place and is more easily managed.
- Decreasing the transfer of pests – Garbage chutes can act as corridors for pests to move from floor to floor. Removing the chutes removes this mode of transportation.

