

## INFRASTRUCTURE &gt; BUS WASH

# Abellio Battersea keeps green and clean

**GREEN ISSUES**

Abellio's Battersea depot was revamped and opened last May by Boris Johnson and aims to be one of the greenest depots in London. *Coach & Bus Week's* Meera Rambissoon reports on its rainwater harvesting system and its green bus wash

Most of us grimace at the sight of rain especially when the great British summers have kept true to form, but at Abellio's Battersea depot in South London, rain plays a key feature as the primary source for its bus wash. This means little reliance on mains supplied water and not only that, a bacterial wash which is free from chemicals, is used to clean the buses – both these features help Battersea in doing its bit for the environment.

The depot itself is built on sustainable roots. Standing on the site of the old Victorian depot, which was originally used for train stabling, a new facility was opened last May by London mayor Boris Johnson. Dave Hillier, engineering manager for the depot points out the facility was built on the crushed railway buildings, previously in place.

Operations director Steve Perks, explained when the new premises were built, a rainwater harvesting system was integrated on the roof.

After collection from the roof, the water is cleaned using UV

filtering and stored in three 9,000 litre tanks which have been lodged deep underground, from which it is pumped into the bus wash. There is a further 14,000 litres of storage within the bus wash system, which together with the 19,000 litres total available to the bus wash provides 41,000 litres of stored water at the site. "It's a big, big hole in the ground," said Steve. "But you wouldn't know it was there."

"The water is collected and recycled using reclaim equipment," he continues. "Not all the water is retrieved when we do the reclaim but we get 90% of it back and we clean it using hydrocyclone and carbon filters – it's a bit like a Dyson vacuum or garden pump filter – and it feeds back into the wash. The remaining 10% is topped up."

Commenting on the key benefit of the system, Steve says: "We practically don't use any water supplies. Recycling bus wash water isn't new but what we've noticed is how the water harvested from the roof stagnated and started to smell."

This problem is eradicated by the use of the bacterial, PH-neutral product used in the bus wash, called Nu-KleenSmell which the depot has been using for the last



**Top: Efficient and environmentally friendly bus washing at Abellio. Above: Steve Perks**

**"There is so much rain water, we get over flow. We had been running the garage for nine months and one summer it stopped working. The rainwater had lasted that long"**

**Steve Perks** Operations director

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**7**

Number of routes operated at Abellio's Battersea depot

**540**

Number of drivers at Abellio's Battersea depot

**9,000**

Capacity of each of three rail water storage tanks at Abellio's Battersea depot



## Abellio: a brief history

**Abellio is a wholly owned subsidiary of NS (Dutch Railways) and was previously called NedRailways until its name change in 2010. It operates in the UK rail market through its Merseyrail and Northern Rail businesses, and operates bus and rail contracts in several federal states in Germany through Abellio Deutschland and bus contracts in the Czech Republic through Probo Bus.**

**Abellio entered the UK bus market in June 2010 by acquiring National Express' bus operations Travel London and Travel Surrey, now operating under the names Abellio London and Abellio Surrey. With 1,600 employees, Abellio London and Abellio Surrey operate 507 buses on 71 routes across Central London, South London and the Surrey region, and carry over 270,000 passengers per day.**

two and a half years. It is produced by a company called Innu-Science who supply Nu-KleenSmell to all Abellio's six London depots and also to bus services run by South Yorkshire PTE. The company also supplies biologically based cleaning products to public buildings, offices and bathrooms through Bunzl Cleaning & Hygiene Supplies.

"The products are environmentally friendly – not chemical but biological and non-hazardous," explains Amy Dyall, Innu-Science's key accounts manager. Dirt or 'bad' bacteria on the buses are a food source for the

good bacteria in the product, which is inactive in its concentrated state. It is packed with enough food in its dormant state, and when mixed with water and introduced to food on the buses, the product is activated.

The supply of the rainwater doesn't appear to be a problem – far from it. "There is so much rain water, we get overflow," says Steve. "We had been running the garage for nine months and one summer it stopped working. The rainwater had lasted that long." Underground pipework connects the tanks to two reclaim units, which sit next to the



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bus washes. They connect to two of three bus washes; for the third, water is pumped overhead and a third reclaim unit will be built.

The existing units were introduced in 2009 and used without rainwater harvesting but to pump Nu-KleenSmell. Amy explains the product is automatically diluted at the right ratio and goes straight onto the buses from the reclaim unit. Although it requires topping up from time to time, Amy says: "There is an ongoing positive effect and cycle and the product continues to be active. When you get up to the right level, you can reduce the dosage manually.

"In the winter season, when the buses are dirtier, topping up is needed but in summer the on-going effect works slightly better."

Amy adds: "Because Nu-KleenSmell is non-corrosive, it is OK to be pumped through the system unlike chemicals."


Highlighting a key advantage, she enthused: "Because the product is PH neutral, it balances the system and you don't get streaking which used to be a major problem."

Abellio was one of the first companies to use Nu-KleenSmell in the UK - with Walworth and Beddington depots using it from 2009 as well as Battersea. The

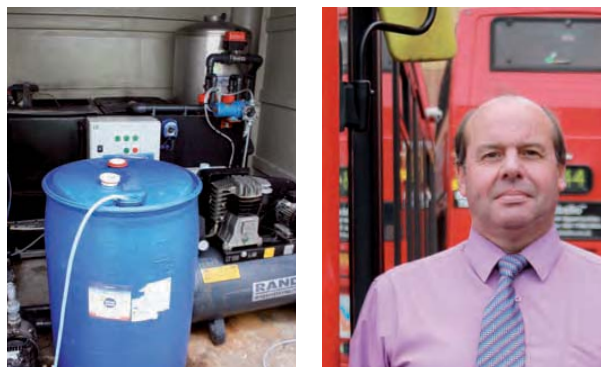
### Innu-Science: a synopsis

Innu-Science is a global biotechnology company specialising in research, development, production, and distribution of professional high performance cleaning products. Its UK headquarters are in Surrey. Over 20 years ago, it began developing 'Green' products - and has more of these certified by EU Ecolabel than any other European manufacturer. Its products are found in most sectors of industry - from health to transport - including key customers such as Montreal Metro in Canada and RTL, SNCF, Transpole and Veolia in France.

The company provided all cleaning products for the FIFA World Cup in South Africa.

 For more information about the company and its products visit [www.innu-science.co.uk](http://www.innu-science.co.uk)

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Top: 90% of wash water can be reclaimed and recycled. Above left: Reclaim system automatically doses concentrate. Above: Dave Hillier. Below: Water reclaim & pumping equipment neatly housed above the underground tank system alongside the automatic wash installation



product will be introduced to Abellio's remaining three depots in London - Twickenham, Hayes and Byfleet in the next four months.

Dave confirmed he had encountered no problems at all with the system and product. However, he confessed: "It's a good idea to shut the window during the bus wash." He used to work at Go-Ahead and took a group of school children through the wash. "I had a window open and I got told off because all the kids got soaked!"

The product is supplied not through Innu-Science itself but through a cleaning company called Dynamique. Abellio previously used a company called Resource through which Innu-Science made contact with Abellio.

Would Dave recommend using rainwater harvesting systems to other depots? He says unless the depot is new built, it would not necessarily be cost effective - indicating a site like West Ham may not lend itself to such development.

"You can use the Innu-Science product," he adds. For example, at Abellio's depot in Byfleet, which is a lot smaller, the bus wash isn't automatic and Nu-KleenSmell is applied using a squeegee.

Amy says Nu-Action, a similar product, is used for the interior of buses and to keep the garage clean. Plumbed into the wall, the dosing system is used for filling up buckets. With this system Dave says it's a matter of using old-fashioned "elbow grease".



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