

Goodbye to Gum

A reprint of an article in



March 2007

A case study showing how Magic-Cote
Porous Surface Protection
is keeping Westminster City Council's
pavements free of gum

Goodbye to Gum

Imagine virtually gum-free, self-cleaning footways at the heart of our towns and cities

Over the last decade, chewing gum has become almost as ubiquitous as smoking related litter, but is a far worse blight. It has always been litter but the systems required to remove it are so labour-intensive and aggressive that removal of gum is the province of specialist providers, not a core street cleansing service.

Since 1993 Westminster City Council (WCC) has tried all sorts of options for removing gum-scrapers, chemicals, cryogenics and various machines using either water or steam at a very high temperature and very high pressure.

By 1994 WCC was operating two high temperature/high pressure machines using water and one using steam to remove chewing gum from a few high profile streets two to four times a year. It was instrumental in the setting up of a technical working group with ENCAMS (among others) and persuading Wrigley to print the "chew it, wrap it, bin it" graphics on its packaging.

In August 2001 a specialist chewing gum removal contractor was engaged to remove around 300000 pieces of gum on Oxford Street between Marble Arch and Oxford Circus. The company deployed a machine with two operatives working five nights a week but fresh gum deposits were already extensive within a fortnight of the job beginning. It took four months to complete, by which time the north side of the street was almost as bad as when work had begun.

On the basis of that Oxford Street project, and assuming varying frequency of cleaning according to levels of use, WCC estimated that the

annual cost of gum removal would be £9m a year.

In 2004 WCC mounted a campaign for the imposition of a tax on gum to fund its removal from footways in the event that manufacturers were unwilling to provide it. Some advocated campaigning and enforcement as alternatives to tax, rather than as complementary elements. They failed to acknowledge, however, the limited impact these would have, or the fact that neither would remove a single piece of the tens of millions of pieces of chewing gum currently stuck fast to footways throughout the UK.

In 2005 Westminster hosted a capital cities "Gum Summit" to which members and officers from Cardiff, Edinburgh, Belfast and Dublin were invited. After the summit Dublin embarked on establishing the taxing option, while the UK Government advocated a strategy of campaigns and enforcement. Dublin received 7m Euro (£4.9m) from Wrigley, the UK received just £600 000.

In May 2005 WCC became aware of a product called Magic Cote, a water-based blend of polymers and surfactants which, according to the makers, forms a permeable membrane about 3mm deep within surfaces to which it is applied. The membrane breathes one way so moisture can escape but not penetrate it. It is described as a surface protector rather than a sealant and the manufacturer claims it will last for up to five years.

WCC arranged a trial on a couple of slabs of newly-laid Yorkstone in Coventry Street, which links Piccadilly Circus to Leicester Square and is one of the busiest stretches of footway in the UK – 80 000 people each day pass along it – and is probably one of the streets most heavily blighted by chewing gum in

the UK (two and a half times greater than Oxford Street).

The laying of the paving was still in progress and, as usual with new installations, to allow the bedding to settle and grouting to cure no cleansing vehicles were allowed to traverse the footway for 30 days.

Shortly after each completed section opened, particulate carbon and the intensity of footfall made their mark (as did the illegal hotdog sellers at night) and the slabs rapidly darkened. By the time 30 days had elapsed the original appearance of the footway was just a memory and fresh chewing gum was already in evidence.

The performance of the test slabs was encouraging but inconclusive (it was too small an area) so in August a much larger area was deep cleaned, within which a sizeable proportion was treated.

Over the next few weeks what had been encouraging on the small area was repeated... and amplified. Gum dropped on treated slabs was being walked away on the soles of people's shoes or picked up during the twice-weekly visits of a Euromec Aquazura machine. Pieces that did catch on the slabs could mostly be scuffed off or, if left for a few days, started to break up and disintegrate. Significantly in all cases there was no tell-tale oily footprint left behind (proof that the treated surface was resistant to oil, preventing the gum from sticking).

In September, following the first significant rainfall for months, a photograph illustrating the self cleaning effect of the treatment was taken by an employee of the Heart of London Business Alliance (HoLBA), which has offices nearby. The treated area stood out from the surrounding footway as if it had been illuminated from below.

Only four months after installation gum spots had accumulated in a density of 70 pieces per square



Michael Newport
Westminster City Council

metre, and in some places in three layers. During 16 weeks within an area of just under 1800m² over 100 000 pieces of gum had been spat onto the pavement.

Encouraged by the success of the trial, a strategy for rescuing Coventry Street became viable- In simultaneous operations the footway would be intensively deep cleaned during the removal of chewing gum and then treated. A third element of the strategy was for HoLBA's Business Improvement

District operators in the area to purchase, house and operate a Euromec D802 machine. This would be deployed to ball up and remove gum on a daily basis (assuming HoLBA is re-elected, this element will be implemented in March 2007 – until then, as an interim measure, WCC deploys an Aquazura machine three times a week).

Funding for the surface protection was secured and work began in October. The quantity of gum to be removed meant WCC could only deep clean and apply Magic Cote to 100–130m² of footway each day. Once 50m² had been deep cleaned the product was applied even though the slabs were still damp, and even during light rain.

Doing the whole of the eastern side of the footway first meant early starts to avoid blocking the entrances to business premises during

operations. It also meant that at one stage people could appreciate the contrast between the deep cleaned, treated side and the area yet to be done. The exercise certainly raised awareness of just how serious a blight chewing gum can be.

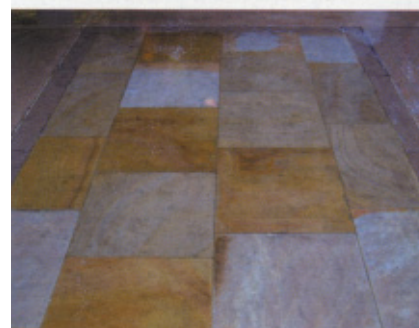
The work was completed in November and the results speak for themselves. Chewing gum continues to rain down onto the pavement, but now it can be managed through fairly low-level, routine operations.

Coventry Street was a recovery operation but, in future, treatment of new installations prior to their opening will protect the City Council's investment at minimal expense.

It may not have been cheap, but the treatment will last for up to five years. Compared to the £9m cost each year of removing gum, not to mention the labour and time required, it is a more than viable option.

Virtually gum-free, self-cleaning footways at the heart of our town and city centres are an affordable reality and available now. All that remains is for gum manufacturers to at least share the cost, or for Central Government to impose a tax on the product to provide the funding.

This is a case study and the reported effectiveness of products mentioned within it are taken from the reports of Westminster City Council with no independent testing by CIWM.



From top: the streets as they were; cleaning outside Planet Hollywood; the application; a comparison between treated and untreated paving; and the finished product

CIWM Says...

CIWM'S COLLECTION, Recycling and Environmental Cleansing Special Interest Group has, for a number of years, been making representations to Defra about the issue of gum removal on Britain's streets and asking that it be taken seriously. In liaison meetings CIWM supplied information on the cost of removing this material from the street for a number of local authorities. ENCAMS has done research into the behaviour of gum users and the reasons why they throw it on the floor and not in the bin. This research formed the basis for the campaigning work mentioned in the article.

There are many who say education is the way to make people stop dropping gum and there are others who advocate taxation, so that the money can be used to remove the material. Taxation could lead some people to argue: "I have paid to have the gum removed, so why should I worry about dropping it?"

As ENCAMS' research highlighted, there is a group that will drop gum regardless of who see or says anything. This is the hardest group to change and could in theory increase in number if the taxing option is taken. Dublin is cited as a case study in gum taxation. Is there any indication that this has made any difference, and are the streets now gum free because the money is there to cleanse the material away?

The following is an extract from an article in the g2 supplement of The Guardian written by Jeremy Paxman entitled "Filthy Britain."

Guardian
Unlimited

Of course, you can't describe anywhere in London as spotless unless you are gum-blind. The streets and pavements of Soho are, like everywhere else, liberally spotted with pale grey ovoid blobs. At certain intersections where, for mysterious reasons, lots of people suddenly come to the conclusion that they've had enough of their gum, the spots begin to join together into a continuous oyster carpet.

Further south, things are much the same. The worst you can say about Piccadilly Circus at this time of day is that the exteriors of the buildings are a bit grimy at street level. **Outside the Hard Rock Cafe, they even seem to have made a start on the gum; either that or the pavement is freshly laid.**

According to Leith Penny from Westminster's environment and planning office; the council spends £32m a year on waste collection; street cleaning and "trying to influence peopled behaviour." **He says the gum-free bit of pavement I spotted near the Hard Rock has actually been treated with something so the gum doesn't stick any more, at a cost of £13,000.**

The following is an extract from a letter from Michael Newport, Operations Manager – (Street Cleansing) Westminster City Council which appeared in the May 2007 edition of CIWM in response to the above.

The journalist apparently visited Piccadilly Circus and walked along the north side of Coventry Street (the treated area featured in the article in CIWM) in fact, it's now five months since I tried out MagicCote there so I'm sure you can well imagine how satisfying the journalist's observation of conditions outside the Hard Rock Cafe are to me:

"Outside the Hard Rock Cafe, they even seem to have made a start on the gum, either that or the pavement is freshly laid."

RESULT!

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