

FINAL REPORT

London 2012 Legacy Transfer Report: Event Waste Management



A report on best practice events waste management from the London 2012 Olympic and Paralympic Games with reference to the document 'Zero Waste Vision for London 2012'

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where resources are used sustainably.

We work with businesses, individuals and
communities to help them reap the
benefits of reducing waste, developing
sustainable products and using resources
in an efficient way.

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Front cover photography: Front of House containers - London 2012.

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Executive summary

From the outset The London Organising Committee of the Olympic Games and Paralympic Games (LOCOG) worked hard to ensure that sustainability was embedded into the management of all Games-related projects, venues, information, processes and contracts and set about developing a vision for 'The Zero Waste Games', the delivery of which would require:

" ... exemplary resource management practices and [the promotion] of long-term behavioural change."

This report reviews the planning, implementation and lessons learned from the management of events waste at The Games. It is based on in-depth interviews with representatives from several stakeholder groups including event organisers, contractors and partners.

The Games was an enormous success not only for our team, our capital and our nation, but also the people who worked behind the scenes to develop and deliver the most ambitious waste management strategy and plan of any major event to date.

There were initial concerns from contractors about the proposed waste management system, in particular the introduction of a three-bin scheme to include a compostables waste stream for food and compostable packaging.

These focused on:

- A perceived lack of re-processing capacity for a compostables stream with packaging
- A limited number of providers meeting PAS100/110
- Contamination from Back of House operations and non-compostable packaging
- Possible customer confusion Front of House about how to use the system
- Unrealistic expectations of catering and cleaning staff to segregate effectively

Yet a PAS-accredited facility was found and the three-bin scheme - with a little tweaking - was a success, despite the opinion that compostables might have been a case of running before being able to walk.

However, the vision for the Zero Waste Games was designed to be radical and the targets challenging: the waste management system had to push at the boundaries otherwise it would have been a case of simply maintaining the status quo in terms of sustainable waste management. The Games had to rise to the challenge, had to strive and had to achieve, a bit like the athletes themselves.

Early, effective engagement with contractors offering a practical perspective needs to be balanced with the desire of events organising bodies to innovate and lead. If the aim of a waste management strategy is simply to achieve high tonnages, then it could be argued that a simple, familiar system will achieve impressive results and possibly less contamination. But in the case of The Games this would have been to compromise on the spirit of The Zero Waste Vision. It was ambitious: that was the whole point.

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1.0 About this report

WRAP worked closely with LOCOG throughout the build-up to The Games in order to ensure the London 2012 Olympic and Paralympic Games were as sustainable as possible and to deliver on the vision of both WRAP and LOCOG:

“a world without waste”

“to inspire lasting change”

This report summarises the system used to minimise waste and maximise re-use, recycling and composting during The Games, and provides anecdotal evidence and experiences of best practice approaches. A number of examples of interest to the organisers, contractors and partners of future major events have also been provided.

The report is intended to encourage others involved in the planning and delivery of major events to learn from these principles in order to benefit from the advantages of sustainable events waste management.

The scope of this report covers the system that was planned and implemented to manage waste arisings from events held during the London 2012 Olympic and Paralympic Games and the lessons learned thereafter. It refers to the three main stages of The Games as: pre-event, in-event and post-event.

2.0 Who should read the report

The information within this report will be relevant to:

- Events organising bodies
- Waste managers, re-processors and cleaners
- Caterers and other suppliers
- Partners (sponsors)
- Venue managers

Qualitative data was gathered from key contacts, provided by LOCOG, by way of in-depth interviews. The interviews were semi-structured in approach and based on topic guides that varied slightly according to five stakeholder groups, corresponding to the audiences for whom the report will be relevant.

Copies of the topic guides are provided in the Appendix.

3.0 Scope

The aim of the interviews was to capture information about the:

- Planning for managing waste arisings (and the expectations of stakeholders) pre-event
- Implementation and impact of waste management systems in-event
- Post-event lessons learned for the events sector with examples and benefits

Context to the interviews was set by a background research phase incorporating a review of key literature and two meetings at LOCOG's offices in London.

4.0 Introduction

“Staging the largest then the second-largest peacetime logistical operation in the world in a sustainable way is a significant challenge and LOCOG is already taking sustainability into new areas of event operations.”¹

4.1 LOCOG’s commitments to achieving Zero Waste

- Ensure, wherever possible, that the amount of waste produced in connection with its activities will be minimised
- Ensure that no waste arising within ‘closed venues’ during the operational period will be sent directly to landfill
- Treat all waste as a potential resource within ‘closed venues’ and seek closed-loop solutions (that is, seek ‘real’ recycling solutions, rather than down-cycling) wherever appropriate and practicable
- Work with suppliers, partners and local authorities to encourage alignment of waste management practices at ‘open’ sites with those adopted for ‘closed venues’
- Work with partners to develop tools, public education and outreach initiatives to promote low-waste lifestyles

4.2 The targets

- Ensure that at least 70 per cent, by weight, of operational waste is re-used, recycled or composted
- Take reasonable endeavours to re-use or recycle at least 90 per cent, by weight, of the material arising from the installation and decommissioning of our venues

4.3 The system

- Three primary waste streams:
 - recycling
 - food and compostable packaging
 - non-recyclables
- Colour-coding (containers, bags, signage, on-pack)
 - green – recycling
 - orange – food and compostable packaging
 - black – non-recyclable
- Provision for additional recycling streams e.g.
 - high grade paper (media areas)
 - specialist streams e.g.
 - electrical items
 - ammunition
 - shooting clays
 - equestrian waste
 - clinical waste
- Backhauling of certain waste streams for recycling, where appropriate e.g.
 - used cooking oil
 - plastic milk bottles
 - cardboard

¹ London 2012 Zero Waste Games Vision

5.0 Events organising bodies

In 2008/09 LOCOG commissioned a scoping report to assess the quantities and types of waste that might arise from The Games and to make recommendations about the system that would help to manage it.

“Our scoping work determined that in addition to recyclable items such as paper and drinks bottles, separation of food and food contaminated packaging and consumable items for composting as crucial to delivering Games targets. Additional opportunities exist for further re-use and recycling streams, as well as the requirement for more specialist streams (for example, electrical items, hazardous materials, clinical waste).”²

5.1 Pre-event

LOCOG had the ability to take a ‘command and control’ approach to delivering on the commitment and targets of the Zero Waste Vision by identifying in advance the areas with the potential to create waste and employing strategies either to avoid its generation altogether or solutions for re-using, recycling and composting the waste created.

Therefore, it seemed almost churlish to ask the people responsible for the plan to manage almost 8,000 tonnes of waste (excluding re-use) and such an enormous range of waste materials - from cardboard to carpet, trees to tennis balls, sand to semi-permanent structures - if delivering on the commitments and targets was a priority for them. Of course it was.

However, it was interesting that this was not necessarily the case for the stakeholders with whom they had to engage.

Providers whose existing practices did not meet the standards set out in the various supplier specifications were requested to change their operations, and consequently their training, to accommodate the event organiser’s sustainable waste management requirements and to ensure consistency across the board.

Although The Zero Waste Vision was present in some form from the Pre-Qualification Questionnaire stage of procurement the ambition of the waste management requirements presented a challenge for a number of providers.



“Suppliers responded differently ... Some suppliers got it and changed their practices willingly, others didn’t and thought it was a pain.”

– Event organiser

A catering contractor acknowledged that getting the right thing in the right bin was likely to be testing. “*Talking to the people on the ground: it’s cultural,*” observed one event organiser.



“Sometimes, it can be difficult to achieve a good level of recycling in kitchens with temporary staff, which is common in the events industry.”

- Caterer

² London 2012 Zero Waste Games Vision

5.2 In-event

The compostables waste stream did prove to be a big challenge for Back of House (BOH) catering operations. The event organiser, however, felt that its requirements were clear and that the contractors knew what was expected of them, but they [the contractors] found that getting operatives to segregate effectively was a problem.

During Transition (the period between the Olympics and the Paralympics) the event organiser sought to modify the method for collecting this waste stream BOH, with orange bags being used to collect food waste only in areas where there was little compostable packaging anyway.

“They are casual staff. They come, they go, that’s how they work ... but that’s not what we wanted: we needed them to be vigilant.”

– Event organiser



5.3 Post-event

Success stories

Feedback from some of the contractors, and the results of spectator surveys, indicate that the colour-coded three-bin system was well received by the public - once a confusing symbol was removed from the compostables receptacles.

Signage in workforce dining areas was adjusted to make the system requirements extra clear to Games Makers and other staff, and monitors were stationed at receptacles during busy periods, although the event organiser admitted there were probably not enough.

The application of Key Performance Indicators with contractors also helped to realise significant improvements to contamination levels and event organisers spent more time on-the-ground working with cleaners and caterers during The Paralympics. These measures helped to realise improvements as The Games progressed and demonstrate the benefits of effective communication and pro-active contract management.

Challenges

Contamination

The level of BOH contamination from the catering operations, especially of the compostables waste stream, was disappointing for event organisers.

Some contamination of the compostables waste stream also occurred Front of House (FOH), largely due to confusion about what was accepted in the compostables receptacles. Sponsor signage, which included an image of a bottle, and marketing around the introduction of new plant-based packaging, resulted in incorrect segregation of bottles by both the public and cleaning operatives.

Compost

A change to definitions within the waste hierarchy meant that compost could count as recycling only if it was PAS100/110 accredited. If not, it had to be attributed to recovery. However, almost 900 tonnes of compostable material was lost as a result of contamination.

One Vision	<p>Event organisers felt that the contamination problem was not helped by the number of loads that ended up being rejected by the re-processor.</p> <p>Waste managers, cleaners and partners were in favour of a more familiar two-bin system, but this was neither the ambition nor the requirement for The Games and suggests that they had not necessarily bought in to the Vision entirely.</p>
Lessons learned	
Gain buy-in	<p>The ever-increasing importance of sustainability at international events will result in even more challenging waste management requirements than those of The Games. Effective engagement with contractors at all levels about the importance of sustainability and the thinking behind what it is suppliers are being asked to do is crucial to effective implementation of the system.</p> <p>The criticism of the waste management system, in particular the inclusion of the third, compostables, waste stream, demonstrates either a lack of understanding of the Zero Waste Vision or stakeholders not fully engaged with it.</p>
Ask the experts	<p>The involvement of a composting technical expert much earlier in the process might have helped to identify some of the issues that occurred with re-processing.</p>
Reach agreement on reporting	<p>A protocol for reporting needs to be agreed, if not for the sector then at least for individual events. Event organisers felt that simply reporting the in-bridge data (on wastes that entered the waste management contractor's facility) would have been misleading in terms of the commitments set out in the Vision. The reporting of re-use is difficult currently, as there is no standard method.</p>
Embrace change	<p>Changes to the system in-event resulted in improvements to contamination levels. Events organising bodies should not be afraid of making adjustments to the system and can take advantage of opportunities, such as that offered by Transition in the case of The Games, to make alterations if necessary.</p>
Get it in the bag	<p>Event organisers and cleaners felt the orange bags used to collect the compostables waste stream were not translucent enough, and that better visibility would also have helped to reduce contamination levels.</p>
Compound the problem	<p>Several interviewees mentioned that, with hindsight, it would have been beneficial for the waste management contractor to manage the compound areas: not cleaners. This is a point of agreement amongst stakeholders and therefore should be considered seriously by future event organisers. It was felt that if the waste contractor had been in charge, screening and contamination levels could have been managed more effectively. It was suggested that if space and money had not been constraining factors, separate compounds for FOH and BOH would have helped.</p>

5.4 Re-use³

“In staging The Games, LOCOG will take possession of a number of assets. Post-games these items need to be managed in a cost effective and timely manner to maximise revenue generation and ensure our legacy commitments are met.”⁴

5.4.1 Pre-event

Being aware of the re-use potential of items long before they are built, manufactured or branded helps to reduce waste. Standard sizes should be specified in supplier contracts.



“Bespoke fittings and branded items have a more limited re-use market.”
– Event organiser

In addition, there are two distinct elements: what the contractors bring onto site during venue build and what the event organiser brings onto site during ‘bump-in’ and move-in, which leads to a big and complicated picture. In terms of re-use it is vitally important to know how much of a particular material there is, when it is coming off site and when the recipients can come and collect it.

“The time to find homes for things is as early as possible, not post-event.”
– Event organiser



5.4.2 In-event

Keeping track of assets coming in and going out of venues is crucial, but complex. Efforts were made to do this during The Games, but the process was described as *“not necessarily tied up”* – a comment that relates primarily to the difficulties of having different on-site teams responsible for venue build and reinstatement.

5.4.3 Post-event

Success stories

Over 4,000 tonnes of sand from Horse Guard’s Parade (where there were seven beach volleyball courts) has been re-used at six different community sports clubs, some of which will be used again as volleyball courts! The contractor arranged the logistics for the transfer of the material to the community groups.

Twenty-two semi-mature trees, up to five metres in height, were re-used by Growing Southwark – a community organisation that plants trees in communal, civic and school spaces. LOCOG paid for the transportation of the trees, which, as it involved a crane and a flat-bed truck, would have been beyond the reach of a community group. The alternative (chipping the trees) would have incurred a similar cost without the social benefits.

³ A more detailed report about re-use at The Games is available

⁴ London 2012 Zero Waste Games Vision

Challenges

Bespoke items

Items made specifically to fit certain venues – if they cannot be re-used whole – result in a lot of construction-type waste. This means a lot of board, timber and Medium-Density Fibreboard (MDF), all of which, of course, is potentially re-usable, but only if it remains in good condition.

Unexpected arisings

Woodchip was an unexpected waste stream that came about as a result of inclement weather, and fortunately, a home was secured for 8,000 litres of it (worth £750) at a local city farm. A further 20,000 litres was donated to riding events across the country. The Royal Parks were happy to retain woodchip, for horticultural use.

Lessons learned

Know what you have

It is vitally important to know how much of a particular material there is, when it is coming off site and when the recipients can come and collect it. Back-up plans, in case an original re-use option falls through, are a sensible precaution.

Preserve the quality

Timber with the nails removed is easier to re-use than that which has just been ripped out and still has nails sticking out of it. Similarly, carpet is re-usable (and some used during The Games did go for re-use) but not if it has been trampled all over by contractors dismantling a venue! Preserving the quality of items with a view to their re-use when re-instating venues needs to be handled through effective contract management.

Manage expectations

Recipients should be made aware, however, that quality cannot be guaranteed, although event organisers should endeavour to ensure materials remain in as good a condition as possible.

Assess as soon as

It is important to make sure that any materials called into use in-event, such as the woodchip that was brought in to stabilise muddy paths at a number of outdoor venues, are assessed for re-use if not prior to purchase, then as early as possible to avoid being stuck with it post-event.

Raise awareness in advance

There is a pre-event PR/communications opportunity to raise awareness amongst community organisations of the amount and range of re-usable items that are going to be available post- event. Supplier take-back schemes or identifying opportunities for re-use was incorporated into principal contractors' obligations, but despite this, there were still several instances whereby enterprising event organisers had to find homes for unexpected/unanticipated materials! The use of tennis balls at Surrey Wildlife Trust (as houses for dormice!) is an example of how items can end up having a very different use to their original purpose!

Realise the potential

As well as encouraging others to come up with ideas for some of their more unusual waste streams, it also makes sense for events organising bodies to develop the positive Public Relations value of these stories pre-event, especially if, as in the case of LOCOG, the organisation is not around for long after the event to benefit from the publicity.

6.0 Waste managers, re-processors and cleaners

6.1 Pre-event

London 2012 commissioned a principal contractor to provide waste management services for the 77-days of The Games, including Transition, as well as 'bump-in' and 'bump-out' recycling services for the two to three weeks before and after The Games.

There was an appreciation from this contractor of the ambitious aim and forward-thinking nature of the Zero Waste Vision and its related Targets, but there were also some concerns, such as the ability of the composting industry to cope with the compostable packaging and proportions of packaging to food waste. Composting, however, was always going to be an essential part of the system, in order to reach the 70% target.

A cleaning contractor also praised LOCOG's aim to deliver solutions as high up the waste hierarchy as possible, but referred to the inclusion of the compostables waste stream as *"great ... on paper."*



"Composting at major events is non-existent. It's not widespread."

– Cleaning contractor

The waste management contractor claimed a good understanding of the Zero Waste Vision, related Targets and the overall emphasis that was going to be placed on sustainability at The Games: a view echoed by one of the cleaning contractors.

"The general overall vision of what they had for the Olympics was very clear right from the beginning, but I suppose it was unpacking that into operational practice; some of that could have been dealt with earlier, because we didn't have a lot of lead-in time for some of the things that had to happen."

- Waste manager



The waste management contractor, however, was unconvinced by the packaging and recycling communications strategy in that neither the materials nor the colour-coding matched the public's experience of recycling in the home. A cleaning contractor also agreed with this view.



"So much work has been done in the last decade with getting the public used to recycling particular material types at home and The Games material types were different. It's not what they were used to."

- Waste manager

It is true that within WRAP's Recycle Now campaign there is no colour-coding for compostables. However, green is used to represent recycling and black for non-recyclables in the national On Pack Recycling Label scheme, which has been adopted by many well-known household brands. Local authority collections and Recycling on the Go schemes vary enormously across the country, so a lack of consistency is not necessarily a Games-related issue.

6.2 In-event

The waste coming in to the waste management contractor's facility, which was given over exclusively to The Games from the start of the Olympics until 10 days after the end of the Paralympics, was "not of the standard" that had been hoped for due to the level of contamination.

As well as that arising from the catering, there was contamination from cleaning operations. Some cleaners were reported to have emptied bins without performing even rudimentary decontamination, which can help significantly with delivering uncontaminated waste streams.

As part of reducing contamination levels, during Transition changes were made to the BOH signs situated above receptacles. The main changes made to the signage were to enlarge the materials stream icon in the top left-hand corner and to add 'no plastic' and 'no food' to the signs for the compostables and recycling versions respectively, as illustrated below.

The original (above) and revised during Transition (below) BOH 'above receptacle' signage



Success stories

Perhaps the biggest operational risk was that the waste arisings were going to be drastically different to those planned for. Waste arisings were higher than those outlined in the scoping exercise of 2008/2009, but were within contingency planning levels.

Plastic packaging

The re-processor commissioned to recycle plastic bottles collected by the waste management contractor reported a very positive experience, possibly due to it being 'once removed' from the management of games waste, in its role as a specialist service provider for one particular material.

There was the potential for problems with both quantity and quality, but neither were realised and the re-processor was pleased with the full loads and good condition of the recyclate. No loads were rejected. Four or five years ago there might have been more issues, but plastic recycling is now well established and the industry is "*in the right place for it*" which bodes well for the future of the compostables waste stream.

LOCOG's requirements were more comprehensive than usual for the re-processor, in that it needed to report on every load that was brought in rather than the usual material assessment on 15 per cent of input, but, again, this did not present any particular difficulties.

An interesting observation (also noted by the waste management contractor) and something that stood out as being remarkable was the amount of liquid left in the bottles, which was considerably more than expected, with many reportedly still one-third full. This was not a problem for the processor: it was just more than usual.

The re-processor also agreed that there was some confusion amongst members of the public around the compostables waste stream, especially the introduction of a sponsor's plant-based bottle which, due to confusing marketing messaging, was incorrectly segregated by both the public and cleaning staff.

One contractor reported that, in general, the need for litter-picking was minimal throughout the public areas and that spectators were, on the whole, very tidy.

Challenges

Composting

A hot potato?

Several interviewees perceived a gap between the waste management system and current capability within the composting industry. The waste management contractor took the view that the system at The Games was at least five years ahead of the times, a view echoed by several others including cleaning contractors and partners.

This is in marked contrast to the re-processor's rather matter-of-fact comment: "... *it was a typical input waste stream for an in-vessel composting plant,*" indicating a disconnect between the principal waste manger and the re-processor.

The task of finding a composting plant that was PAS-ready and able to accept material with a high packaging content fell to the principal waste management contractor. The final facility was not chosen until March 2012 and did not receive full approval until June 2012. The lateness of this decision put pressure on the contractor and exposed the project to the risk of not having an avenue for compost identified.

Tests were undertaken at the plant where samples of the packaging were processed through the system and, according to the facility, these were 100% successful.

However, the two per cent contamination threshold at the facility proved to be a significant challenge and caused difficulties throughout The Games. Event organisers and waste managers worked together to try and reduce the level of contaminated material being sent to the facility for composting, but the problem was never completely resolved.

Despite the re-processor's claim that rejection rates were "*negligible*", reports from the waste management contractor suggest that 870 tonnes of material, particularly from BOH, was deemed of insufficient quality to be composted and had to be hauled back to London to an Energy from Waste plant; this equates to over 40 lorry-loads of material.

Lessons learned

Clearer requirements

The disconnect between the principal waste management contractor and the re-processor, which resulted in the rejection of over 40 lorry-loads of potentially compostable material, could have been restored through clearer communication about exactly what was expected and required of both parties.

Be flexible

The waste management contractor was realistic about that whatever had been prepared for in the 18 months prior to The Games was never expected to go exactly according to plan. In practice its models served as a base, which were developed and in some cases changed; they were as one interviewee put it "*living in the moment and dealing with it in real time.*"

Educate the public

A quick win for FOH communications at future major events would be to provide more education for spectators about sustainability in their

packs/programmes and in-event on video screens. At The Games it was noted that there were lots of video clips shown about the various sporting events, but nothing about the waste management system. Perhaps customer-facing catering staff could also have passed on information at the point of sale?

Simple signage

Plastic bottles appeared “*everywhere*” according to the waste manager. Some FOH contamination with plastic bottles was attributed to the sponsorship signage on all receptacles, including those for the compostables waste stream. When this was removed from the receptacles and ‘no plastics’ and ‘no food’ stickers were added, contamination levels were reduced.

Sponsor’s signage was removed from the near the top of, and stickers requesting ‘no food’ and ‘no plastics’ added to, the relevant receptacles



Benefits

Despite the challenges, the waste management company feels it can boast unrivalled major event contract experience, putting it in an excellent position in the marketplace. It also possesses expertise on how waste at major events, for example: air shows, county fairs, concerts and flower shows and venues, for example: permanent sports stadia and exhibition centres, should be managed. It has learned valuable lessons about employee engagement and will benefit from a better trained workforce as a result.

In terms of moving up the waste hierarchy the waste management contractor claimed to be in a more enlightened position as a result of its endeavours to find solutions for a huge number and types of waste streams.

Thanks to its experience of The Games one of the cleaning contractors, which provides other aspects of facilities management, is working to promote the separation of food waste BOH at the venues where it also manages catering operations. The driver for this change is purely financial: it will save money (disposal charges) by diverting the not insignificant volumes attributable to food waste to a composting solution, but its experience at The Games has prompted the action.

7.0 Caterers

7.1 Pre-event

LOCOG commissioned a number of suppliers to provide a range of food services across the venues. Some caterers were tasked with preparing up to 30,000 meals a day; others with delivering catering services to some four million people including the workforce and to families, the media and athletes.

All the catering companies were provided with information prior to The Games, including the Zero Waste Vision document, and details relating specifically to food and packaging.

Preparing for the impact of LOCOG's waste management requirements in advance of The Games took the form, for one contractor, of interpreting this information to ascertain what was expected and how it compared to existing procedures and estimates of waste likely to be generated. The amount of information provided by the LOCOG sustainability team was described as "*amazing*" and having application value at future events.

Hands-on training was provided by contractors to employees including, reportedly, information about the Zero Waste Vision as well as what to put in each bin.

7.2 In-event

There was more food waste and more contamination caused by food than anticipated and predicted by the test events. It was reported that a lot was learned during the test events, but that the caterers hardly retained any the staff so this knowledge was not passed on.



"We thought people would eat the food and leave us with the packaging."
- Waste manager

There was also criticism of the catering operations with regards to levels of knowledge about sustainable waste management practices. An event organiser - and former caterer - expected the contractors to "*know a lot more*", and also felt that the lack of consistency when allocating temporary staff to different placements meant that "*employees simply did not take ownership of the scheme.*"

"The people we engaged [the managers] seemed to know what they were supposed to do, but they didn't pass it down ... you can't blame the people on the ground. The people who run the kitchens are the chefs and when they did take control it made all the difference."

- Event organiser



An observation that might offer an explanation for a proportion of the BOH contamination mentioned was the access other organisations had to the facilities yard, making it impossible to identify who had abused the system. This seemed to be worse during Transition and the period just before and after.

7.3 Post-event

Challenges

Segregation

The biggest single challenge was the level of contamination occurring from BOH catering operations due to the incorrect segregation of materials. As one cleaning contractor put it:

"If a kitchen porter gets a big box of chicken, which comes in a cardboard box and then inside is a plastic stay-fresh wrapper and thinks ... there's 50 pieces of chicken [left] I'm going to throw those away ... Well, the kitchen porter looks at the chicken, 'oh that's food waste that goes in the compostables', but forgets that it's in a box and it's wrapped in plastic, so chucks the whole thing in instead of just chucking the chicken ... what that kitchen porter needs to have done - if he was doing it properly - is put the chicken in the compostables, take the plastic out of the box ... and the box would then go in the separate cardboard stream Back of House."

Lessons learned

Target

It is not enough simply to provide caterers with enormous quantities of information. Communications, such as the Supplier's Guidance Pack, need to be more targeted at their intended audience with specific information for caterers, rather than for all suppliers.

Communicate

One caterer stated they would have preferred better access to the LOCOG sustainability team, but acknowledged that the organisation was not necessarily structured to facilitate this. In early March 2012 a series of meetings was held, after which communication began "*to flow*". The library of information was praised as being re-usable and suitable for use at future events, providing a welcome and "*unique legacy*".

Intervene

Improved contract management, especially the application of Key Performance Indicators with contractors, also helped to realise significant improvements to contamination levels. LOCOG staff were able to spend more time on-the-ground working with cleaners and caterers during The Paralympics and reaped the rewards.

Testing, testing

The test events, according to the waste management contractor, did not accurately reflect the actual catering operations.

8.0 Partners (sponsors)

8.1 Pre-event

LOCOG had a number of worldwide partners, several of whom had a public-facing waste-generating aspect. A well-known international fast-food chain was commissioned to provide four restaurants (in the Olympic Park, Athletes' Village and Media Centre) and along with one other multi-national brand was awarded exclusive sponsorship rights to The Games.

The partner claimed its own waste targets are based on: "*Working towards zero waste to landfill*," and that they were well aware of the Zero Waste Vision and the emphasis that was going to be placed on sustainability before, during and after The Games.

However, and as per some of the other interviewees, they reported that although an overview of the Zero Waste Vision was provided at the beginning of the process, it took a long time for the specifics to come through. With these being provided - or in some cases clarified - only 18 months prior to the start of the event, it was too late to change specific processes to accommodate some of the changes that were required. Therefore, a decision was taken to operate within the spirit of the requirements rather than to the letter.

WRAP's material stream icons were added to packaging to aid customers with using the system. However, the symbols were considered too small to be effective by the partner.

Examples of material stream icons on partner food and drink packaging



8.2 In-event

In general the partner felt well supported by LOCOG during The Games, which was important given their operation was busier than predicted at all outlets. But, this meant that the planned BOH sorting rooms were not utilised as planned. It is unclear as to what degree these facilities were under-used, but reports from the waste management contractor indicate that the material it dealt with from the partner's restaurants (some materials were back-hauled by the organisation, as per its usual procedures) was of a better standard than most other food service providers, which is positive, but not necessarily attributable to this initiative.

The overall impression from the partner was that London 2012 was an "*immensely rewarding*" experience and that, despite the lack of clarity in the early days, LOCOG was very supportive of waste management issues during The Games.

Success stories

FOH receptacles were unique to The Games and had not been used before in any of the partner’s restaurants: a complete change to both provision and procedure. The partner was heartened to witness its customers “*getting it right,*” despite the unfamiliarity of the system.

Challenges

Segregation

BOH too much emphasis was being placed on attempting to separate multiple plastic film types, which caused confusion for kitchen staff. Original signage, which was in use until the end of July featured long lists of items for segregation and was later simplified.

Lessons learned

Timescales

Some packaging was able to be changed in advance of The Games, but some of it was impossible to alter given the timescales, which were considered “tight” by the partner. In the end, event organisers conceded that the emphasis would be placed on FOH and branded packaging. There was, perhaps, a sense of frustration at having to go through both WRAP and LOCOG to approve packaging – could one body take responsibility for this in future?

Simpler signage

Example of the partner’s original BOH signage (left) and the revised, much simpler version (right)



Benefits

Although there are no plans currently to roll it out and its packaging is not set to change imminently, the partner reported a positive response from customers to the three-bin system and claims to have learned a lot about customer behaviour, which will serve to influence future decision-making. “*It has influenced our strategy in terms of what we now know.*” Some products are now certified as compostable.

9.0 Venue managers

9.1 Pre-event

There were two types of venue managers: the LOCOG staff responsible for events venues and the venue managers themselves. For one of LOCOG's venue managers the biggest challenge was staying focused on the priority that had been placed on sustainability.



"People were under intense pressure to get things ready, but it doesn't mean it [sustainability] can get just chucked to the side."

- Event organiser

9.2 In-event

One manager of an existing venue that was used for The Games felt exasperated due to having an external system "*foisted*" upon his venue. He ended up negotiating with event organisers to keep some of the venue's existing system in place. This seemed, partly, to help, but also caused confusion as one system integrated with the other.

"Although I can appreciate what was trying to be achieved during The Games the process for me was frustrating and confusing for all at this venue as we were trying to half-adopt the LOCOG waste strategy and merge it with our procedures/infrastructure."

- Venue manager



9.3 Post-event

Challenges

Compactors

Compactor management at event venues was flagged as being a challenge with "*sheriffs*" from one cleaning company stationed by compactors all day to monitor waste as it came into the yards.

Shortages

In some of the smaller and more outlying venues such as Lee Valley and Box Hill there was a shortage of FOH Olympic Bins. These were substituted with 120- and 240-litre containers, presumably from BOH areas, complete with rudimentary signage. Unfortunately there was also a shortage of residual bins so the three-bin system was not deployed in these venues. One cleaning contractor did not anticipate these unexpected bin sizes and had to buy separate bags with which to line them. He surmised that the mix-up contributed both to confusion from a public perspective and increased contamination.

Lessons learned

Explain the change

Existing venues do not appreciate changes to their systems if, in their eyes, existing waste management practices are already effective. Prior to merging operations it should be ascertained whether the existing system is successful and if reporting is aligned with requirements.

10.0 Legacy learning points

Lesson learned		
Pre-event	Major events	All events
Engage effectively with contractors, at all levels, about the importance of sustainability and the vision behind what it is suppliers are being asked to do on-the-ground.	⊙	⊙
Involve technical experts early in the process to help to identify potential issues, such as that which occurred with compost re-processing.	⊙	
Restore disconnects, such as that between the principal waste management contractor and the composting re-processor, through clear communication about exactly what is expected and required of both parties.	⊙	⊙
Review and, if necessary test, all signage – especially on receptacles - to ensure clarity and comprehension, especially with regards to sponsorship.	⊙	⊙
Agree a protocol for reporting requirements. Event organisers felt that for The Games simply reporting the in-bridge data (on wastes that entered the waste management contractor's facility) would have been misleading in terms of the commitments set out in the Zero Waste Vision for London 2012.	⊙	⊙
Ensure that existing venues either comply with reporting requirements or understand the need for changes, in order to minimise the risk of having to merge systems.	⊙	
Target communications, such as the Supplier's Guidance Pack, at their intended audience; in the case of The Games, with specific information for caterers, rather than for all suppliers. Consider whether there is appropriate access for suppliers to key sustainability personnel. Consider the early implementation of regular "deep dive" meetings with contractors.	⊙	⊙
Take account of the long lead-in times needed for global brands to make operational changes, to packaging for example, when planning the system.	⊙	
In-event		
Be realistic – and flexible - about the fact that whatever has been prepared in advance is unlikely to go exactly according to plan on the day. Test events will offer an indication as to actual operations, but may not be exactly the same.	⊙	⊙

Lesson learned

In-event *continued*

Make adjustments to the system in-event and take advantage of opportunities, such as that offered by Transition, to intervene and make alterations if necessary. Changes to the system during The Games resulted in improvements to contamination, for example.

Major events

All events



Adopt a more hands-on approach, if necessary. Sharpening up of contract management, especially the application of Key Performance Indicators with contractors, helped to realise significant improvements to contamination during The Games.



Incorporate the management of compound areas into the waste manager's contract to improve screening and contamination levels. Consider separate compounds for FOH and BOH.



Provide education for spectators about sustainability in packs/programmes and in-event on video screens. Employ customer-facing catering staff to pass on information at the point of sale.



Re-use

Pre-event

Incorporate the need to use supplier take-back schemes or identify opportunities for re-use into principal contractors' obligations.



Raise awareness pre-event amongst community organisations of the amount and range of re-usable items that are going to be available post- event.



Develop the positive Public Relations value of re-use pre-event, especially if, as in the case of LOCOG, the organisation is not around for long afterward to benefit from the publicity



In-event

Ensure any materials called into use in-event, such as the woodchip that was brought in to stabilise muddy paths at a number of outdoor venues during The Games, are assessed for re-use if not prior to purchase, then as early as possible to avoid being stuck with it.



Know how much of a particular material there is, when it is coming off site and when the recipients can come and collect it. Back-up plans, in case an original re-use option falls through, are a sensible precaution.



Preserve the quality of items when re-instating venues. Make recipients aware, however, that quality cannot be guaranteed.



Appendix

Topic Guide A (LOCOG)

Pre-event

Was the implementation of the Zero Waste Vision a priority for you in dealing with your stakeholders?

Were your stakeholders aware of LOCOG's vision for the Zero Waste Games or the emphasis that was going to be placed on sustainability at London 2012?

Did you feel that waste management at The Games was a priority for your stakeholders?

How much contact did you have with your stakeholders regarding waste management pre-Games?

Were any of your stakeholders required to change their existing practices to accommodate LOCOG's waste management requirements?

If so, which of their operations were affected most?

How did your stakeholders view LOCOG's waste management requirements?

How did you advise/support your stakeholders in implementing waste management measures?

Did you have to compromise on the implementation of waste management measures? If so, which aspects?

In-event

Which aspects of working with your stakeholders on waste management went well?

Why did these work?

What did not go so well?

What were the main reasons for this?

Post-event

How would you describe your overall experience of working with your stakeholders on waste management issues?

Will any of your stakeholders be keeping any of the waste management measures they implemented?

Do you think the Zero Waste Vision was realistic?

Do you think the Zero Waste Vision will be achieved?

Do you think your expectations of the impact of The Games on your stakeholders, relating to waste management, were realistic?

How did your experience of working with your stakeholders on waste management during The Games differ from your expectations?

What would be the one piece of advice you would pass on to others planning and delivering sustainable waste management at future international events?

Topic Guide B (venues)

Pre-event

What type of events does your venue normally host?

Which events did you host during The Games?

How important was waste management to your venue prior to your involvement with The Games?

Which aspects of waste management were important to your venue prior to The Games?

Were you aware of LOCOG's vision for the Zero Waste Games or the emphasis that was going to be placed on sustainability at London 2012?

How would you rate the level of information about waste management provided to you pre-Games?

Did you have to change any of your existing practices to accommodate LOCOG's waste management requirements?

If so, what were the main differences to your usual operations?

Did you consider these waste management measures an improvement - or otherwise - to your usual operations?

What approach did you take to training your workforce about waste management in preparation for The Games?

Was health and safety/security an issue - perceived or actual - when implementing waste management measures?

In-event

Which aspects of your service provision, related to waste management, went well?

Why did these work?

What did not go so well?

What were the main reasons for this?

What challenges did you face with your workforce when using the system? How was this addressed?

Post-event

How would you describe your venue's overall experience of the Zero Waste Games?

How would you describe your experience of working with LOCOG on waste management issues?

How would you rate the level of support for waste management provided to you during The Games by LOCOG?

Will you be keeping any waste management measures implemented as result of The Games?

Do you think the Zero Waste Vision was realistic?

Do you think your expectations of the impact of The Games on your business, relating to waste management, were realistic?

How did your experience of waste management during The Games differ from your expectations?

Will your venue behave differently in the future as a result of The Games?

What added value would you say your venue has gained from its Games experience?

What would be the one piece of advice you would pass on to others supporting sustainable waste management at future international events?

Topic Guide C (suppliers/caterers)

Pre-event

What service does your organisation usually provide?

What services were you contracted to provide to The Games?

How important was waste management to your organisation prior to your involvement with The Games?

Which aspects of waste management were important to your organisation prior to The Games?

Were you aware of LOCOG's vision for the Zero Waste Games or the emphasis that was going to be placed on sustainability at London 2012?

How would you rate the level of information about waste management provided to you pre-Games?

Did you have to change any of your existing practices to accommodate LOCOG's waste management requirements?

If so, what were the main differences to your usual operations?

Did you consider these waste management measures an improvement - or otherwise - to your usual operations?

To what extent did you train your staff about waste management in preparation for The Games? What approach did you take to training your workforce?

Did you use any LOCOG training materials? Were these useful - or not - and why?

Was health and safety/security an issue - perceived or actual - when implementing waste management measures?

In-event

Which aspects of your service provision, related to waste management, went well?

Why did these work?

What did not go so well?

What were the main reasons for this?

What challenges did you face with your workforce when using the system?

How was this addressed?

Post-event

How would you describe your organisation's overall experience of the Zero Waste Games?

How would you describe your experience of working with LOCOG on waste management issues?

How would you rate the level of support for waste management provided to you during The Games?

Will you be keeping any sustainable waste management measures implemented as result of The Games?

Do you think the Zero Waste Vision was realistic?

Do you think your expectations of the impact of The Games on your business, relating to waste management, were realistic?

How did your experience of waste management during The Games differ from your expectations?

Will your organisation behave differently in the future as a result of The Games?

What added value would you say your organisation has gained from its Games experience?

What would be the one piece of advice you would pass on to others supporting sustainable waste management at future international events?

Topic Guide D (partners)

Pre-event

What service does your organisation usually provide?

What was the nature of your partnership at The Games?

How important was waste management to your organisation prior to your involvement with The Games?

Which aspects of waste management were important to your organisation prior to The Games?

Were you aware of LOCOG's vision for the Zero Waste Games or the emphasis that was going to be placed on sustainability at London 2012?

How would you rate the level of information about waste management provided to you pre-Games?

Did you have to change any of your existing practices to accommodate LOCOG's waste management requirements?

If so, what were the main differences to your usual operations?

Did you consider these waste management measures an improvement - or otherwise - to your usual operations?

To what extent did you train your staff about waste management in preparation for The Games? What approach did you take to training your workforce?

Did you use any LOCOG training materials? Were these useful - or not - and why?

Was health and safety/security an issue - perceived or actual - when implementing waste management measures?

In-event

Which aspects of being a Partner, relating to waste management, went well?

Why did these work?

What did not go so well?

What were the main reasons for this?

Post-games

How would you describe your overall experience of being a Partner to the Zero Waste Games?

How would you describe your experience of working with LOCOG on waste management issues?

How would you rate the level of support for waste management provided to you during The Games?

Will you be keeping any waste management measures implemented as result of The Games?

Do you think the Zero Waste Vision was realistic?

Do you think your expectations of the impact of The Games on your business, in terms of being a Partner and relating to waste management, were realistic?

How did your experience of waste management during The Games differ from your expectations?

Will your organisation behave differently in the future as a result of The Games?

What would you say your organisation has gained from its Games experience?

What would be the one piece of advice you would pass on to Partners supporting sustainable waste management at future international events?

Topic Guide E (waste managers/re-processors and cleaners)

Pre-event

What services does your organisation usually provide?

What service were you contracted to provide to The Games?

How important was sustainable waste management to your organisation prior to your involvement with The Games?

Which aspects of sustainable waste management were important to your organisation prior to The Games?

Were you aware of LOCOG's vision for the Zero Waste Games or the emphasis that was going to be placed on sustainability at London 2012?

How would you rate the level of information about waste management provided to you pre-Games?

Did you have to change any of your existing practices to accommodate LOCOG's requirements?

If so, what were the main differences to your usual operations?

Did you consider these measures an improvement - or otherwise - to your usual operations?

What approach did you take to training your workforce in preparation for The Games?

Was health and safety/security an issue - perceived or actual - when implementing waste management measures?

In-event

Which aspects of your service provision went well?

Why did these work?

What did not go so well?

What were the main reasons for this?

What challenges did you face within your workforce when managing the system?

How was this addressed?

Post-event

How would you describe your organisation's overall experience of providing waste management/re-processing/cleansing services to the Zero Waste Games?

How would you describe your experience of working with LOCOG on waste management issues?

How would you rate the level of support provided to you during The Games?

Will you be keeping any sustainability measures implemented as result of The Games?

Do you think the Zero Waste Vision was realistic?

Do you think your expectations of the impact of The Games on your business were realistic?

How did your experience during The Games differ from your expectations?

Will your organisation behave differently in the future as a result of The Games?

What would you say your organisation has gained from its Games experience?

What would be the one piece of advice you would pass on to the waste managers/re-processors/cleaners for future international events?

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