# Changing Littering Behaviour in Football Stadia



CHAMPIONS ON & OFF THE PARK Making our Community a Better Place Be a Litter Champion with AFC & ACE



Working in Partnership to make our Community a better place to live and enjoy for both us and our children.

## Arbroath Football Club and Angus Clean Environments 'Save our Seas - Litter Champion Project'

NO	CONTENTS	PAGE
1	EXECUTIVE SUMMARY	P3
2	INTRODUCTION	P3
3	3.1 Assessment	
	<ul><li>3.1.1 Sustainability and Litter Management Infrastructure</li><li>3.1.2 Most Common Litter Types in the Stadium</li><li>3.1.3 Littering Behaviours</li></ul>	P4
	3.2 <b>Planning and Interventions</b> 3.2.1 Infrastructure	P5
	<ul><li>3.2.2 Communication</li><li>3.2.3 Inspiring the Next Generation of Fans</li><li>3.2.4 Litter Champion Volunteers</li></ul>	P6-7
4	SUPPORTING AND MANAGING LITTER CHAMPION VOLUNTEERS	P8
	4.1 Volunteer Equipment	
	<ul><li>4.2 Before the Game</li><li>4.2.1 During the Game</li><li>4.2.2 Half Time</li><li>4.2.3 After The Game</li></ul>	P9
5	CHALLENGES	P9 - 10
	5.1 Litter Champions Working in the 'Away Side' of the Stadium	
	<ul><li>5.2 Recruiting Suitable Litter Champion Volunteers</li><li>5.3 Waste and Recycling</li></ul>	
6	OUTCOMES	P11 -12
	<ul><li>6.1 The Response of Fans</li><li>6.2 Changing Behaviours</li></ul>	
	<ul><li>6.3 New Infrastructure</li><li>6.4 Save Our Seas</li></ul>	
7	CONCLUSION	P13
8	SAVE OUR SEAS LITTER CHAMPION PROJECT SUPPORTED BY	P14
9	APPENDIX 1. LITTER CHAMPIONS: RISK ASSESSMENT	P15

#### A report by Arbroath Football Club and Angus Clean Environments

#### **1. EXECUTIVE SUMMARY**

This report highlights how Arbroath Football Club worked in partnership with Angus Clean Environments (ACE), a local environmental group, to reduce littering in Gayfield Park. The Scottish Football Association (SFA) recognise that sporting events can have a significant impact on changing public attitudes. However, the management of waste and recycling in stadiums remains a major challenge for Clubs. The overall aim of the Arbroath project was to change littering behaviours and as a consequence, prevent litter escaping from the stadium and into the sea. Although the project was brought to an abrupt halt in March 2020 due to the restrictions arising from the Covid 19 pandemic, evidence gathered over the period of a year suggests that the project went a long way towards achieving its desired aims and that there is learning for other Clubs across Scotland. A comment about the 'Save our Seas Litter Champion' project from a camera man who was filming at Gayfield in December 2019 is worthy of reflection. He said, "I have been filming at matches for over 20 years and this is the best thing I've seen in Scottish football during that time". The report details how the project was planned and managed and highlights key outcomes and challenges.

#### 2. INTRODUCTION

ACE launched an initiative in February 2019 to reduce the amount of litter in the harbour area of Arbroath. Litter surveys had been undertaken which identified significant amounts of litter outside the sea facing wall of the stadium following matches. Gayfield Park is situated closer to the sea than any other football stadium of its size in Scotland and there were concerns that litter was entering the marine environment. A meeting with Arbroath Football Club in early 2019 highlighted shared concerns and a commitment to working together to find ways of preventing litter escaping from the stadium at Gayfield.

There appears to be varied and complex reasons why littering has become an acceptable social norm in football stadia. It is estimated that every fan drops between 1 and 5 items of litter on the stadium floor during a match as there are no alternatives and no cues to do anything else with their waste. This is concerning on a number of levels and is confusing for children and young people who are receiving mixed messages from adults. On the one hand they are taught in school that it is unacceptable to litter and on the other, that it is acceptable in certain circumstances such as in football stadia. This confusion could contribute to why some individuals go on to develop the belief that it is 'OK' to litter in some situations such as from cars or in places where there are no bins. The Arbroath Football Club Litter Champion initiative therefore challenged some of the beliefs held within football and made it easier for fans to dispose of their litter appropriately at matches.

#### **3. METHODOLOGY**

#### 3.1 Assessment

Before planning any interventions it was recognised that a full assessment was required to review the stadium infrastructure, litter types and litter behaviours. Two ACE volunteers attended the Arbroath v East Fife match on 16 March 2019 to carry out an assessment within the stadium and observe fan behaviour. Capacity in the Gayfield stadium is 6,600 and the average attendance for League One games during 2017-2018 was 772. At the match on 16th March 2019, there were 720 fans in attendance. However, the number of attendees increased significantly at subsequent



Gayfield Main stand



Gayfield South West Terraced stand illustrating proximity to sea

matches as Arbroath FC was promoted to the Championship League in April 2019.

The age profile of fans attending the March match appeared to be largely men in the 40-75 year age group. There was also a small but significant number of children aged between 5 and 16 years. The Gayfield Main stand comprises a covered, single tiered all seated area of 861 seats. There are three covered terraced areas of similar size situated around the other areas of ground.

#### 3.1.1 Sustainability and Litter Management Infrastructure

The Club use compostable hot cups in their own food outlet which sells beverages sweets and pies wrapped in white serviettes. One fan was observed bringing her food-related litter out of the stadium at half time and depositing it in a black wheelie bin situated next to the food serving area. However, most fans were taking food away from this area and were not necessarily ready to deposit their waste at this location. There were no facilities to dispose of litter within the stadium itself.

A further three black wheelie bins had been placed in strategic positions at entrance and exit points to the ground. A bright attractive blue bin with the Club's emblem is also permanently situated outside the ground. Once everyone had left the ground, each of the bins was observed as being approximately half full. There did not appear to be any specific recycling or composting facilities.

#### 3.1.2 Most Common Litter Types in the Stadium

The following items were the most commonly littered items at the assessment match in March 2019.

- Compostable cups
- White paper serviettes
- Single use hand warmers
- Food Waste mainly pies
- Confectionary papers
- Wooden stirrers
- Cigarette Butts

#### 3.1.3 Littering Behaviours



In the main stand, it was observed that approximately 90% of fans disposed of their litter under seats. Due to the sheltered nature of the litter in that location it is believed that very little of this would escape out of the stadium. However, food waste can attract seagulls and vermin if left for any period of time. In Arbroath, litter in the stadium could be left uncleared for up to 2 weeks depending on the fixture list. In the covered terraces it was noted that fans dropped their litter where they were standing and one person threw his litter directly onto the pitch at half -time. There was a moderate wind on the day of the match and the litter blew freely especially from the north and west terraces. Some young children were observed to watch in astonishment as adults dropped large amounts of litter at their feet. Other children appeared reluctant to drop their litter but were assured by adults that it was permissible within the grounds of the stadium.

During half-time, the two ACE volunteers who had up to till this point been observing fan behaviour and watching the game, emerged from their seats and passed round bags for the fans to use to dispose of their waste. It was not certain how this brief intervention would be received but fans welcomed the opportunity to dispose of their litter appropriately and were pro-active in clearing up under seats and placing litter into the bags. It was only possible to cover around 200 seats during this brief period but it was extremely encouraging to know that fans seemed engaged and keen to help.

#### **3.2 Planning and Interventions**

#### 3.2.1 Infrastructure

Following the assessment period further discussions took place with the Club to review the findings of the assessment and consider changes and interventions to encourage fans to dispose of their litter appropriately. In an important move, the Club agreed to consider the idea of locating bins at key points within the stadium itself. Security and safety concerns are paramount but it was recognised that there was a need to overcome some of the constraints to address wider concerns relating to littering behaviour and environmental damage. The Club obtained funding and sponsorship to purchase bins and produced colourful information wraps with cleverly worded football slogans to engage fans. This was an important element of the intervention phase as it was necessary to provide as many opportunities as possible to prompt fans to do something different with their litter.



#### 3.2.2 Communication

Announcements were made over the public address system and on social media to inform fans about the changes and to promote the Litter Champion Volunteer initiative.

#### Example

• You will notice that there are a number of Litter Champions in the stadium today. Arbroath Football Club is doing everything it can to keep the stadium litter-free and prevent litter escaping into the marine environment. Please deposit your litter in one of the bags carried by the Litter Champions or as Bobby Linn says - Stick it in the Bin!



#### 3.2.3 Inspiring the Next Generation of Fans

In 2019 the Club also launched a new 'Young Lichties Supporters Club'. A competition was held in which they were asked to design a poster to encourage fans not to litter. ACE was invited to judge the submissions which were of a very high standard. This was an inspired idea and provided a great opportunity to influence the next generation of fans. The posters are also another visual reminder that our children want to see cleaner stadia in the future. A couple of the football players also championed the cause. Bobby Linn for example took time out to meet with volunteers and with the young people involved in designing posters.



Arbroath FC Chairman Mike Caird, Stephen Slessor, Regional Director of Morrison Construction who are sponsors of the Young Lichties Club and Arbroath FC Director Brian Cargill

#### 3.2.4 Litter Champion Volunteers

Arbroath Football Club agreed to provide free tickets and refreshments to volunteers willing to act as litter champions during matches. Further discussion about how Litter Champions were managed and supported is contained in the next section. With hindsight it would have been helpful to promote the initiative prior to season tickets going on sale. A total of 20 volunteers were recruited for the project but not all of them could attend every match. It was a mixed group of volunteers with some being passionate about football and recognising it as an opportunity to gain access to a match they might not have otherwise have been able to attend. Others had no interest at all in football but were passionate about football and the environment so being a litter champion was a win-win opportunity. It was crucial to have a lead volunteer with strong organisational and communication skills present at each match to support volunteers and liaise with Club officials when required.



Player Bobby Linn with Litter Champions in November 2019

#### 4. SUPPORTING AND MANAGING LITTER CHAMPION VOLUNTEERS

ACE volunteers facilitated the first formal Litter Champion intervention during the Arbroath vs Alloa Athletic game on 02 November 2019. A total of ten volunteers assisted during the first game. They subsequently supported a further nine matches. Arbroath Football Club provided free tickets and refreshments to all volunteers. A risk assessment was carried out and is appended to this document (Appendix 1).

#### It was important that volunteers;

- recognised themselves as part of a Team and also representatives of the Club.
- · carried out their role in a pleasant and unobtrusive manner
- understood that they were modelling the type of behaviour that we want fans to exhibit/ develop
- made it easy for fans to do the right thing with their litter
- were able to explain what the initiative was about if asked and had the ability to engage in a friendly manner with both home and away fans
- · Understood risks ie. not to pick up sharps to move away from any potential hazards

#### It was important that Club support staff

- valued volunteers as being an important part of the team
- encouraged fans where appropriate to support the aims of the initiative
- supported volunteers in their role

#### 4.1 Volunteer Equipment

- All volunteers wore orange hi-viz vests. It was important that they were visible but distinguishable from the Club Stewards.
- Litter pickers were donated by the clean up company, Helping Hand.
- Litter hoops were donated by Angus Council.
- Biodegradable bags were donated by Angus Clean Environments.
- Heavy Duty and disposable gloves were made available to volunteers.
- A sharps bin was available but was not required

#### 4.2 Before The Game

- The Club made a space available in part of the stewards accommodation which provided a place for volunteers to meet, make a drink and store equipment.
- The Club made announcements on the public address system to raise awareness about Litter Champions and changes to the way in which fans were expected to dispose of their waste.
- The Head Steward briefed the lead volunteer prior to the match to communicate any potential issues. The lead volunteer ensured that all volunteers were suitably equipped and wearing their hi-viz vests. Volunteers were then briefed before each match and given plenty/regular encouragement to support them in their role
- Volunteers worked in groups of at least two and decisions were made at each match regarding where people were best located within the stadium.
- Litter Champions made themselves visible prior to matches by walking along the terraces picking up litter. The act of being out on the terraces collecting litter was such an alien phenomenon that initially fans were quite taken aback and very curious. However, as soon as they realised what was happening the majority of fans on both sides were keen to help and gave it their full support. Many fans moved to pick up litter which they had previously dropped.

#### 4.2.1 During The Game

During the game the Litter Champions who were passionate about football watched the game from a location on the home side. Other volunteers used the time to ensure that entrances and areas around food outlets were clear of litter. Sometimes it was possible to walk along terraces discreetly and unobtrusively so as not to spoil anybody's enjoyment of the game. Again, being visible in this way was a reminder to fans who may be eating and drinking that they now had facilities in which to dispose of their waste appropriately. Many fans made a big effort to come forward with their litter and use the bags carried by volunteers. Others began to use the bins which were generally located at the rear of the stands. Volunteers would have preferred the bins to be located in full view of fans at the front of the terraces but recognise that there are security implications. In time, it would be expected that fans would become familiar with the location of bins within the football stadium.

#### 4.2.2 Half Time

Just prior to half time Litter Champion Volunteers returned to their station for refreshments. This enabled them to be available during half time itself to pick up any litter in the stands. Volunteers learned that a crucial time for being visible is towards the end of half time when the majority of food related waste is dropped on the terraces. Being active at this time was really helpful to fans as it made it easy for them to dispose of their waste appropriately. It also significantly reduced the amount of litter left in the terraces at the end of the game. The Club wrapped orange buckets with their football slogans to pass along the seated areas. This worked well once people realised that we were collecting litter and not money!

#### 4.2.3 After The Game

After the game, Litter Champions carried out a sweep of the entire stadium to ensure that every item of litter was removed. For crowds of less than 1,000 this only took half an hour as much of the litter had already been bagged or binned. Once the new bin infrastructure was in place volunteers filled approximately 8-10 large bin bags after each game. The only exception to this were the games which attracted larger crowds of away fans; for example, at the Arbroath v Dundee fixture on the 7th December 2019 there were 2500 fans in the stadium. On this occasion, 31 large bin bags of litter were collected.

#### 5. CHALLENGES

#### 5.1 Litter Champions In The 'Away Side' Of The Stadium

Learning from this project has highlighted the need to create the right conditions for Litter Champions to work in the away side of the stadium. Large crowds were expected at the Arbroath v Dundee game in December and there were concerns about potential anti-social behaviour. As a result, litter champions were asked not to enter the away side of the stadium at all. There were concerns for the welfare of volunteers and particularly those who were passionate fans of Arbroath. In addition, Stewards seemed particularly concerned that female volunteers might be at risk from the behaviour of anti-social men in the away side. Litter champions complied with the request but the volume of litter covering the terrace when fans left was immense. Litter pickers literally broke as they were not strong enough to cope with the repetitive action associated with lifting such large volumes of litter at the one time. On this occasion it took ten volunteers 2 hours to clean that side of the stadium. As a result of this experience the lead volunteer who happens to be female, made a special case to be allowed into the away side of the stadium at the next big match. This individual has no interest in football so was not going to provoke any of the away fans by working alongside them.

Although the presence of a volunteer litter picker was met with surprise by fans it was very much welcomed. Many fans took time to thank the volunteer and said how important they thought the initiative was. In subsequent games of this size, two volunteers worked in the away side and there were no problems whatsoever. As a result, littering was



somewhat reduced although more volunteers would have enabled a greater impact. Due to high emotion and the fact that some people have consumed alcohol prior to the match ACE agree that only experienced volunteers who can remain neutral about the game should work in the away side of the ground.

#### 5.2 Recruiting Suitable Litter Champion Volunteers

The project attracted some of the most amazing volunteers with exactly the right kind of skills required for such a role. People came from varied backgrounds and those with disabilities were fully included. People under the age of 18 were only able to participate if supervised by a parent or person with a Protecting Vulnerable Groups (PVG) certificate. Five young people became volunteers and four of them were exemplary and great role models for their peers. However, one young person required far more intensive supervision than the project could support. He became too excitable in the stadium environment and displayed inappropriate behaviours. This experience reinforced how important it is for the lead volunteer to know the strengths and support needs of volunteers. In terms of the number of Litter Champions required we found eight to ten volunteers to be an optimum number for smaller matches of up to 1,500 and up to 16 for crowds of around 3,000.

#### 5.3 Waste and Recycling

It is noteworthy that due to the large numbers of attendees at the Arbroath v Dundee match in December 2019, an additional mobile food vendor was brought in to supply hot food which was distributed in large polystyrene trays. All the trays and plastic forks were discarded on the floor of the stadium. This highlights the importance of considering what type of food is served and the best kind of packaging. The Club itself serves pies in paper serviettes which produces less waste. It is also worth considering whether external vendors have any responsibility to consider packaging and the management of waste in these circumstances.

Small items such as lucky draw tickets, wooden stirrers and cigarette butts are particularly hard to remove with litter pickers. Many older fans did not perceive cigarette butts as litter and thought that they would biodegrade quickly. They expressed surprise to learn that they contain plastic and could take 8-10 years to biodegrade. Innovative solutions will need to be found to identify ways in which cigarettes can be safely extinguished and disposed of in the stadium environment. Finally, small sweet wrappers were more prevalent in the seated/hospitality areas and it is not properly understood why this was the case. Again more work could be done in future to target particular litter types and either reduce them or make it easier for people to dispose of them appropriately.

#### 6.1 The Response Of Fans

Overwhelmingly, fans welcomed the opportunity to do the right thing with their litter. After the initial surprise at seeing volunteers picking up the litter that they were dropping fans were extremely supportive. Many came over with their litter, some picked up litter they had previously discarded and others simply placed their litter in one of the designated bins. It was particularly heartening to see how engaged children were with many expressing relief at having somewhere to dispose of their litter. At every match there were always dozens of fans who made a point of thanking volunteers for their work. Some were so moved by the initiative that they wanted to donate funds to show their



gratitude. Others were very clear that they never wanted to leave litter in the first place but felt they had no alternative. One man was moved to tears because of his concern about the impact of litter on the environment.

During several matches, Litter Champions were able to access the entire stadium throughout the game as crowd numbers were very manageable. The 'away fans' were equally as surprised by the initiative and with the exception of a small minority most of them were also very engaged and keen to do the right thing. Several fans asked the Litter Champions for more information as they thought it was something that their own Clubs should be doing. Again, 'away fans' were effusive with their thanks and praise of volunteers.

#### 6.2 Changing Behaviours

The project really was an example of rapid behaviour change in action. Most behaviour change initiatives take place over long periods of time. However, the introduction of bins, messaging and the visible presence of Litter Champions sent out strong signals to fans that their Club had different expectations of them. It was rewarding and satisfying for volunteers to see fans stop and take stock of the situation before moving to do something different with their litter. A very small minority of fans most often in the 'away section' appeared to use littering as a means of expressing emotion about the game. If all football clubs developed an anti-littering culture this would potentially change this behaviour amongst this group.





#### 6.3 New Infrastructure

The Club purchased 14 maroon coloured bins which were strategically located within the stadium. Various local companies provided sponsorship ensuring that the cost of the bins was cost neutral to the club. Colourful messaging on the bins raised the profile of the project and further engaged fans. Developing a bin infrastructure within the stadium itself was a significant and bold step.

#### 6.4 Save Our Seas

Ensuring that the stadium was litter free at the end of every match was a great achievement and prevented significant amounts of single use plastic from blowing into the sea. Approximately 10 full bags of waste were removed after each match in addition to the litter which was disposed of directly into the bins. At larger matches up to 30 bags of litter were removed. However, this project was about more than simply 'cleaning up' after fans it was about enabling fans to do this themselves. Not only did fans rise to the challenge but they did so with enthusiasm and gratitude. Keep Scotland Beautiful honoured the Club with an award in 2020 which recognised the success of the project in changing littering behaviours.



#### 7. CONCLUSION

The project has evidenced that changing behaviours and the littering culture in football stadia can be achieved but requires multiple interventions and a whole systems approach. In addition, strong partnerships and a commitment from all involved to really make a difference is also critical to the success of such an initiative. Initial assessment and ongoing monitoring helped to increase understanding of how the stadium setting contributed to fans leaving their waste. It also informed decisions about where to place new infrastructure. Interventions were monitored and regularly reviewed to provide the best opportunity to achieve desired outcomes. The ongoing dialogue between the Club and volunteers enabled snags to be overcome at an early stage. Had the initiative not been brought to an abrupt end due to the Covid 19 restrictions it is likely that further developments would have strengthened the project and further embedded it into the overall management strategy of the stadium.

*"I have been filming at matches for over 20 years and this is the best thing I've seen in Scottish football during that time".* 

#### **REPORT AUTHORS;**

Wendy Murray, Angus Clean Environments Brian Cargill, Director Arbroath Football Club

18 August 2020

### 'Save our Seas Litter Champion' Project Supported by



Jonny O'Mara



But 'n' Ben,



C Lyons Purple Fish Shop









Bobby Linn Bin (Dundee Bin Man and AFC Player)







#### **APPENDIX 1 LITTER CHAMPIONS: RISK ASSESSMENT**

#### ARBROATH FOOTBALL CLUB: LITTER CHAMPIONS PROJECT PLAN and Risk Assessment





Project Name	Arbroath Football Club Litter Champions	Date	02/11/2019 09/11/2019 07/12/2019. 14/12/2019 As per fixture list	Time	2pm - 5pm
Location	Gayfield Stadium, Arbroath	Event organiser	AFC	Event safety controller	ACE and AFC
Assessors	Wendy Murray (ACE)	Date	06/11/2019	Permission given by	Brian Cargill, Director

Section 1 - Identify activities and hazards - consider all the activities within the project and tick the boxes to those that apply

1.	Identification of Litter Champions	x	4	Handling of Sharps	x	7	Slips, trips, unforeseen accidents	x	10	Layout and traffic routes		13	Seating arrangements		16	Confined space	
2.	Handling of Litter	x	5	Lighting levels		8	Manual Handling	x	11	temporary structures		14	Welfare and Support	x	17	Lone working	
3.	Inflatables		6	Lighting systems		9	Environmental noise		12	Communication	x	15	Sanitation		18	Crowd Control	

Section 2 - Who may be at risk - tick the boxes of all relevant persons at risk

Employees	Contractors		Volunteers	x	Children		Visitors		Special Needs	
-----------	-------------	--	------------	---	----------	--	----------	--	---------------	--

#### EVENT HEALTH AND SAFETY RISK ASSESSMENT FORM

No	Activity and/or Hazard	Organisation and Existing controls	Risk level			
	Description		High	Med	Low	
1	Identification of Litter Champions	Litter Champions to wear orange Hi -Viz Jackets to make them easily identifiable and also to distinguish them from Stewards and Ball Boys.			x	
2	Handling of Litter	Litter Champions to be provided with gloves, litter pickers, hoops and bags. Litter Champions to be advised not to directly handle litter and to wash hands at the end of volunteering activity.			x	
4	Handling of Sharps.	In the unlikely event that a needle or any glass is identified the volunteer will alert one of the Litter Champion Co-ordinators. The co-ordinator will dispose of any needles in a dedicated sharps box and any glass will be swept into a bucket for appropriate disposal. On identification of a sharp object the Litter Champion will remain with the sharp object until it is safely removed.			x	
7	Slips, Trips, Unforseen accidents	Volunteers will be advised to wear appropriate clothing and strong shoes. In the event of any unforseen accidents there are trained paramedics and a doctor on-site.			x	
8	Manual Handling	An assessment has been made of litter types which are light and easily carried in biodegradable bin bags supported by litter hoops. The club have produced Bobby Linn stickers which have been used to brand Orange buckets which are to be passed around the seated area in the main stand.			x	
12	Communication	Volunteers will work in pairs or larger groups. This provides a system of mutual support. Lead Volunteer can be contacted by mobile. All Stewards carry portable comms systems and can obtain other assistance if required			x	
14	Welfare support of volunteers	Any volunteers aged under 18 years must be closely supervised by a parent /guardian or a volunteer with a PVG certificate.Matches take place from Autumn though to Spring so Volunteers will be advised to wrap up warm. The club have made a space available in the stewards accommodation. Refreshments and pies are available for volunteers. Litter Champions benefit from free tickets to matches and are valued members of AFC support services.			x	
15	Large Matches	Arbroath FC is playing Dundee and Dundee Utd in Dec and crowds of around 5000 are expected. Volunteers must remain in the home side of the stadium during these games			x	