Guidance for introducing food waste disposers to domestic households

Summary
The guidance contained in this summary document is based on the experience of managing the Local Government Association's (LGA) three food waste disposer (FWD) pilot sites and the subsequent results of the extensive monitoring of these sites. Food waste disposal (FWD) units are small grinders that are installed in the kitchen sink outlet of domestic households. The householder separates food waste and flushes this down the plug and into the unit with a small flow of cold water. Most foods are reduced to small particles and pass via the kitchen drain to the public sewer.

The monitoring included investigations into the impact of FWD on the sewer network, the residual waste volumes and face-to-face interviews with householders about usage. These results were published in an LGA report 'The impact of household food waste disposers: results of the field trials in Shropshire' and were discussed at a launch roundtable with a number of local authorities in July 2015. Further information about the project, the pilot results and the roundtable can be found on the LGA website http://www.local.gov.uk/productivity/-/journal_content/56/10180/3510540/ARTICLE.

During the roundtable it was agreed that a short guidance document would be beneficial to assist councils in deciding whether or not to encourage FWD use in their areas. The five points below are those that were agreed to be the most useful. It is important that councils consider each of these five points before encouraging or supporting FWD use in their areas. It is assumed in this guidance that a third party, such as a private contractor or a housing association, is building the properties that will be fitted with FWD and that FWD are only being fitted to new-build properties. However, the guidance may still be relevant to authorities who are only supporting or encouraging householders to retrofit FWD to their own properties.
Summary

1. Condition of the existing sewers

The condition of both the existing sewers and the capacity of the relevant wastewater treatment works are important. A recent report for UKWIR (UK Water Industry Research): ‘Food Waste Disposers: Consequences for the water industry of widespread market penetration’, studied the impact of FWD on the sewer network using laboratory trials. This report concluded that where there are pre-existing problems in the sewer then FWD would exacerbate those problems. However, where there are no existing problems in the sewer, then FWD will not negatively impact the sewers. The one area where there is likely to be a problem, regardless of the condition of the sewer, is where there are interceptor traps. These are u-shaped sections of pipe that were more commonly fitted before the 1920s, and therefore, where the sewer network is older, it is important to check whether or not there are interceptor traps in the local area.

The local water and sewerage company is the obvious place to check the condition of the local sewer network. The Environment Agency can also give information on locations of sewer blockages or overflows.

Therefore it is recommended that FWD be encouraged or supported only on new-build developments in areas where it is agreed that there are no problems with the local sewer network.

2. Kitchen design

The FWD in the pilot sites tended to be fitted in the smaller half-sink of the properties, rather than in the main sink. Interviews showed that this was convenient for the householders who mainly used the FWD when clearing up after a meal and when preparing food, often at times when the main sink was also in use.

The FWD is fitted below the kitchen sink and therefore takes up space in the cupboard. Many developers and housing associations have a minimum specification for the volume of space that is available under the sink, so it is important to check not only that the FWD fits in the cupboard, but also that it leaves enough space. The inclusion of washing machines and dishwashers will also impact this cupboard space. The FWD requires an electrical connection and it is more practical for this to be in place before the FWD is fitted.

In two of the three pilot sites when householders upgraded their kitchen work-surface to granite, the developer was unable to fit the FWD. Be aware of potential upgrades to kitchens that may affect the layout of the kitchen and the ability to fit FWD.
3. FWD Specifications

A minimum specification for the FWD is required before beginning a process to purchase the technology. There may be benefits to each council coordinating the purchase, rather than a developer, in terms of setting the minimum specification and potentially obtaining a better price through larger orders.

The table below highlights five areas that should be considered as a minimum and suggested specification levels for these areas:

<table>
<thead>
<tr>
<th>Family Size FWD</th>
<th>Small Household FWD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Feed</td>
<td>Continuous</td>
</tr>
<tr>
<td></td>
<td>Continuous</td>
</tr>
<tr>
<td>On/Off Control</td>
<td>Manual switch</td>
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<tr>
<td></td>
<td>Manual Switch</td>
</tr>
<tr>
<td>Grind Technology</td>
<td>2 Stage</td>
</tr>
<tr>
<td></td>
<td>1 Stage</td>
</tr>
<tr>
<td>Horse Power</td>
<td>Minimum - 0.75hp</td>
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<tr>
<td></td>
<td>Min - 0.55hp</td>
</tr>
<tr>
<td>Motor Protection</td>
<td>Manual Reset Overload</td>
</tr>
<tr>
<td></td>
<td>Manual Reset Overload</td>
</tr>
</tbody>
</table>

Other areas that could be covered include: the length of manufacturer's guarantee; sound and vibration technology; fitting instructions and guidance; and the drain and plughole connections. For example, it is important to make sure that the kitchens will have a standard size plughole and the FWD provided matches this.

4. Education and communication materials

Education and communication materials are key to ensuring the correct and continued use of FWD. The technology is unfamiliar to many in England and if householders have not previously used one before, they either do not know how to use it, or do not know the range of materials that can be disposed of with FWD.

There are two areas where communication is important. The first regards the instructions given to the developers and their sub-contractors about how to fit the FWD and make them ready for householder use. Each FWD should have fitting instructions in each box, however it is worth liaising with the site manager and relevant plumbing lead, or plumbing sub-contractor to ensure that everyone understands how they are connected and how they work. These instructions should be diagrammatic where this makes fitting clearer.

The second area is the education material for the householders. This should cover both how to use the FWD and what materials can and cannot be disposed of safely. There should be information about who to contact in case of questions or problems. Some householders are interested in what happens to the food waste, and the interviews showed that there were some who did not want to use the FWD because they were not sure if it was good for the environment or not. Therefore it may be appropriate, depending on local circumstances, to provide information about where the food wastes goes, or why FWD are being offered, rather than a separate food waste collection service.

As the sales team on-site are often a focal point for queries, it is imperative that they are given all the materials and that time is spent ensuring they too understand how to use FWD and what can be safely disposed of.

5. Managing the developers

New housing developments employ large numbers of staff and sub-contractors. If the council is to be involved in the project the first stage is meeting with the staff that are responsible for the site pre-build and in the early stages. These could be the Technical Manager for example and the Site Manager. Agreement needs to be reached about the process of ordering and fitting the FWD, and monitoring and any subsequent follow-up including interviewing householders.
It is important to be on-site at the early stages, meeting with the site manager, to ensure that the FWD are fitted properly, both in terms of the plumbing and the electrical connection. It would be recommended that an inspection is made once the first few are fitted to ensure any problems with fitting, design or kitchen layout are identified at an early stage.

If the authority is supplying FWD, then the build schedule needs to be discussed to ensure that there are always enough FWD on-site at any one time. It is likely that if there are no FWD on-site, then a property will not be fitted with one, rather than wait and delay the build schedule, or a customer moving in.

If the authority is just recommending that FWD are fitted to a development, then follow up with the site manager is useful, to determine whether units were fitted or not, whether there were any local problems that had not been previously identified and what feedback was received from householders.

In terms of the education materials, the first people who should receive them are the sales teams on-site. They will be a key resource in answering questions for householders as they move in and in demonstrating FWD and other white goods when showing prospective homeowners around. When the sales team are on-site, they are the first port of call for householders who have queries or problems, so will be a valuable source of information about the success of the project.

Finally, it may be the case that the developer or housing association would like to promote the scheme, or publicise their involvement in it. This can be a useful tool in raising awareness of FWD and encouraging further spread.

**Conclusion**

These five points highlight the areas that should be considered before promoting FWD use. The first two are critical and must be considered at the feasibility stage. If the existing sewers have current problems with blockages then it is not recommended that FWD are encouraged in the area. The kitchen design then determines whether or not they will suitable for a particular development.

The experience of managing the three pilot sites has proven that the FWD specification, the quality of education materials and training of staff, and the managing of the developers are then all key to the successful implementation of FWD and their continued use. In terms of resources, small amounts of regular and frequent staff time is likely to be needed, but the total time required is not likely to be large, once agreement has been reached on a project and the first two points (condition of sewer network and kitchen design) have been assessed. Once FWD are successfully fitted and householders educated, the evidence from the pilot sites shows a high level of continued use, with a low dropout rate.

For more information on the FWD pilot project, please see [http://www.local.gov.uk/productivity/-/journal_content/56/10180/3510540/ARTICLE](http://www.local.gov.uk/productivity/-/journal_content/56/10180/3510540/ARTICLE) or email joanne.straw@local.gov.uk.