Litter Prevention Community Engagement: Options Paper

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1.0   Introduction

The recently published National Litter Strategy sets out: [1]

> *how Scotland can significantly reduce litter and flytipping, and support cleaner, safer communities.*

It makes clear that prevention is a key focus, stating:

> *Our focus on preventing litter and flytipping aims to encourage personal responsibility and reduce the need for expensive clean-up or enforcement.*

It aims to do this by encouraging delivery partners, such as local authorities, businesses, charities, volunteer organisations and community groups, to:

> *identify what they can do to inspire people to take personal responsibility, and maintain that behaviour.*

The strategy is based on the mutually supporting principles of information provision, infrastructure improvements and enforcement, and highlights community-level interventions as an important means to achieving its goals. Within the "Information" theme, 'Local Community Action' is one area given prominence. Community action also has the potential to contribute to the 'Education' and 'Communication' areas of the theme. Community action can even contribute to the 'Research and Monitoring' aspect of the "Infrastructure" theme.

Furthermore, there are also three early actions the National Litter Strategy has identified — one of which is 'Community Empowerment' and another 'Tailored Local Messaging' — both of which can be delivered by community actions.

Eunomia Research and Consulting was commissioned by Zero Waste Scotland (ZWS) to research ways in which community level activities can best be developed and supported to bring about litter prevention. Desk based research, expert interviews, and workshops, were used to investigate case studies as well as stakeholder views regarding community actions (see Appendices for a full list of projects explored).

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[1] Scottish Government (2014) *Zero Waste: Towards A Litter-Free Scotland: A Strategic Approach to Higher Quality Local Environments*, 2014

The approaches researched which were believed, based on practitioner experience, to have the most potential to prevent littering, were grouped into five 'options' as a way of presenting the findings and discussing future considerations for community level litter prevention. The options are not discrete entities but can be combined or used in succession. These, in no particular order, are:

- **Option 1: Litter Pick PLUS** – clean-ups designed to maximise the litter prevention impacts;
- **Option 2: Community campaigns**;
- **Option 3: Monitoring and citizen science**;
- **Option 4**: **Incentives** – used to motivate behaviour change;
- **Option 5: Wider community approaches**, including
  - Option 5a: Community green space and street improvements - re-purposing sites for community use as green spaces; and
  - Option 5b: Wider community building - to develop a sense of civic pride leading to litter prevention effects.

2.0 Approach

Eunomia has used a number of techniques to research and evaluate current approaches to help address littering in local communities. It is from these that the five options were developed as a way of summarising the findings. The approach taken is as follows:

- **Desk-based evidence review of community level interventions** – a series of case studies were identified and evaluated to established key elements of successful interventions, potential barriers, opportunities for development and the wider environmental, social and economic benefits of each method of intervention.

- **Expert Stakeholder interviews** – 15 interviews were conducted with expert stakeholders in litter prevention or wider environmental improvement works. Some of the interviews enabled information gaps in formal reporting on specific projects to be filled, whilst others explored emerging projects which have not yet been through a period of formal reporting. The expert stakeholder interviews allowed us to discuss the wider benefits of different approaches, in terms of environmental, social and economic improvements, along with the legacy of litter prevention and to establish the wider benefits of projects on the local community. The organisations interviewed are identified in Appendix 7.0.

- **Stakeholder workshops** – six workshops were conducted, three for local authorities and three for third sector organisations. The workshops aimed to draw on stakeholder experience of, and ideas for, litter prevention interventions in order to refine a series of engagement options, building on the results of the evidence review and stakeholder interviews. Third sector organisations represented at workshops are listed in Appendix A.2.0 along with the reason for their selection.

A list of the local authorities represented at the stakeholder workshops can be found in Appendix 0. Zero Waste Scotland was also represented at the stakeholder workshops, drawing upon their experience working with different levels of government and practitioners as outlined in Appendix A.4.0.

2.1   Evaluation Criteria Methodology

Although litter prevention is the top priority for government under the National Litter Strategy, unfortunately it is also the area where evidence on relative success is perhaps weakest. This relates to the difficulties of robust measurement and assessment in this area, meaning that few interventions to date have captured convincing data.

However absence of evidence does not equal evidence of absence. Therefore, as quantitative evidence that would allow a direct comparison of the impacts of different approaches upon the levels of litter is not available, other types of evidence have been assessed. The following criteria were therefore used to assess each option:

- **Fit to the National Litter Strategy:** Relevance to the delivery of the National Litter Strategy.
- **Litter Prevention Benefits**:
    - **Anecdotal evidence of actual litter prevention**: Impressions regarding reduction in the amount of litter, an increase in non-littering behaviours, the duration of the effects, and whether there were displacement effects.

    As even anecdotal evidence is often unavailable, other types of evidence have been assessed, which are assumed to be correlates of, or proxies for, sustained littering behaviour change. These assumptions have been made based on preliminary desk based research and are as follows:

    - **Participation**
        - **Range:** Increasing the diversity of participants, compared with only engaging self-selecting volunteers, increases the possibility of directly engaging litterers and producing positive behaviour change.

        - **Number:** the more individuals that can be reached by an initiative, the more opportunities there are for effecting behaviour change.

    - **Frequency and duration of inputs for sustained change:** This impacts the ability to deliver long lasting change. However the relationship is complex. There are examples of both one-off events having significant ripple effects and also longer programs having success by virtue of involving a high frequency of inputs. This will be explored as relevant to litter prevention as appropriate to each option.
    - **Key advantages and disadvantages:** the research highlighted a number of key advantages and disadvantages for each option,

including potential risks, in terms of litter prevention potential. These represent the key findings for each option.[2]

- **Current delivery methods:** examples of delivery which have been highlighted as they are believed to improve the success of initiatives and/or litter prevention benefits;
- **Wider Benefits:** Community interventions for litter prevention have a variety of wider benefits, which here are assessed as;

  ○ **Transformational impact:** Where the wider local environmental quality is improved such that use or perception of the area is improved.
  ○ **Environmental benefits:** Benefits deriving from litter reduction itself but also where litter interventions have spill-over effects on other pro-environmental behaviours.
  ○ **Social benefits:** Where community interventions enhance social cohesion.
  ○ **Economic benefits:** Such as savings to local authorities or where local businesses benefit.

These wider benefits are further assessed for their ability to enhance the delivery of litter prevention benefits

- **Future considerations:** Factors based on comments directly received during the research, which are thought likely to enhance the litter prevention benefits of the option. These may require further examination with practitioners for options taken forward.

2.2   Limitations of the Methodology

The research methodology was unable to eliminate a number of biases which may have affected the results. The organisations and individuals involved in the delivery of case study projects were interviewed and invited to participate at workshops in order to gain their experience of community-level litter prevention work and evidence of litter prevention benefits. Asking those involved in project delivery to evaluate the effectiveness of their projects against our criteria naturally opens the results to reporter bias. Furthermore, as litter prevention is very difficult to monitor many of the projects had not sought to record and report the impacts in this area. Some projects had not been focussed on litter at all. This meant that we relied on stakeholders to recall project

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[2] As the focus is key points, in practice it is likely that with respect to advantages and disadvantages, there will be a level of crossover between options. Therefore we do not recommend this being used to rank the options against each other

activities, sometimes which were not very recent, and comment upon the litter prevention impact or potential of the approach in question. This kind of research is susceptible to recall bias, where participants are 'seeking' information from memories and so may unintentionally misrepresent the past to fit the question asked.

In order to limit the impact of these potential biases we evaluated a number of factors that were believed to impact upon litter prevention benefits alongside the monitored or anecdotal evidence provided of litter prevention itself. Taking an analysis of a greater number of success factors into account is likely to lessen the effect of any bias compared to simply asking how well the stakeholder believed their project performed against a single evaluation criterion. The other factors considered, such as the number and diversity of participants engaged, were less subjective and therefore less prone to the biases outlined above. Interviewing beneficiaries and others associated with the case study projects was considered in order to obtain a more objective view. However, this approach was discounted as it may still suffer from the same biases and would be much less likely to provide the detailed information required to support and evaluate the research options.

The scope of the project and the options considered could have benefited from consulting those who are currently not engaged with the issue of littering at all and litterers themselves. The options developed were very much driven by people who choose to take part in the issue, largely on a professional or voluntary basis, and it is possible that more innovative ideas could have been elicited from a broader stakeholder base. Unfortunately, such engagement could not have been undertaken to represent so broad a range of stakeholders to any acceptable standard given the scope and resources available to the project. Some organisations, such as Young Scot, that work with large groups of stakeholders under much broader remits than litter and flytipping issues were contacted during the research to take advantage of their unique experience and perspectives.

3.0   Option 1: Litter Pick PLUS

3.1   Description

Litter picking is the most commonly recognised and widely understood form of community level litter activity (often referred to as 'clean-ups'). Clean-ups can also include the clearance of flytipping from local sites.

The 'Litter Pick PLUS' option is intended to maximise the potential of clean-ups to lead to litter prevention. Litter Pick PLUS involves broad engagement with the local community, seeking to involve schools and community groups, businesses, and those considered 'hard to reach', for example by including individuals potentially being referred by medical practitioners and community payback groups. It should take advantage of communications and other forms of support that maximise the visibility and continuity of the clean-ups. Where flytipping is dealt with, using signage and access barriers as

preventative measures has been successful. The overall aim is to enhance local community spirit, increase pride in the local environment and empower communities to take on future projects to address litter in their local area, all of which contribute to generating wider behaviour change.

3.2 Case Studies

'Litter Pick PLUS' combines elements of 'best practice' from various existing interventions. There are therefore no case study examples that wholly represent 'Litter Pick PLUS'. However, the following exhibit a number of positive attributes that have been incorporated into the approach:

- Shetland Amenity Trust – Da Voar Redd Up: long running litter pick programme;
- Aberdeenshire Environmental Forum – Aberdeenshire Litter Initiative (ALi): local clean-ups and flytipping removal;
- Keep Scotland Beautiful – Clean Up Scotland, and its predecessor the National Spring Clean: national level clean-up campaigns;
- Tidy Towns – local environmental quality improvement projects in Wales including clean-ups and preventative measures, identified in the desk-based evidence review;
- Marine Conservation Society – Beachwatch national beachcleaning programme: individuals and groups cleaning recreational spaces ; and
- '2 Minute Beach Clean': individuals taking part and sharing results online.

3.3 Fit to National Litter Strategy

Of the three main themes in the National Litter Strategy (Information, Infrastructure and Enforcement), Litter Pick PLUS has the most potential to contribute to the "Information" theme. This states that effective information and engagement should help lead to a shared understanding of acceptable and unacceptable behaviour; it should cause people to reflect on their own behaviour; and motivate people to stop littering.

Litter picks can promote this in a variety of ways. Participating in litter picks is thought to be an effective way of sensitising people as to the impacts of litter, and changing behaviour. However because litter picks tend to recruit people who are already sensitised to the impacts of litter, to contribute fully to this objective, wider participation must be sought. Clean-ups can be a useful vehicle for wider communication if efforts are made to increase their visibility and communicate the activities being undertaken. Innovative and creative means of communication (singled out for mention in the strategy) can be used in the context of clean-ups.

The "Information" theme includes "Local Community Action" as a sub-theme. This states that empowering local communities is viewed as a mechanism by which communities can take greater ownership of the quality of their local environments. Evidence demonstrates that litter picks can be the activity that enables communities to get

involved, learn the skills that lead to empowerment and take wider action on local environmental quality.[3]

3.4 Litter Prevention Benefits

3.4.1 Anecdotal evidence of actual litter prevention

There is limited evidence as to the litter prevention benefits of litter picks. Keep Scotland Beautiful (KSB) has reported that their clean-up projects (Clean Up Scotland and formerly National Spring Clean) have brought about subsequent reductions in the level of litter being dropped, but the extent and duration of this effect is not fully quantified. Similarly, workshop attendees described examples of flytipping removal, installation of fencing and on-going clean-ups leading to reductions in flytipping and littering, yet the long-term impacts have not been reported. It is worth noting that local litter reduction impacts are said by KSB and participants to have been greatest where there is continued community-level activity in the form of clean-ups (and other interventions) over a longer period of time (i.e. multi-year). Schools are invited to take part in Clean Up Scotland, with a view to encouraging subsequent behaviour change. In one example a school repositioned its existing bins to areas subject to litter accumulation. This immediately reduced the amount of litter.[4]

3.4.2 Participation

Evidence from stakeholder interviews and workshop attendees indicates that litter picks primarily attract people who are already highly engaged with the issue of littering or are otherwise active members of their community. KSB also suggests that local people are more likely to get involved if the event is on their street, while engagement in clean-ups that are slightly further away will depend upon some form of attachment to the site in question, e.g. recreational use of the location.[5] The challenge of reaching out to the wider community and engaging a broader range of participants has been overcome in some instances through the involvement of external organisations or by offering incentives for hard to reach groups to participate.[6] Workshop participants and interviewees further suggested that more people could be engaged in such events if they were conducted in a range of different areas, from local streets to parks and local woodlands.

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[3] White, D. (2012) *Pride in Place: Tackling Environmental Incivilities: Local Environmental Problems and Wellbeing*, 2012, http://carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=2ccfcd58-24fc-4acf-beb5-c35e427d6cf0

[4] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[5] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[6] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

3.4.3 Frequency and duration of inputs for sustained change

Interviewee and workshop attendees believed that sustaining reduced levels of littering and flytipping would need continued involvement of communities in removal activities. This was based on their experience that the litter prevention benefits of one-off events were significantly lower than where a programme of events and improvements had been implemented. Shetland Amenity Trust reports that along one remote main road in Shetland, the impacts of a litter clearance activity were felt to last no longer than six months. This was thought to be due to litterers not having been engaged with the clean-up activities.[7] By contrast a town-based intervention in Uddingston was reported as an 'exceptional success' in creating community wide behaviour change as the improvements in one area encouraged others to take part until the scheme and benefits were being felt across the whole town.[8]

3.4.4 Key advantages and disadvantages

Key Advantages	Key Disadvantages
An extensive base of litter picking groups exists that could be encouraged to adopt the enhanced characteristics of Litter Pick PLUS.	Risk of not engaging a broad range of people and not reaching 'litterers' through the initiative.
An established range of resources is available to support community groups to arrange an event.	Risk of not sustaining long-term momentum in groups to generate behaviour change.

3.5 Current Delivery Methods

There are a number of third sector organisations and councils who already provide information and support to local groups who are interested in arranging a litter clean-up event, such as KSB's Clean Up Scotland campaign. Existing delivery methods are based around the provision of information about how to arrange a community led litter pick event, promoting the event, recording information to feedback into regional or national reports, continuing involvement and the provision of some resources (e.g. bags and tabards). Alongside this there is a growing number of local groups who regularly conduct litter picks within their neighbourhoods or areas of environmental value. Community groups in Wales are supported by Tidy Towns officers through the Tidy Towns initiative. The officers' role is to provide both advice and practical assistance to

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[7] From interview with Shetland Amenity Trust
[8] Beautiful Scotland (2014) *Uddingston Pride: Making Uddingston A Better Place*, Report for Keep Scotland Beautiful, 2014, http://www.keepscotlandbeautiful.org/media/433899/Uddingston-Pride-2014.pdf

community groups who wish to make improvements to their neighbourhood, including conducting litter picks.

3.6   Wider Benefits

A range of wider benefits have been considered in relation to the proposed Litter Pick PLUS option:

- **Transformational impact:** Litter Pick PLUS will provide an immediate improvement to local environmental quality. 'Reclaiming' a location previously dominated by litter and flytipping could change the perception, and thus use of the site, potentially increasing footfall and the range of people visiting the space. This arguably has the potential to prevent future littering through breaking the cycle of low environmental quality and increasing the level of 'casual surveillance'. There is also evidence from the literature and interviews suggesting that in some instances, groups that set out with the primary aim of removing litter, on achieving their goal, look to make further improvements to their local neighbourhood; [9, 10]
- **Environmental benefits**: the most significant environmental benefit of Litter Pick PLUS is the removal of litter from the local environment, reducing impacts on local habitats. Stakeholders have also noted that involvement with clean-ups can increase the environmental consciousness of participants, leading to wider changes such as increased propensity to recycle;[11]
- **Social benefits:** Evidence from the literature suggests that encouraging local communities to take part in clean-up activities helps to create a sense of local pride and community cohesion. [12, 13, 14] Through investing time in improving their local area and getting to know new people in the process an increased sense of stewardship towards local spaces may in fact motivate individuals to make further improvements. Litter Pick PLUS also has the potential to reduce crime and anti-social behaviour through reducing levels of litter, reclaiming spaces and increasing the range of people using them, and improving

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[9] Carr-West, J., and Wilkes, L. (2013) *The Big Lunch: Feeding Community Spirit*, 2013, http://www.thebiglunch.com/documents/FinalBigLunchLGIU4YearImpactReport_000.pdf

[10] Wallace, J., and White, D. (2012) *Pride in Place: Tacking Incivilities - Desk-based Research Report*, 2012, http://www.carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=ee8c4379-117e-49ea-9bad-06af646d991b

[11] Interview with TCV

[12] White, D. (2012) *Pride in Place: Tackling Environmental Incivilities: Local Environmental Problems and Wellbeing*, 2012, http://carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=2ccfcd58-24fc-4acf-beb5-c35e427d6cf0

[13] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[14] Wallace, J., and White, D. (2012) *Pride in Place: Tacking Incivilities - Desk-based Research Report*, 2012, http://www.carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=ee8c4379-117e-49ea-9bad-06af646d991b

community cohesion. Furthermore there may be benefits in respect of health and wellbeing through increasing social interaction (and potentially reducing social exclusion) and outdoor activity;

- **Economic benefits:** Litter Pick PLUS may also generate a number of economic benefits. These include; generating savings to local authorities in terms of resources (time, equipment, etc.) and encouraging inward investment through improved local environmental quality.

3.7   Future Considerations

In some instances litter prevention benefits may be enhanced by holding a large central event which could conceivably generate a 'ripple effect' of litter prevention across the community. By contrast, small (hyper) local events which look to address specific causes of litter and accurately target clean-up efforts on focused areas may be appropriate to some situations.

The research suggests that there are a number of factors which should be taken into account to enhance the litter prevention benefits of this option. These include:

- **Sustaining local momentum**: supporting local community groups could reduce project vulnerability which can arise due to significant reliance on a limited number of volunteers. Ongoing support may comprise of guidance, financial support, practical support such as access to tools and communications channels, or the provision of other materials such as barriers and signage to prevent future flytipping;
- **Best practice**: sharing successful methods of engaging hard to reach groups and monitoring litter prevention levels will help develop models of best practice;
- **Collaborative working**: greater cross-sector working (e.g. engaging with healthcare practitioners) to help community groups increase participant numbers and diversity;
- **Enhanced communication** promoting upcoming local events, increasing the visibility of community volunteers during activities, signposting areas recently cleaned and reporting recent successes to increase awareness of activities, and help recruit new participants. This will assist in:

  o Publicising the fact that litter does not just 'disappear';
  o Highlighting that local people are keen to improve their local area through clean-ups, thus potentially shifting social norms; and
  o Sustaining momentum of initiatives over time.

4.0   Option 2: Community Campaigns

4.1   Description

Community campaigns are focused on increasing community awareness of local litter and motivate individuals and groups to alter their behaviour to prevent littering. Community campaigns can be community led or led by external organisations. Community led campaigns work by empowering local communities to spread their own tailored messages within their neighbourhood, or to help to promote national or regional messages at the local level. Campaigns led by the community could be conceived as:

- Nationally or regionally recognised campaigns with a simple message that can be adapted by local groups to make it more locally relevant;
- Area wide campaigns that can be 'localised' to specific neighbourhoods; and
- Individual groups producing materials that are location-specific in order to be well understood and received by the local community.

Community campaigns led by external organisations can operate at a number of levels, for example, a local walk way, flytipping hotspot or a number of towns. However, engaging the local community at each work area is central to the projects. Regardless of how they are led, the campaigns look to inform people and over the longer term, to make littering more widely perceived as socially unacceptable, leading to reductions in littering.

4.2   Case Studies

The case studies used in this research are:

- Dunna Chuck Bruck: a community led local awareness raising campaign to discourage littering in the Shetland Isles, which contains no organisational branding and can be used in a wide range of settings and contexts.
- Dirty Little Secrets: national campaign that enabled individuals across Scotland to localise the campaign by confessing their littering habits. This campaign has now been regionally adopted by local authorities including Stirling, Clackmannanshire and West Lothian and Borders
- Hillington Park – Partnership Flytipping Prevention Initiative: partnership project to prevent flytipping through the installation of barriers in a business estate. The barriers were illustrated by local design students encouraging the community to 'do their bit' at a local level.
- Scottish Waterways Trust - Cleaner Canals: Scottish Waterways Trust worked to create a clean, safe and usable canal for all, working with the public and partners to raise awareness of the impacts of litter and flytipping.

4.3   Fit to National Litter Strategy

Community campaigns are likely to make an effective contribution to the "Information" theme of the National Litter Strategy. There are a number of ways they can enhance communication. One way is by making communications more accessible. For example, they can be of increased local relevance and of the most appropriate tone for each community; and they may evoke a more emotive response from the public because of this. Community communications will increase the overall number of campaigns in existence and increase the awareness of litter issues. The greater number of campaigns and their bespoke nature also increases the chances of innovation and creativity.

All of these aspects of community campaigns are able to support a shared understanding of acceptable and unacceptable littering behaviours, reflection on individuals' own littering behaviour, and motivation of behaviour change.

Where community campaigns engage the community to the extent that the community is delivering a significant part of the output whether in terms of co-design or co-production, they have the ability to create empowered communities. This supports the goal of the "Local Community Action" part of the "Information" theme which recognizes that empowering local communities is a mechanism by which communities can take greater ownership of the quality of their local environments.

4.4   Litter Prevention Benefits

4.4.1   Anecdotal evidence of actual litter prevention

There is limited quantitative evidence to suggest that community campaigns reduce littering in a local area and generate a wider culture of litter prevention. Anecdotal evidence suggests that people identified with long-standing community campaigns, such as Dunna Chuck Bruck, leading to changes in individuals' behaviour. However the overall reported visible reduction in littering was low.[15]

The Hillington Park project, facilitated by an external organisation is reported to have prevented flytipping at the site. This is thought to be a result of the personalised artwork and successful partnership working.[16]

4.4.2   Participation

There is limited evidence available to demonstrate the ability of community campaigns to engage a broad range of participants (either in running the campaign or observing and responding to the campaign's message). This could well limit their litter prevention

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[15] Interview with Shetland Amenity Trust

[16] Zero Waste Scotland (2014) *Litter and Flytipping Fund Projects 2013-14: A summary of key findings and recommendations*, 2014, http://www.zerowastescotland.org.uk/sites/files/zws/Litter%20and%20Flytipping%20Fund%20Summary%20report%202013-14%20Final.pdf

potential. However, once a group of volunteers agree to take on the production of a local community led awareness raising campaign, they can account for any specific factors that could enhance the likely litter prevention impact. The ability of local people to participate in creating a campaign which is relevant to their neighbourhood may therefore increase its potential to reduce littering.

The Cleaner Canal project, run by Scottish Waterways Trust, engaged with schools, community groups, local authorities, and nearby businesses. This broad participation is believed to have raised local awareness levels around litter.[17]

4.4.3   Frequency and duration of inputs for sustained change

There is limited quantitative evidence demonstrating the litter prevention impact of community campaigns. No reported evidence was revealed of sustained litter prevention for either community or external organisation led campaigns. Some members of the local or wider community may acknowledge a one-off communication (e.g. a poster), identify with the message and subsequently make a lasting change in their behaviour as a result. If the campaign identifies its target audience and either engages with them directly on a project or creates appropriate materials which are promoted through a range of media outlets, then the likelihood of this arguably increases. However, it logically follows that ongoing campaigns could have a greater long term impact than one-off interventions. This opinion was expressed frequently in the workshops.

4.4.4   Key advantages and disadvantages

Key Advantages	Key Disadvantages
Community led campaigns are highly scalable and replicable, potentially making it a cost effective way to influence behaviour change. This is likely to be reduced for campaigns run by external organisations.	Risk of difficulties recruiting and motivating volunteers. For community led campaigns there is a risk that existing volunteers prefer hands-on tasks.

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[17] Zero Waste Scotland (2014) *Litter and Flytipping Fund Projects 2013-14: A summary of key findings and recommendations*, 2014,
http://www.zerowastescotland.org.uk/sites/files/zws/Litter%20and%20Flytipping%20Fund%20Summary%20report%202013-14%20Final.pdf

Key Advantages	Key Disadvantages
Embedding a campaign of local relevance into a community could increase the likelihood of it engaging prospective litterers through targeting local issues/concerns. Whereas campaigns run by external organisations have increase capacity to engage with a wider range of participants.	Hard to measure the impacts of a campaign and the resulting behaviour change.

4.5   Current Delivery Methods

Ongoing campaigns led by the community have included collaborative working between councils, the third sector and businesses to help promote anti-littering messages and influence local community behaviour. Resources for Dunna Chuck Bruck are freely available online and can be used and personalised by community groups. Campaigns run by external organisations are often more intense, and include some assessment prior to work commencing and a strategy to engage with partners, individuals and groups from the wider the community.

4.6   Wider Benefits

A range of wider benefits have been considered in relation to community campaigns approaches:

- **Transformational impact:** successful community campaigns have the potential to improve an area's appearance and in-turn change the use of space. This is arguably more apparent for previously underused or derelict sites;
- **Environmental benefits**: these are dependent on a project's ability to bring about behaviour change and reduce litter. A reduction in littering as a result of a campaign may improve wildlife habitats. Conceivably this may also have a positive effect on individuals' environmental consciousness, potentially leading to further reductions in littering and waste;
- **Social benefits:** these are most likely to be felt by participants in project implementation and include a greater sense of community as local people get to know each other and invest time in their area; and
- **Economic benefits:** with appropriate support, these campaigns could allow members of the community to learn skills in media and communications. Arguably, this could improve employability prospects if members of the community were inspired to get involved. Other potential economic benefits could include increasing business investment in an area if it were to become less littered as a result of the campaign. In such cases there is potential for a reduction in local authority expenditure.

4.7 Future Considerations

The research suggests that there are a number of factors which should be taken into account to enhance litter prevention benefits. These include:

- **Sustaining local momentum:** workshop attendees identified a long-term approach as central to litter prevention success. They proposed that sustained engagement may require longer term external support for both community and externally led campaigns. Arguably, for community led campaigns support may also be required to help target campaigns towards, and increase participation from, harder to reach groups. It is thought this will help to make littering a community wide concern;

- **Best practice:**
  - For both community and externally facilitated campaigns there is potential to target hard to reach groups that are disengaged from littering, by targeting pre-existing groups that may have a different focus. For example, the option could engage a new audience through incentivising them with the opportunity to learn skills in design and communication and enhance their employment prospects. Such incentivisation is explored in more detail in Section 6.0;
  - Quantifying the impacts of campaigns to reduce littering, through monitoring and reporting results to assess the short and long-term reductions in litter, as well as learning from existing successes;

- **Enhanced communication**: interviewees highlighted the importance of access to local, preferably free, communication channels for promoting local or national campaigns. [18, 19] It was felt that providing access to local radio, press and social media and thus disseminating the message to a broader range of people will increase the likelihood of influencing behaviour; and

- **Variation in delivery approach:**
  - For community led campaigns allowing communities to identify the areas and issues that they would like to address either at a local, regional or national scale. It is believed this empowers them to overcome their concerns and focus on the bigger picture. [20] Whereas organisation led approaches should engage with local people to allow the projects to be contextualised, increasing their likelihood of success;
  - Workshop attendees expressed concern with regards to changing the purpose of existing litter clean-up groups to include community led

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[18] Interview with Shetland Amenity Trust

[19] Interview with Keep Scotland Beautiful

[20] Wallace, J., and White, D. (2012) *Pride in Place: Tacking Incivilities - Desk-based Research Report*, 2012, http://www.carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=ee8c4379-117e-49ea-9bad-06af646d991b

communications. They thought this could change the group dynamic and put increased pressure on existing members, potentially taking time away from the clean-up work they currently do – therefore potentially reducing participation. However, if these groups were included as part of an external project their experience and enthusiasm could enhance project results; and

- o Utilising or developing existing design and communications skills of college or university students could provide a cost effective resource as well as involving a wider range of participants in the process.

5.0 Option 3: Monitoring and Citizen Science

5.1 Description

Citizen science is an increasingly popular approach to undertaking research and monitoring. Volunteers undertake data collection and use a range of monitoring techniques under the guidance of professionals such as scientists, researchers, or other ultimate data users.[21] This approach could be incorporated into all other proposed options as a means of measuring the pre- and post-intervention litter levels. However, it could also be a standalone method to increase local and national awareness of litter.

It is thought that through engaging local people in the evaluation and monitoring of localised littering it will empower them to participate in the implementation of an effective litter prevention plan. Whilst such an approach may lead to a slightly less rigorous approach to data collection and analysis, citizen science and monitoring could help address the current shortfall in evidence of litter prevention in a cost-effective manner. Data collected via this method could supplement more robust, professional data.

5.2 Case Studies

The following case studies all included an element of citizen science:

- Eco-Schools[22]: an international initiative to encourage whole school action on sustainable development, including litter reduction and prevention;

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[21] Centre for Ecology and Hydrology (2014) *Choosing and Using Citizen Science: a guide to when and how to use citizen science to monitor biodiversity and the environment*, 2014, http://www.ceh.ac.uk/products/publications/documents/sepa_choosingandusingcitizenscience_interactive_4web_final_amended.pdf

[22] Keep Scotland Beautiful *Eco-Schools*, accessed 3 December 2014, http://www.keepscotlandbeautiful.org/sustainable-development-education/eco-schools/

- Eco-Schools - Wrigley Litter Less Campaign[23]: schools carry out a litter audit, set up an action plan to reduce litter and provide evidence of their progress. Can also include clean-ups in the local community;
- Keep Britain Tidy – Annual Brand Survey of Litter[24]: data collection of levels and types of littering, using both professional surveyors and volunteers; and
- Marine Conservation Society – Beachwatch: a national beach cleaning programme including an annual survey of litter amounts and types.

5.3 Fit to National Litter Strategy

Monitoring and citizen science contribute to the implementation of the National Litter Strategy in the following ways.

Regarding the "Information" theme, monitoring can be used as a way of informing and engaging local communities. It can increase awareness regarding local litter issues and reinforce the unacceptability of dropping litter, both of which contribute to motivating behaviour change. Monitoring also provides information that can help target action to hotspots that need it most. Communication of monitoring efforts can be coupled with messages regarding behaviour change and so increase the opportunities for getting the message across and motivating reduced littering behaviours.

Regarding the "Infrastructure" theme, monitoring and citizen science can help tailor better litter service provision. It can also be a source of valuable research and monitoring data. Potentially this could include the evaluation of pilot projects or ongoing projects, which was identified as an infrastructure need. As mentioned above, communications associated with monitoring efforts can encourage behaviour change related, for example, to use of infrastructure, such as recycling on the go.

5.4 Litter Prevention Benefits

5.4.1 Anecdotal evidence of actual litter prevention

There is currently no quantitative evidence demonstrating litter prevention as a result of citizen science and monitoring style interventions. As an approach that has in general only been applied relatively recently, there were few findings from stakeholder interviews. However, this method is being increasingly used in a number of situations, including within the litter component of the Eco-Schools programme.

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[23] Keep Scotland Beautiful *Wrigley Litter Less Campaign*, accessed 3 December 2014, http://www.keepscotlandbeautiful.org/sustainable-development-education/eco-schools/litter-less/
[24] Keep Britain Tidy *England's Great Litter Count*, accessed 3 December 2014, http://www.keepbritaintidy.org/englandsgreatlittercount/737

5.4.2   Participation

There is limited information available as to the type of participants who currently engage with monitoring and citizen science style projects. Evidence from interviews suggests that this approach primarily attracts volunteers who are already fully engaged in litter reduction activities or other aspects of their community. Intuitively, limited involvement of the wider community in litter-related citizen science would lead to more limited litter prevention effects. However the adoption of citizen science and monitoring as part of the Eco-Schools litter programme, for example, means that the link between participation and behaviour change might be better understood in future years.

5.4.3   Frequency and duration of inputs for sustained change

Due to the recent adoption of monitoring and citizen science there are few long-term case studies which can be used to evaluate its potential for preventing littering. All things being equal, it would follow that ongoing investment and improvement would increase the likelihood of litter prevention benefits from monitoring and citizen science. However as the impacts of the monitoring initiatives have never been determined, whether they are new or well established (e.g. Beachwatch which has a 20 year time series), it is not possible to say with confidence at this time.

5.4.4   Key advantages and disadvantages

Key Advantages	Key Disadvantages
An ability to engage people in local litter issues at a level which promotes understanding and awareness.	Risk that data collected and analysed is not suitably robust and does not deliver a sufficient quality for many applications, e.g. for including in national statistics. This does not necessarily diminish the litter prevention impact.
It helps to address the current shortfall in evidence of litter prevention projects and pilot studies.	Risk that the more specific focus of this option will discourage a wider number of participants and detract from other community action initiatives.

5.5   Current Delivery Methods

Monitoring and citizen science resources are often provided online, which is very cost-effective, however, some additional support may be required in the early stages of a project to resolve any local issues. Actual monitoring in the field is via members of the community, and therefore reliant on their engagement and continued involvement. Results from monitoring can be uploaded for central collation and evaluation, and can be used to feed into national or regional statistics and reports. Alternatively they can be disseminated on an individual basis with social media, which may reach a wider audience.

5.6   Wider Benefits

A range of wider benefits have been considered in relation to monitoring and citizen science approach:

- **Transformational impact:** in isolation this approach does not have any transformational impact on a local area. However, in combination with other behaviour change initiatives or litter removal interventions it could conceivably improve their effectiveness, by promoting understanding of the issue at a local level, enhancing communications, engaging a larger number or wider range of community members and thus lead to an increased impact;

- **Environmental benefits**: if this option includes an element of clean-up or improvement to local environmental quality, environmental benefits will result from the removal of litter, potentially improving wildlife habitats;

- **Social benefits:** if local communities can be encouraged to take part, there is evidence to suggest that it helps to create a sense of local pride and community cohesion through jointly tackling litter. [25, 26, 27] Also those engaged in projects often report feeling empowered to help encourage litter prevention within their local community; [28] and

- **Economic benefits:** this style of project gives community members the opportunity to develop skills based around monitoring and evaluating local environmental quality as well as potentially, statistics. This could help to increase potential employability. If a project prevents litter in the long term, it could result in savings to local authorities.

5.7   Future Considerations

The research suggests that there are a number of factors which should be taken into account to enhance litter prevention benefits. These include:

- **Sustaining local momentum**: continual monitoring of litter levels may require ongoing support to reduce project vulnerability due to reliance on a few volunteers and diversification of projects to include other community action initiatives to maintain local interest. This could help to produce time-series

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[25] White, D. (2012) *Pride in Place: Tackling Environmental Incivilities: Local Environmental Problems and Wellbeing*, 2012, http://carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=2ccfcd58-24fc-4acf-beb5-c35e427d6cf0

[26] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[27] Wallace, J., and White, D. (2012) *Pride in Place: Tacking Incivilities - Desk-based Research Report*, 2012, http://www.carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=ee8c4379-117e-49ea-9bad-06af646d991b

[28] Interview with Keep Scotland Beautiful

data to allow long-term litter prevention impacts to be measured and encourage long-term national involvement from projects and participants;

- **Collaborative working**: increasing cross-sector engagement may help to diversify participants and increase the number of monitoring projects in progress;

- **Best practice:** establishing a system of training and support would enable volunteers to conduct research with a consistent methodology so it can inform larger studies. This would also help volunteers to feel that they are part of something bigger; and

- **Enhanced communication**: encouraging new volunteers to participate through the sharing of results in terms of littering prevention benefits, on a local and national scale, could help groups feel they are part of a larger scheme or movement.

6.0   Option 4: Incentives

6.1   Description

Throughout the research a broad range of incentives were uncovered that could be used to enhance the litter prevention potential of projects. Incentives are used to motivate members of local groups or communities who may otherwise show limited or no interest in a topic. They can be financial or non-financial. Non-financial incentives may include opportunities to learn new skills, access to social activities or health benefits associated with being active outdoors. As well as motivating individuals, incentives can also be used at a community level. For example the best performing neighbourhood in a town wide scheme could receive new play equipment.

6.2   Case Studies

The case studies include a range of financial and non-financial incentives:

- The Conservation Volunteers – Green Gyms: Environmental conservation skills and free outdoor fitness sessions;
- Keep Scotland Beautiful – National Spring Clean (the predecessor to Clean Up Scotland): – e.g. volunteers offered English lessons at local college in exchange for time spent on their local project;
- Changeworks – Litter Prevention in Schools Project: e.g. pupils received raffle tickets for a chance to win cinema tickets for placing rubbish in bins;
- Gorbals Healthy Living Network: e.g. offer training opportunities and workshops on food growing, horticulture, carbon reduction, healthy eating and cooking, whilst reclaiming space for local people;

- Clean Netherlands Foundation has a range of projects including:
  - Teams of volunteer street cleaners receive €50 per km of street per year when a high level of cleanliness is achieved;
  - Charitable donations are issued according to weight of sweet packets received by an organisation for recycling ;
  - Credits achieved through cleaning an area of town which can be exchanged for tickets to the swimming pool or ice rink;
  - Community BBQ for cleanest street; and
  - Tickets to attractions given to teams that clean a specified area; and
- Carnegie Trust: case studies reviewed in "Tackling Incivilities" report identified a wide range of skills that were being learned as a result of community action. [29]

6.3 Fit to National Litter Strategy

Within the three main themes of the National Litter Strategy ('Information, Infrastructure, Enforcement'), incentives of the sort described here are not explicitly mentioned. They are, however, of indirect relevance, as they can be built into community action initiatives, which as covered above, are explicitly mentioned in the strategy. Incentives are intended to increase participation both in terms of numbers as well as the range of stakeholders, which is a goal under "Local Community Action" (a sub-theme of the "Information" strand). It is also likely that incentivisation could prove an innovative way of spreading the word about community litter initiatives, and propagating implicit messages regarding litter impacts and social norms regarding local environmental quality, contributing to "Information" theme goals.

In the preamble to the strategy, an "early action" pilot for community action is described whereby clean-ups are incentivised so as to increase their numbers and frequency, and to improve community engagement generally.

6.4 Litter Prevention Benefits

6.4.1 Anecdotal evidence of actual litter prevention

There is limited quantitative evidence to demonstrate the long-term litter prevention impact of incentives. Case study evidence suggests that individual incentives are most successful at generating littering behaviour change and encouraging removal of litter from the local environment, if they are skill and experience based. This is thought to be because it increases the length of time spent working on a project and thus increases

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[29] White, D. (2012) *Pride in Place: Tackling Environmental Incivilities: Local Environmental Problems and Wellbeing*, 2012, http://carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=2ccfcd58-24fc-4acf-beb5-c35e427d6cf0

exposure to activities which could influence behaviour change. [30, 31, 32] Whereas incentives appear most effective at reducing litter when the reward has wide appeal, however, it is unclear if the reduction will be sustained once the incentive is removed. [33]

6.4.2 Participation

There is limited evidence about the type and number of participants engaged by incentive based projects. Interview evidence suggests that incentives are primarily used to engage with harder to reach groups yet whether this is achieved has not been evaluated, thus its potential to generate anti-littering behaviour change is unknown.[34, 35] Some of the projects which involve participants from hard to reach groups and have reported reductions in littering include:

- TCV Green Gyms projects accept referrals from health practitioners, increasing the participation of individuals suffering from low level health conditions. The incentive is health and wellbeing benefits for participants as a result of outdoor, environmental conservation activities including litter and flytipping removal;[36]
- A National Spring Clean project incentivised members of the local Roma population to participate through offering English lessons in exchange for their involvement;
- The Clean Netherlands Foundation offer community focused rewards, such as street BBQs. These appear to motivate groups to remove litter from designated areas.

6.4.3 Frequency and duration of inputs for sustained change

Most of the evidence suggests that the litter prevention effect of incentives is significantly reduced when the motivator is subsequently removed. [37, 38] This is believed to be a result of the initial incentive only targeting or reaching a small number of individuals or members of a targeted group. Yet, it is conceivable that if the duration of the incentive is sufficient to engage with a large number and broad range of people, the

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[30] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[31] Interview with Changeworks

[32] Information received from Clean Netherlands Foundation

[33] Information from Clean Netherlands Foundation

[34] Interview with Changeworks

[35] Interview with Shetland Amenity Trust

[36] The Conservation Volunteers (2008) *TCV Green Gym National Evaluation Report: Summary of Findings*, 2008, http://www.tcv.org.uk/sites/default/files/green-gym-evaluation-2008.pdf

[37] Interview with Changeworks schools litter team

[38] Interview with Shetland Amenity Trust

'ripple effect' could generate a sustained reduction in littering. This could increase the likelihood of it being maintained when the incentive is gradually removed. [39]

6.4.4   Key advantages and disadvantages

Key Advantages	Key Disadvantages
Ability to specifically target hard to reach groups or individuals, based on the type of incentive offered.	Case studies show a reliance on partnerships, e.g. local businesses, to provide or fund rewards.
Interviewees suggested that competitions and annual award based incentives are successful at sustaining group engagement.	Anecdotal evidence shows that the litter prevention benefits reduce dramatically once the incentive is removed.

6.5   Current Delivery Methods

A wide range of skills-based incentives have been identified which are currently in use and could be adapted to motivate communities in litter prevention activities. Currently incentives are predominantly focused on motivating individuals and are funded by local and national business sponsorship.

6.6   Wider Benefits

A range of wider benefits have been considered in relation to incentives:

- **Transformational impact:** the ability of incentives to transform a local space, either through appearance or change of use, depends on the proposed activity. One case study example showed how volunteers transformed a local woodland, through litter and flytipping removal, to be a valued community space, in exchange for learning some 'on-the-job' environmental conservation skills; [40]

- **Environmental benefits**: if a project includes community greening or litter removal and the effect is sustained after the incentive is removed, the activity could lead to litter prevention;

- **Social benefits:** this is likely to be limited to those investing time in their local neighbourhood or obtaining improvements in health and wellbeing through participation in outdoor, social activities. Green Gyms report high retention

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[39] Information from Clean Netherlands Foundation
[40] The Conservation Volunteers (2008) *TCV Green Gym National Evaluation Report: Summary of Findings*, 2008, http://www.tcv.org.uk/sites/default/files/green-gym-evaluation-2008.pdf

rates of participants and an ability to reach individuals that may otherwise be hard to engage in a physical activity; [41]

- **Economic benefits:** if incentives are skill based, the experience gained through projects could increase the employment potential of participants. There is also the potential of environmental improvements leading to further inward investment to an area as well as cost saving to local authorities if reductions in littering result.

6.7 Future Considerations

The research suggests that there are a number of factors which should be taken into account to enhance litter prevention benefits:

- **Sustaining local momentum**: Incentives could provide ongoing encouragement to project groups in the form of national competitions and awards. KSB believes the Beautiful Scotland awards help to keep groups interested in their project and make continual improvements to enhance their prospect of winning, as well as leading to groups feeling part of something bigger and having their participation acknowledged;[42]

- **Collaborative working:** Incentives are reliant on developing partnerships, for example with local businesses, colleges and community groups, to allow suitable rewards to be provided to volunteers. Evidence from the stakeholder interviews showed how poorly designed or poorly targeted incentives can have little or no impact on encouraging new people to participate in litter prevention activities.[43] Therefore, it is important that councils, businesses, third sector organisations and behaviour change experts work together to identify their target audience and appropriate incentives prior to implementation;

- **Best practice:** sharing successful methods of engaging hard to reach groups and monitoring litter prevention levels could help to develop a model of best practice; and

- **Enhanced communication:** promoting activities and respective rewards widely could help to broaden participation. Equally many interviewees stressed the significance to participants of being part of something bigger, which can be enhanced if individuals and groups are given the opportunity to contribute to national statistics or reports.

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[41] The Conservation Volunteers (2008) *TCV Green Gym National Evaluation Report: Summary of Findings*, 2008, http://www.tcv.org.uk/sites/default/files/green-gym-evaluation-2008.pdf
[42] Interview with Keep Scotland Beautiful
[43] Interview with Shetland Amenity Trust

7.0   Option 5: Wider Community Approaches

A range of different approaches are currently being used to enhance a sense of local community and address issues at a neighbourhood level. This section looks at how these approaches could be adapted to increase their litter prevention potential.

7.1   Option 5a: Community Green Space and Street Improvements

7.1.1   Description

There is a wide range of community-level improvement projects, from community gardening to intensive street redesigns, facilitated by external organisations. These aim to influence behaviour change by empowering local communities to identify and address issues which they feel reduce the quality of their local environment. At present, whilst very few of these projects address litter prevention or indeed litter, some involve the clearance of established flytipping sites. Arguably all the examples reviewed indicate that they have indirectly reduced or prevented littering and flytipping, the latter including using physical barriers or installing signage.

7.1.2   Case Studies

These cover a range of interventions from community led, 'light touch' approaches to more 'intensive' methods:

- The Conservation Volunteers – Green Gym: site specific environmental improvement, including flytipping removal, and conservation projects run by fitness experts;
- Keep Scotland Beautiful – It's Your Neighbourhood and Beautiful Scotland: community led street and neighbourhood gardening schemes which also include environmental improvement and community participation;
- Lambeth Council – Community Freshview: light-touch, community led street level improvements such as fence painting and installation of planters;
- Sustrans – Street Design: intensive street redesign by an external organisation, include extensive community consultation and behaviour change; and
- Greenspace Scotland – Young People and Place Making: empowering young people to work with the community in the process of place making.

7.1.3   Fit to National Litter Strategy

With respect to the three themes of the National Litter Strategy of 'Information, Infrastructure and Communication', Community Green Space and Street Improvements align best with the "Information" theme.

Green space and street improvements offer opportunities for promoting awareness and behaviour change in much the same way as Litter Pick PLUS (see Section 3.3). There is also great potential for including a wider range of stakeholders, which is advantageous for litter communications.

The "Information" theme of the National Litter Strategy includes the sub-theme "Local Community Action". The nature of the changes made during green space and street improvements is likely to lead to a lasting sense of achievement, and involve the widest range of skill acquisition, and so contribute particularly well to the empowerment of local communities. The potentially wide ranging nature of the improvements also increases the potential for a sense of ownership of the local environmental quality. Because these kinds of community improvements can be wider ranging in scope than focussing on litter alone, there is perhaps greater potential for including a wider selection of stakeholders from the public, as well as local business and local authorities, in this option. This provides more scope for taking into account their input, which is also desirable, according to the strategy.

7.1.4   Litter Prevention Benefits

7.1.4.1   Anecdotal evidence of actual litter prevention

Interviewees from Keep Scotland Beautiful, Sustrans and Lambeth Council reported reductions in littering shortly after the completion of their projects, but there is limited quantitative evidence to demonstrate the long-term litter prevention potential of such projects. However, there is some anecdotal evidence to support this effect. It is suggested that through making wider environmental improvements to an area or street, not only is civic pride enhanced but a greater sense of guilt is felt by (potential) litterers thus making them more likely to put their litter in a bin or take it home. [44, 45] Evidence from workshop attendees suggests that installing barriers and improving the aesthetic at former flytipping hotspots reduced the number of local incidences. Long-term evidence of the success of these measures was not available.

7.1.4.2   Participation

The research suggests this method is successful at motivating those who are already active in their communities. However, the ability to move beyond self-selecting volunteers and engage harder to reach groups appears to be limited unless an external

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[44] Comments from interview with Sustrans
[45] Comments from interview with Keep Scotland Beautiful

organisation is involved. KSB projects with council officer support and Sustrans projects demonstrate a greater number and diversity of participants compared to those run solely by the community. [46,47,48] This may be the result of a neutral party acting as a mediator between existing groups, perhaps enabling the final project to better represent, and engage with, the wider community and thus potentially have a greater influence on litter prevention. Green Gyms involve a diverse range of participants through accepting referrals from medical practitioners. This approach could conceivably be rolled out to other community projects.

7.1.4.3   Frequency and duration of inputs for sustained change

There are a number of long running projects which report on-going litter prevention and behaviour change as a result of holding regular events, either with a community, infrastructure or environmental quality focus. [49, 50, 51] Uddingston Prides Beautiful Scotland project has expanded from a local neighbourhood scheme to a town-wide initiative. This occurred through a gradual expansion of the programme. Local residents noticed improvements and adopted a similar approach in their street which led to reported reductions in litter. [52, 53] Sustrans interviewee also noted that some of their past projects, which included flower planters, are still being maintained by communities five or more years after the project completed. They believe this to be a result of an increased sense of pride motivating individuals to maintain the planting. There is potential to expand this to litter prevention.

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[46] Keep Scotland Beautiful (2013) *It's Your Neighbourhood: Community Action for a Clean, Green Scotland - Review 2012*, 2013, http://www.keepscotlandbeautiful.org/media/49015/iyn-2012-evaluation-report-final.pdf

[47] Keep Scotland Beautiful (2012) *Beautiful Scotland: Community Action for a Clean, Green Scotland - Review 2012*, 2012, http://www.keepscotlandbeautiful.org/media/49073/beautiful-scotland-evaluation-report-final.pdf

[48] Interview with Sustrans

[49] Comments and case study examples from interview with Keep Scotland Beautiful in relation to It's Your Neighbourhood and Beautiful Scotland projects.

[50] Comments and case study examples from interview with Lambeth Council in relation to Community Freshview project.

[51] Case study examples from interview with TCV in relation to Green Gym projects.

[52] Beautiful Scotland (2014) *Uddingston Pride: Making Uddingston A Better Place*, Report for Keep Scotland Beautiful, 2014, http://www.keepscotlandbeautiful.org/media/433899/Uddingston-Pride-2014.pdf

[53] Interview with Keep Scotland Beautiful

7.1.4.4   Key advantages and disadvantages

Key Advantages	Key Disadvantages
Potential to work with external organisations - this has been reported by numerous projects as a successful way of increasing participant numbers and diversity.	Potentially challenging to inspire existing groups to include a littering element in their project when they have broader environmental goals.
A large number of groups exist who are already active; providing the opportunity to develop their projects to include a litter aspect and better communication of local success.	Risk of local groups not sustaining their initial momentum, reducing the potential to prevent littering. Risk of social barriers or community conflict preventing a cohesive approach or reducing participation.

7.1.5   Current Delivery Methods

Currently there are two main forms of community green space and street improvement type schemes - those delivered by community groups and those instigated or encouraged by an external organisation. Projects run by community groups typically use online resources and local support services to design, implement and source funding for their projects. Projects implemented by external organisations may have an 'organisation-specific' goal – in the case of Sustrans it is encouraging 'active travel', i.e. walking and cycling. However, account is always taken of the local community context, ensuring other local concerns are addressed in order for the development to be accepted and owned by residents.

7.1.6   Wider Benefits

A range of wider benefits have been considered in relation to community green space and street improvements:

- **Transformational impact:** of all the options presented, community green space and street improvements arguably has the most potential to transform local disused or problematic spaces, improve the neighbourhoods' appearance and improve community perceptions of their neighbourhood. Enhanced local pride in the transformed area could discourage littering and flytipping as more people visit, or spend time outside in, the location;
- **Environmental benefits**: inclusion of community gardening could increase local diversity and create new habitats for wildlife. Conceivably this has potential to remove and prevent littering both through local site maintenance and improvements increasing the environmental consciousness of volunteers and local residents;

- **Social benefits:** many projects report increased social cohesion and guardianship of local space as a result of the intervention.[54, 55, 56] Moreover, workshop attendees believed increased social capital has the potential to reduce littering, crime and other anti-social behaviour as communities get to know each other better and share common ground;
- **Economic benefits:** the variety of tasks which occur during a project not only attract a wider range of people to a project but could provide more opportunities for local people to learn new skills (refer to section 6.0 for further information on incentives). Projects also have the potential to increase economic activity in an area. One case study in Shetland showed how planting on a high street led to an increase in shop occupancy, boosting local revenue streams as well as services. [57]

7.1.7   Future Considerations

The research suggests that there are a number of factors which should be taken into account to enhance litter prevention benefits. These include:

- **Sustaining local momentum:** developing a sense of community was highlighted in interviews as a way to sustain local progress; there is also potential to further reduce project vulnerability by providing ongoing support to lessen reliance upon a few key volunteers, and encouraging new participants so that communities are more diversely represented;
- **Collaborative working**: projects may be able to access a broad range of funding schemes but the subsequent number and spectrum of funding requirements may push litter down the agenda. Also collaborative working could help to specifically target hard to reach groups - helping to overcome social barriers or exclusion and isolation, increasing the diversity of project participants; [58]
- **Best practice:** assess successful litter prevention initiatives in current practice to identify best practice. This could be used to advise and encourage pilot projects to integrate these features. Best practice could also be developed around communicating local successes to help volunteers feel valued and part of something bigger;

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[54] Interview comments from Keep Scotland Beautiful, Sustrans and Lambeth Council.

[55] Keep Scotland Beautiful (2012) *National Spring Clean: Community Action for Safe and Healthy Neighbourhoods - Review 2012*, November 2012

[56] Keep Scotland Beautiful (2012) *Beautiful Scotland: Community Action for a Clean, Green Scotland - Review 2012*, 2012, http://www.keepscotlandbeautiful.org/media/49073/beautiful-scotland-evaluation-report-final.pdf

[57] Details provide through interview with Shetland Amenity Trust.

[58] Interview with Sustrans

- **Variation in delivery approaches**: adapting existing projects to include a litter prevention element could include raising awareness to levels local littering, installing bins or preventative measures and increasing 'casual surveillance' through other design features. [59, 60] It should be appreciated that all communities are at different levels of litter awareness and concern, leading to a range of priorities to address; however, litter prevention must still be considered fully in project planning in order to maximise outcomes. Whether a 'light touch' or 'intensive' style approach is selected would be dependent on current levels of community engagement ; and
- **Limitations to approach:** these schemes, especially those run by external organisations, can be more costly than other interventions, potentially restricting its roll-out capacity. Also there is a potential limit to the number of areas that can be 'greened'.

7.2   Option 5b: Wider Community Building

7.2.1   Description

Developing a sense of community has been identified in the research as central to addressing local issues such as litter, by increasing a sense of ownership of public spaces and by empowering residents to make changes to their local area. [61, 62] There are a number of examples of community building projects that work by catching the attention of a few individuals who then collaborate with their neighbours to hold an event. These are generally at street level but can be part of a national day or regional event. One of the main objectives of holding a community event is to enable neighbours to get to know each other and encourage friendlier and safer communities. It is also believed that through spending an increased amount of time in community spaces, it can heighten residents' awareness and concern about littering, leading to positive behaviour change.

7.2.2   Case Studies

Case studies that have been examined in the evidence review and stakeholder interviews include:

- The Eden Project – Big Lunch: one-day street parties across the UK to encourage neighbours to get to know each other; and

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[59] Interview with Keep Scotland Beautiful
[60] Interview with Sustrans
[61] White, D. (2012) *Pride in Place: Tackling Environmental Incivilities: Local Environmental Problems and Wellbeing*, 2012, http://carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=2ccfcd58-24fc-4acf-beb5-c35e427d6cf0
[62] Wallace, J., and White, D. (2012) *Pride in Place: Tacking Incivilities - Desk-based Research Report*, 2012, http://www.carnegieuktrust.org.uk/CMSPages/GetFile.aspx?guid=ee8c4379-117e-49ea-9bad-06af646d991b

- Playing Out – Street Play; one-off or regular street closures to allow children to play in their own street.

7.2.3 Fit to National Litter Strategy

Regarding the three main themes of the National Litter Strategy, Wider Community Building relates most closely to the "Information" theme; but specifically it is the sub-theme "Local Community Action" with which it is most aligned. We were told by one practitioner that increasing community contact (increasing "cohesion") changes communities "profoundly";[63] for example by:

- Increasing use of public space;
- Increasing sense of ownership;
- Improving and creating relationships between community members; and
- Enabling individuals to access resources possessed by the community.

All of these increase the level of empowerment of a community and its sense of place, which are likely to lead to improved levels of care and raised standards/social norms regarding local environmental quality.

7.2.4 Litter Prevention Benefits

7.2.4.1 Anecdotal evidence of actual litter prevention

There is limited quantitative evidence to demonstrate the litter prevention potential of community building events. The aims of street play and street parties are most commonly social rather than environmental. They are centred on building a more cohesive community and greater sense of identity within a residential area. The evidence has shown that in organising community building events, volunteers often arrange litter clearance and tidy-ups prior to the activity. [64, 65] At one street's Big Lunch, a noticeable reduction in littering was observed by participants, increasing awareness of local littering, and the group later opted to conduct a series of clean-ups after the event to maintain the improvement. The sustained change as a result of this is not reported.

7.2.4.2 Participation – number and diversity

The Eden Project Big Lunch appears to attract a wide number of participants across different levels of income, and in a wide range of locations. [66] In addition, there is anecdotal evidence to demonstrate individuals' success at overcoming social exclusion

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[63] Interview with Playing Out
[64] Interview with The Eden Project's Big Lunch team.
[65] Interview with Playing Out
[66] Carr-West, J., and Wilkes, L. (2013) *The Big Lunch: Feeding Community Spirit*, 2013, http://www.thebiglunch.com/documents/FinalBigLunchLGIU4YearImpactReport_000.pdf

and increasing participation.[67] It could be surmised that whilst this approach is unlikely to directly reduce litter, it may provide the community foundations for broader change.

7.2.4.3   Frequency and duration of inputs for sustained change

There is no quantitative evidence to demonstrate that holding regular community events reduces or prevents littering. In general, interviewees suggested that closer communities were more likely to be concerned about the level of littering. In some instances this led to groups making aesthetic improvements to their area, potentially leading to litter reductions. However, there is currently no systematic evidence to support this.

7.2.4.4   Key advantages and disadvantages

Key Advantages	Key Disadvantages
Potential to attract a wide number of participants who may not normally get involved in litter focused or community activities but want to participate in a fun, social event.	Risk that litter prevention potential will be lost if support not is not available to direct community empowerment towards addressing littering.
Any litter prevention is underpinned by increased civic pride in participants. Such behaviour change is thought to be deep rooted and long lasting.	Risk that events themselves may produce litter if waste is not well managed and the site is not carefully cleared afterwards. Leaving a littered site could have a negative effect on litter prevention.

Risk of social barriers or community conflict preventing a cohesive approach or reducing participation |

7.2.5   Current Delivery Methods

Community building events are currently delivered via a grass roots approach. The delivery of the event is community led, but drawing on web-based information and remote support for event-specific queries.

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[67] Interview with Eden Project Big Lunch Team – case study of councillor helping local residents to encourage support and attendance for their event, in the process they identified several residents who were socially isolated. The councillor assisted them to attend the event and they are now supported by the wider community who had been previously unaware of how lonely they felt.

7.2.6   Wider Benefits

A range of wider benefits have been considered in relation to community building events:

- **Transformational impact:** the extent to which transformations occur is likely to depend on participants' levels of engagement with enhancing environmental quality and reducing litter. Arguably this potential is greatest in formerly underused or problematic spaces. This would potentially require a transformation prior to the event which could improve perceptions of the neighbourhood. The Big Lunch interviewee shared examples of communities getting to know each other and wanting to make improvements in litter or by planting in their area. If conducted this could help enhance or maintain the quality of the site and discourage littering;

- **Environmental benefits**: these will be reliant on litter removal activities and community greening being undertaken by groups. The research showed a number of groups dedicated time to clearing the area and making small improvements prior to the event to improve the feel of the site. [68, 69] It is unclear, however, whether areas become regularly maintained after the event has completed;

- **Social benefits:** both the Big Lunch and Playing Out case studies were successful at increasing community spirit; 86% of 2012 Big Lunch survey respondents said their street party made them feel better about their neighbourhood and that they have kept in touch with people they met at previous lunches. [70] Conceivably, through creating a greater sense of community, perceptions of local safety increase, as does the use of local spaces for social events;

- **Economic benefits:** there is potential for the volunteers engaged in arranging a street party or play activity to learn new skills in event organisation and management. Also, inward investment could be increased if physical improvements to the area result from the initial community building events.

7.2.7   Future Considerations

The research suggests that there are a number of factors which should be taken into account to enhance litter prevention benefits:

- **Sustaining local momentum**: there are a number of existing community groups who regularly hold social events in their neighbourhood. The provision

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[68] Carr-West, J., and Wilkes, L. (2013) *The Big Lunch: Feeding Community Spirit*, 2013, http://www.thebiglunch.com/documents/FinalBigLunchLGIU4YearImpactReport_000.pdf
[69] Interview with Playing Out
[70] Carr-West, J., and Wilkes, L. (2013) *The Big Lunch: Feeding Community Spirit*, 2013, http://www.thebiglunch.com/documents/FinalBigLunchLGIU4YearImpactReport_000.pdf

of resources could encourage groups to include an aspect of litter prevention and additional support may be required to reduce project vulnerability due to reliance on a few volunteers and ensure that regular events are held;

- **Enhanced communication**: considering how best to promote upcoming local events and encourage awareness of activities could help to recruit new participants, especially those from hard to reach groups;
- **Best practice**: monitor and evaluate success at integrating litter prevention into community building events to develop best practice to be shared with new and existing participants; and
- **Variation in delivery approaches**: helping communities identify local priorities for activities may result in litter being addressed as a lower priority but lead to increases in participant diversification. Communities may also require a range of different resources from practical guidance information to organisational assistance to facilitate their event.

APPENDICES

A.1.0 Organisations Contacted for Expert Stakeholder Interviews

Table 1: Organisations Contacted for Expert Stakeholder Interviews

Organisation	Name of Project(s)	Reason for Selection
Carnegie Trust	Eight case studies reviewed in "Tackling Incivilities" study: Springhill Garden of Reflection, Belfast; Bredhurst Woodland Action Group, Kent; Civic Pride, Lancashire; Tipton Litter Watch, Sandwell; Urban Eye, London; Llwynhendy Growing Spaces Project, Llanelli; Redruth Brewery Leats Project, Cornwall; Clean Glasgow, Scotland	The Carnegie Trust published a report summarising key findings from a study of eight projects that addressed incivilities in local communities. Many different projects were reviewed, many with a clean-up element that extended over time into more involved projects to adopt, renovate or repurpose a local area. The report dealt extensively with success factors and wider benefits of the projects.
Changeworks	Community Waste Reduction Initiative	To understand how they work within local communities to encourage behaviour change through overcoming barriers
Changeworks	Litter Prevention Projects in Primary and Secondary Schools	To understand the benefits and barriers to working with schools and implementation of interventions
Lambeth Council	Community Freshview	To explore issues relating to light-touch community led intervention to improve local streets and build local communities
Marine Conservation Society	Beachwatch	To understand more about this long running annual volunteer delivered coastal litter clean-up and monitoring event
Sustrans – Scotland and UK wide	Street Design	To obtain detail about an intensive approach to community engagement and how this helps to attract a broader range of volunteers

Organisation	Name of Project(s)	Reason for Selection
Greenspace Scotland	*Deliver variety of community led action plans for public spaces*	To understand successes and barriers to engaging with a wide variety of people and the impact this has on project results
Keep Scotland Beautiful (KSB)	National Spring Clean Clean Up Scotland It's Your Neighbourhood Beautiful Scotland	To understand what makes communities get involved and how working with communities generates long-term improvements. How to engage with a wide range of individuals and groups, especially those considered hard to reach.
Orkney Zero Waste	Bag the Bruck; and varied recycling advocacy projects	To learn more about their role in organising annual clean-ups. They also do a lot of community engagement relating to recycling.
Playing Out	Street Play	To explore how reclaiming streets from cars to allow children to play can help enhance community spirit, and the current and potential related relevance of local environmental quality elements
Scottish Water	No specific litter related projects	Scottish Water is interested in SuDS schemes, which provide an opportunity to deliver environmental improvements through a process of community engagement, with the associated potential to prevent litter.
Shetland Amenity Trust	Da Voar Redd Up Dunna Chuck Bruck	To understand the effectiveness of community communication campaigns, ensuring projects have a sustained approach and to explore the difficulties of working in remote communities
Eden Project	The Big Lunch	To understand the role of community led activities in creating a sense of community and civic pride
The Conservation Volunteers	Green Gyms	To understand the wider benefits that can be achieved through engagement with hard to reach groups
Young Scot	Youth Engagement Litter Project (for ZWS); varied youth engagement and incentivisation work.	To understand techniques that are used to engage a youth audience and deliver co-production and co-design processes for interventions.

A.2.0 Third Sector Organisations Represented at Workshops

Table 2: Third Sector Organisations Represented at Workshops

Third Sector Organisation	Reason for Selection
Aberdeenshire Environmental Forum	Litter pick style approach
Beautiful Perth	An in-bloom style approach
Changeworks	Community engagement experience
CRNS	Experience of working with communities to address environmental protection and waste management
Essential Edinburgh	Knowledge of the impacts of litter on economic prosperity
Fife Zero Waste / Centre for Stewardship	Experience of local stewardship
Forth Environment Link	Experience of working with communities and partners on environmental issues
Friends of the Pentlands	Practical experience of area clean-ups and working with volunteers
Glasgow Community Council	Experience of representing local residents and communities and understanding their concerns
Gorbals Healthy Living Network	Experience of working with the local community to help improve health and wellbeing through the delivery of practical projects
Scottish Fire and Rescue Service	Experience of anti-littering campaigns and awareness raising within local communities
Transform Dundee, Transform Your Community	Experience of working with hard to reach groups to improve the appearance of local communities
WISE Group	Experience of working with hard to reach groups and developing incentives to encourage engagement

A.3.0 Local Authorities Represented at Stakeholder Workshops

The following local authorities were represented at stakeholder workshops:

- Aberdeen City Council
- Angus Council
- Argyll and Bute Council
- Clackmannanshire Council
- Dumfries and Galloway Council
- Dundee Council
- East Ayrshire Council
- East Dumbarton Council
- East Lothian Council
- East Renfrewshire Council
- Edinburgh City Council
- Falkirk Council
- Fife Council
- Highland Council
- North Ayrshire Council
- North Lanarkshire Council
- Perth and Kinross Council
- West Lothian Council

A.4.0 Other Organisations Represented at Workshops

Table 3: Other Organisations Represented at Workshops

Organisation	Reason for Selection
Zero Waste Scotland	Experience of working with Scottish Government to deliver its Zero Waste Plan and National Litter Strategy