



# Awards 2014 Case Study

Award Winner

## Innovation Award

### Waste Reduction Strategy

Without the contagious enthusiasm and conviction of Jo Charles, environmental champion for Willmott Dixon, the ground-breaking scheme that won CEW's Award for Innovation may never have got off the ground.



Senior environmental manager for the privately-owned contracting, residential development and property support company, Jo admits that challenging embedded attitudes towards site waste - and finding a quantifiable way of monitoring the changes - has been far from easy.

Nevertheless, this is exactly what has been achieved and subsequently acknowledged by CEW judges as an innovative solution to the long-standing problem of site waste management, with industry-wide implications.

The idea for this scheme came from then management trainee, now assistant buildings manager, Mark Wolverson about recycling and diverting waste from landfill. Identifying who was creating what waste on site seemed to them a good starting point. The next step was to challenge mindsets and change behaviour on site, favouring a carrots rather than sticks approach. Mark's idea demonstrated that site teams suggestions offer a practical and in this case, very effective solution to an historical challenge.

Jo explains: "We needed to change people's perceptions about common behaviour and we wanted to incentivise contractors to limit waste, not upset them. It's about working in partnership to benefit a particular project and the industry as a whole."

The scheme they developed entails the use of the usual open skips but in a fenced, lockable area, which was calculated to be more economical than using lockable skips. The cost of a skip is divided by the number of wheelie bins it will take to fill it, and an amount added for a fork lift truck driver and other associated expenses.

When companies are tendering, they are required to make an allowance for waste, based on the number of wheelie bins they estimate they will need to tip. This figure needs to be realistic and stand up to scrutiny. Each time a wheelie bin is taken to the skip, it is recorded against that contractor and deducted from their allowance. If they reuse materials

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Jo Charles

Senior Environmental Manager

and come in under budget, Willmott Dixon credits them the remainder: if they go over budget, the difference comes off their account.

Whilst it sounds a fairly home-spun solution, it is already reaping rewards and is constantly being refined thanks in great measure to feedback from sites, several of which Jo visits every week. “We listen to views and feedback and try to adapt the scheme to make it as workable as possible,” said Jo. So, the initial method of forklift truck drivers jumping out of their cabs to sign tickets has been replaced by a less time consuming token system which, long-term is likely to become more sophisticated still.

Jo is clear that no sub-contractor produces waste on purpose but the fact that the main contractor usually picks up the bill for waste skips has, at times encouraged bad practice such as dumping damaged items rather than returning them to the manufacturer or leaving materials to the mercy of the elements. To help reverse this attitude, Willmott Dixon is setting up designated recycling areas, where wood is stacked properly so it isn't damaged and is easy to find. The next stage is to establish official 'swap shops' on site, with an audit trail to ensure it remains above board.

There are still logistical challenges to overcome, such as adapting the scheme for developments over two storeys high, where wheelie bins are less practical. And, of course, any proposal must gain approval from Willmott Dixon's health and safety team, winners of a CEW award in 2013.

Accepting change has been a struggle for some staff but with every job in Wales and the West running the scheme from the beginning of 2014, there is no turning back. For the most part, sub-contractors have bought into the scheme as they can see that it is fair and transparent. Its success relies heavily on those in the crucial position of recording information accurately at the waste area and locking it securely, as without being able to match waste to contractors, the system collapses. Nevertheless, Jo is convinced that the benefits outweigh the risks and the more it runs, the slicker it will become.

In terms of hard results, all construction sites are different, making scientific comparisons difficult. However, Willmott Dixon does have the advantage of providing 'off the shelf' school buildings and so were able to have a 'control'



site – one that had been built in Rugby before the introduction of wheelie bins – to compare with a virtually identical new build. The comparison showed a 50% reduction in waste, discounting demolition waste. And whilst there are no other direct site comparisons to demonstrate the success of the scheme, comparisons against prelims are equally impressive. These figures, coupled with Jo's determination, mean waste is now a hot topic at board level and each regional branch of Willmott Dixon has been tasked with trialling the system on one of its sites.

Data produced will help the industry on many levels. It will reduce waste by ensuring contractors are more careful and re-use where possible and help design out waste, maintains Jo. “If we can see a roofer produced excess waste, for example, and he says it was because the parapets were fiddly to cut, we can pass that on to designers so that they are aware of the issue.” It also provides historical data, eliminating the need to estimate a waste budget or allocate the usual percentage for waste, enabling contractors to be more competitive.

Building on their reputation as leaders in waste management, Willmott Dixon have introduced an exciting scheme that shakes up behaviours and attitudes, and provides incentives for contractors and individuals to take responsibility for site waste. Others will now have little choice but to follow where Willmott Dixon has already dared to tread.