



## UK Food Transport Hygiene standards

The first comprehensive UK study in to food transportation hygiene standards commenced in 2013 supported by Food Chain Compliance in conjunction with a number of partner organisations. The study initially investigated RTP trays used to transport food between producers and retail stores. However, the findings quickly led to an expanded study which eventually comprised food trailers, rigid and home delivery vehicles, home delivery trays, roll cages, shippers, dollies and store trolleys. The research featured discussions with food producers, food retailers, UK and international food transporters, subcontractors and return load brokers, and included associated support service operators such as equipment pooling operators and tray-wash providers. Processes currently provided by food transport hygiene specialists were also tested and included within the study.

There is no argument that all Stakeholders within the Food Supply Chain play a vital role in abiding by food safety guidelines and regulations, helping to control the risks of food contamination in order to protect consumers. The products and services provided by these stakeholder companies may be varied in type and disparate in nature but they are all inextricably linked by the importance of their individual contributions to the chain of safe custody. Given the significant quality and hygiene disciplines and controls instituted within the upstream elements of the food production, preparation and packing phases of the food supply chain, it would be reasonable to expect the disciplines and regulatory requirements designed to uphold the quality and integrity of food are acknowledged and maintained by those stakeholders providing essential support services further along the chain of custody. Therefore, the objective of the sponsored research was to verify that appropriate hygiene standards were in place within the food conveyance and transportation phase and operations were regulatory compliant.



A total of 2044 microbial swabs were tested by UKAS approved laboratories with results analysed using microbial food safety assessment benchmarks issued by the Food Standards Agency, Harper Adams University College and Hutchison Scientific Limited together with similar guidelines issued by the Health Protection Agency. This benchmark data was also compared and combined with recognised food safety criteria known to be utilised by a number of UK supermarkets to determine acceptable or unacceptable food safe standards. Tests were taken from 724 trailers, 65 rigids, 119 home delivery vehicles, 112 home delivery trays, 212 roll cages, 130 shippers, 114 dollies, 244 RTP trays and 356 store trolleys.

Current food safety best practice guidelines and regulatory obligations are designed to maintain standards throughout the food custody chain. Food conveyance equipment (*RTP trays, home delivery trays, roll cages, pallets, shippers, dollies, trolleys*) and food transport vehicles (*In-house or 3PL operated or sub-contracted, ambient, chilled, multi-temperature, for store delivery or home delivery*) are required to uphold the quality and integrity of food and minimise consumer risk. It was considered that the ideal outcome of the study would be confirmation that the high-quality standards achieved by food producers, so robustly audited by retailers, were also upheld throughout the transportation phase.



Interviews with various food producers confirmed that strict and regularly audited hygiene controls were a pre-requisite for retailers and most producers assumed similar audited hygiene protocols would be also be demanded by retailers throughout the transportation phase. However, early discussions with equipment support providers and transport operators indicated a significant shortfall in any understanding of basic food safety regulations and obligations. There were immediate concerns that few companies had adequate processes or protocols in place which were capable of safeguarding the integrity of food while in-transit.



A spokesman for a major UK food retailer confirmed “Vital emphasis has to be placed on determining the food safe best practice parameters which meet the regulatory obligations of each connection within the food chain. Food logistics or associated equipment are not exceptions”. The spokesman declined to comment on the lack of consistency by retailers in not ensuring those providing food logistics related services uphold those food quality and safety standards and regulatory requirements applied by other stakeholders within the farm to fork continuum.



Certainly, an overall analysis of test results from the study would indicate an alarming shortfall in hygiene standards across all items of food conveyance equipment and food carrying vehicles. Of 692 food carrying trailers tested only 12% achieved a food safe standard with only 11% of 65 rigid vehicles being compliant. Only 6% of 119 home delivery vehicles were food safe with none of the 112 home delivery trays tested being acceptable. Remarkably not one of 114 dollies or 212 roll-cages met the basic hygiene standard. Only 13% of 244 RTP trays and 5% of 130 shippers were hygienically clean and finally, of the 308 shopping trolleys tested not a single trolley was found to be acceptable. The average level of acceptability across all categories to a recognised food safe standard was only 10%.

The study encompassed food conveyance equipment and/or food delivery vehicles employed by 42 separate companies, categorised as follows: 9 leading UK food supermarkets (6 also providing home delivery), 2 leading UK online food retailers, 6 other large UK food retail groups, 7 leading UK food distributors, 12 leading UK food logistics companies and 6 UK based international logistics companies.

During the course of the study random ‘indicator’ swabs were also taken from 4 non-food retailer trailers and store trolleys. Ironically these swab analysis results showed an average of 16% of the tested trailers and 12% of tested store trolleys to be hygienically clean to a food safe standard, an improvement of 4% and 12% respectively when compared to the swab results obtained from food carrying vehicles and supermarket trolleys.

The results of this survey patently support the outcome of a 2015 survey of 884 visitors to the Multimodal Exhibition in Birmingham.



Of the 694 respondents who confirmed their companies were closely involved with food logistics, 85% considered hygienic food safe hygienic and regulatory compliant standards should be regularly monitored for all conveyance equipment and vehicles. Yet a conflicting 88% were unaware of any food safety legislation currently applying to food transport or any operator obligation to maintain food quality or maximise consumer protection. 68% considered current levels of food safety applied within the transport sector to be poor while an astonishing 90% considered the nature of prior loads to be irrelevant when arranging a fresh produce collection. Only 4% believed records of prior loads should be maintained and an incredibly low 3% reported vehicle load area cleaning occurred within their business.

Food safety is an essential public health issue for all countries as foodborne illness due to microbial pathogens in food represent a serious threat to the health of millions of people. Serious outbreaks of foodborne disease have been documented on every continent in the past decades, illustrating both the public health and social necessity of food safety disciplines. The clear purpose of food safety regulation and safeguards throughout the food supply chain is to maintain the integrity and quality of food and to protect consumers.

The dangers of foodborne pathogenic microorganisms have also been known for decades and consumers everywhere now view foodborne illness outbreaks with ever-increasing concern. However, it is known outbreaks are likely to be only the visible aspect of much broader, more persistent problems and failed responsibilities in the chain of custody. It follows that the carrying out of elements such as HACCP risk assessments and the hygienic cleaning and sanitising of equipment and vehicles used in the carriage of food underpin the importance of maintaining field to fork food safety.



In a 2010 Consumer survey, 88.2% of 783 UK consumers interviewed said their expectation was that all equipment or vehicles utilised in the movement of food were currently cleaned to a hygienic, food safe standard. 93% of respondents felt any food carrying vehicle or equipment should be hygienically clean, 97% agreed the same standard should apply to RTP trays and 98% believed shopping trolleys and baskets were already regularly maintained to a hygienic standard. A staggering 96% of those consumers interviewed believed food producers, retailers and service providers would systematically update biosecurity practices in line with increasing microbiological threats and available new technologies.



During telephone interviews with spokespeople for a number of food logistics companies, three individuals raised their company's accreditation under the BRC Global Standard for Storage and Distribution as 'proof' of compliance with food safety regulatory obligations. Each of the individual's companies were included within the study and those specific swab analysis results clearly indicate that whatever 'tick box' audit exercise may be notionally accrediting those companies transport operations, the reality is that the food carrying vehicles tested were not operated in a hygienically food-safe condition.



The results of the study clearly indicate that the food logistics sector does not allocate food safety the degree of attention demanded by regulatory requirements or consumer concern. Only small pockets of best practice exist in too few distributors and transporters and areas such as Bulk Tanker movements where high standards are applied. Of the food distribution companies, UK based and international 3PL logistics operators investigated none were able to confirm any hygienic safety program applying to vehicles or equipment.



While there is no evidence that substantive, regulatory compliant, vehicle hygiene practices have ever been widely adopted in the sector, over the last twenty years' initiatives such as the backloading of waste on food delivery vehicles and the increased use of subcontractors has highlighted an obvious lack of understanding or awareness of regulatory requirements and food safety obligations in food logistics. It is an imperative within food safety regulations that any designated food carrying vehicle, which subsequently carries a non-food cargo between food loads particularly where potential cross-contamination may occur, must be hygienically cleaned prior to carrying a further food shipment. While backloading is a widespread practice, only one leading UK supermarket has implemented a high-profile program which regularly sanitises all store delivery vehicles and closely monitors microbiological safety limits.

The nature of the use of subcontractors in the food transport sector also demonstrates the lack of importance placed by the industry on a vehicles suitability to carry food. While taking test swabs at a grower's site in the East of England, a researcher observed subcontract vehicles arriving to either collect fresh produce or to deliver RTP trays. The previous mixed load carried by one of the vehicles to be loaded with fresh produce consisted of bulk bags of fertiliser and 250 conifer trees imported from



Russia. As the Forestry Commission require controls on such imported conifers, known to host harmful pests or diseases, this raises immediate concerns regarding compatibility with fresh produce. The vehicle was swab tested and produced one of the worst analysis results of the study. On examination of the subcontractor vehicle delivering the trays it was noted this vehicle was also partially loaded with wooden pallets. This vehicle was also swab tested together with a



wooden pallet. The analysis results for the pallet swab showed the highest levels of food pathogens recorded for any surface during the study. The analysis results for the vehicle also confirmed very high levels of contamination. As the subcontract vehicle was delivering RTP trays processed via a retail tray-wash operation, there clearly existed a significant potential for cross-contamination of these pre-washed trays during the delivery phase. The trays were then to be packed with fresh produce and stacked on contaminated pallets for onward delivery to point of sale.



Findings in this study strike at the very heart of regulatory compliant food transportation and the requirements of Codex Alimentarius (Latin, meaning Food Law or Code), guidelines which have underpinned food quality and consumer health for over fifty years. With over 180 country members, the Codex Alimentarius Commission is an intergovernmental body established in 1963 by the Food and Agriculture Organisation of the United Nations (FAO) and the World Health Organisation (WHO), with the primary purpose of protecting the health of consumers. It is a collection of internationally adopted and recognised standards, guidelines, codes of practice and other recommendations. The origin of all Food Safety Standards, Regulation and Legislation stem from the Codex Alimentarius.



The General Principles of Food Hygiene cover key hygiene practices and controls which encompass raw materials, primary production, premises, equipment, transportation and consumer protection. It is important to note that these Codex Alimentarius recommended standards and other food safety regulations apply to the whole food chain continuum and specifically includes, not excludes, food conveyance equipment and vehicles.

The research examined policies and controls employed by retailers, 3PL's and lead logistics providers when utilising subcontract vehicles, including the usage of return load 'brokers' and 'freight exchange' websites. There is ample evidence that the significant majority of users ask very few questions and have negligible controls in place when employing the services of a subcontract vehicle for food movements. The study looked at one major retail supermarket group seeking subcontractors for eleven UK RDC's via their Corporate website. While the application form and vetting process requested many details from a prospective haulier and provided basic operating expectations such as reference to HSE, ADR, Public Liability and Goods in Transit insurances, it was notable that there was no requirement for the haulier to be compliant with or aware of any food transport regulatory requirements. The researcher specifically asked the retailer if there was any requirement to follow any food safety protocols or declare previous loads prior to carrying a food consignment. The researcher was told there were "no food safety disciplines involved".

The study continued with enquiries to return load 'brokers' and freight exchange sites regarding vehicle availability and suitability for fresh produce consignments. Questions regarding load area hygiene or cross-contamination risks were regularly dismissed with one operator advising the researcher to be "less fussy if you want to use subbies". Those who responded more courteously explained price, geography and availability were their main focus with food safety, hygiene conditions or potential contamination risks not featuring at all when matching vehicles to load requirements. One operator estimated up to 40% of loads placed on a regular basis could involve foodstuffs and historically, seasonality has seen increases to around 60% where urgent fresh produce movements were required. While it is understood return loads and back loads may be driven by ad hoc necessity and operational economics, it appears this is an example of where it is considered best practice and adherence to regulatory requirements can be consciously sacrificed or ignored.





There is clear evidence that widespread and systemic deficient hygiene standards have been exacerbated by organisational culture failures. An increasing lack of focus on food safe regulatory requirements has resulted in major shortfalls in meeting basic chain of custody obligations and compliance. The reputation of the retailer or size of the logistics organisation appears to have little bearing on levels of awareness or hygiene standards, however researchers reported poor cohesion between retailers and service organisations in food safety terms.

Service providers appear to believe the onus of responsibility for determining food safety parameters largely rests with their retail clients. In essence, they consider themselves responsible for the service parameters specifically dictated by the retailer and no more. Meanwhile the retailers believe that any service organisation involved in providing specific food related services on their behalf have a clear responsibility to deliver any and all of those services in a food safe and regulatory compliant manner. This potential rationale is hardly persuasive when food retailers are responsible for the food safe welfare of many millions of consumers and the service organisations are holding themselves out as apparent ‘experts’ in their field.



Regrettably, certain of these companies regard any acknowledgement of the importance of food safety as akin to eco-marketing or so-called ‘greenwashing’. Overt declarations of their awareness of, and tacit compliance with food safety legislation via website, CSR or food safety policy statements is seen as a no-lose, no-cost option. However, when collating the study findings, researchers found these companies to be in serious breach of their own policies in every case. One could take the view that such public declarations, subsequently undermined by non-compliance with the stated policy, may simply suggest a miscalculation of the complexities involved in installing necessary disciplines. However, it could equally demonstrate a cynical disregard for food safety and a belief that strategic statements can outweigh legislative obligations while misleading both clients and consumers. The study investigated a number of instances where policies published by various companies were clearly not recognised by their personnel or upheld within their day to day operations.

The UK food transportation sector has an antiquated view of food safety. Overall attitudes are both outmoded and inflexible with many policies, specifications and processes dating back to the 1980’s. Researchers encountered repeated references to an unusually narrow band-width of manufacturers, products and service support providers who had provided services for up to thirty years. The same few manufacturers, product types and service support providers still formed the bedrock of the modern-day operations employed by major retailers and logistics organisations alike. However, the absence of examples of change, innovation or new technologies suggested a high degree of inertia. In fact, research has revealed the sector is dominated by the Not Invented Here Syndrome (NIHS). Mindsets of individuals and corporate structures clearly allow historical supplier services and products to be favoured. Innovation is effectively ‘frozen out’ and externally-developed solutions receive a hostile and defensive response, even where the external solution is clearly superior and offers advancement.





While the study demonstrated an urgent need for rapid and significant improvements in food conveyance and transportation hygiene standards in the UK, embryonic signs of positive change were detected. At a time when new challenges and new threats regularly present themselves, new technologies are now being employed to provide new levels of effective bio-security. Researchers worked alongside the UK's leading provider of purpose-designed food safety systems and witnessed well-attended and responsive on-site food safety awareness programs. Robust new cost-saving processes and purpose-designed equipment types are now providing exceptional hygiene standards for a matter of pence. Food safe, prolonged efficacy, non-toxic, Halal approved, natural chemicals now provide low cost, high hygiene standards for any application.

Earlier in this paper reference was made to the outcome of a 2015 food logistics survey. It is of note that 91% of respondents felt that food transport, regulatory and operator obligations and consumer risks receive extremely imbalanced coverage from Industry Press, Conferences and Representative Bodies when compared to topics of a similar relevance. 86% considered this lack of coverage to be unhelpful in promoting compliant best practice and reducing consumer risk.

This research paper does not seek to provide a 'League table' of unacceptable food hygiene results, nor does it seek to identify any of the 42 companies by name. A document attached to this paper summarises the results of all key tests, identifying each company only by market sector and an individual ID known only to the Authors and Contributors to this paper. Consideration will be given to discussing individual company's results with them.

This constructive and detailed three-year study provides a comprehensive insight in to a lack of awareness and understanding of food safety requirements within the UK food transportation sector generally. It illustrates an obvious and alarming trend of systematic non-compliance with food safety legislation and disregard for increased consumer risk.

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**Liam Jennings, John Ryan and Olesja Christensen**

Email: [liam.jennings@foodchaincompliance.com](mailto:liam.jennings@foodchaincompliance.com))

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*About the Authors:*

**Liam Jennings** is a leading Food Risk specialist with an MSc in Microbiology and Infection. Now based in Nottingham, England, he has worked with major brands and retailers in Australia, South Africa and the US.

**John Ryan** lives in London, England and is a Fresh Produce Post-Harvest Specialist. He has a PhD from Queensland University and lectures on Food Security and Supply and Food Quality and Safety.

**Olesja Christensen** has a BSc in Marketing, is a qualified Lawyer and lives in Christchurch, England. A specialist in Food Quality and Consumer Risk, she has coordinated over 24 food related National and International Consumer Studies.



## FOOD SAFE TRANSPORT EQUIPMENT & VEHICLE RESEARCH PROJECT - FEBRUARY 2017

Test subject source	Study ID	Food trailer	No of vehicles	Rigid	No of vehicles	HD van	No of vehicles	HD tray	No of trays	Store trolley	No of trolleys	Roll cages	No of cages	Shipper unit	No of units	Dolly unit	No of units	RTP tray	No of trays	Total no of tests	Food Safe %	Potential unsafe %
Leading UK Supermarket	A	72%	24	50%	10	14%	17	0%	15	0%	23	0%	16	14%	17	0%	14	40%	26	162	21%	79%
Leading UK Supermarket	B	5%	21	NT	NT	6%	17	0%	17	0%	27	0%	18	12%	18	0%	15	11%	29	162	4%	96%
Leading UK Supermarket	C	5%	21	NT	NT	0%	18	0%	16	0%	23	0%	20	0%	15	0%	14	20%	25	152	3%	97%
Leading UK Supermarket	D	0%	20	NT	NT	0%	17	0%	15	0%	23	0%	17	0%	15	0%	14	8%	29	150	1%	99%
Leading UK Food Retailer	E	0%	19	NT	NT	NT	NT	NT	NT	0%	27	0%	16	0%	16	0%	15	0%	28	121	0%	100%
Leading UK Supermarket	F	5%	19	NT	NT	6%	16	0%	16	0%	23	0%	18	14%	17	0%	14	17%	26	149	5%	95%
Leading UK Supermarket	G	10%	21	NT	NT	NT	NT	NT	NT	0%	23	0%	16	0%	16	0%	14	0%	27	117	2%	98%
Leading UK Supermarket	H	10%	18	NT	NT	6%	16	0%	17	0%	24	0%	17	0%	16	0%	14	9%	29	151	3%	97%
Leading UK Supermarket	I	14%	16	NT	NT	NT	NT	NT	NT	0%	23	0%	15	NT	NT	NT	NT	NT	NT	54	5%	95%
Leading Online Food Retailer	J	10%	20	NT	NT	12%	18	0%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	25	79	10%	90%
Leading Online Food Retailer	K	10%	10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	10	10%	90%
Major UK Food Retail Group	L	5%	15	NT	NT	NT	NT	NT	NT	0%	15	0%	14	NT	NT	NT	NT	NT	NT	44	2%	98%
Major UK Food Retail Group	M	6%	16	20%	8	NT	NT	NT	NT	0%	17	0%	15	NT	NT	NT	NT	NT	NT	56	7%	93%
Major UK Food Retail Group	N	9%	21	0%	7	NT	NT	NT	NT	0%	14	0%	15	NT	NT	NT	NT	NT	NT	57	2%	98%
Major UK Food Retail Group	O	17%	18	0%	8	NT	NT	NT	NT	0%	16	NT	NT	NT	NT	NT	NT	NT	NT	42	6%	94%
Major UK Food Retail Group	P	5%	19	0%	8	NT	NT	NT	NT	0%	15	NT	NT	NT	NT	NT	NT	NT	NT	42	2%	98%
Major UK Food Distributor	D1	5%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	16	5%	95%
Major UK Food Distributor	D2	6%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	16	6%	94%
Major UK Food Distributor	D3	13%	16	0%	9	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	25	7%	93%
Major UK Food Distributor	D4	5%	15	14%	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	22	10%	90%
Major UK Food Distributor	D5	22%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	16	22%	78%
Major UK Food Distributor	D6	14%	18	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	33	7%	93%
Major UK Food Distributor	D7	12%	19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	19	12%	88%
UK Food Logistics Company	L1	6%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	16	6%	94%
UK Food Logistics Company	L2	8%	13	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	13	8%	92%
UK Food Logistics Company	L3	35%	17	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	17	35%	65%
UK Food Logistics Company	L4	8%	12	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	12	8%	92%
UK Food Logistics Company	L5	14%	18	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	18	14%	86%
UK Food Logistics Company	L6	11%	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	20	11%	89%
UK Food Logistics Company	L7	11%	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	20	11%	89%
UK Food Logistics Company	L8	15%	9	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	9	15%	85%
UK Food Logistics Company	L9	20%	10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	10	20%	80%
UK Food Logistics Company	L10	25%	8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	8	25%	75%
UK Food Logistics Company	L11	20%	10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	10	20%	80%
UK Food Logistics Company	L12	25%	8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	8	25%	75%
International Logistics Co	IL13	5%	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	20	5%	95%
International Logistics Co	IL14	5%	16	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	16	5%	95%
International Logistics Co	IL15	22%	21	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	21	22%	78%
International Logistics Co	IL16	0%	18	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	18	0%	100%
International Logistics Co	IL17	0%	17	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	17	0%	100%
International Logistics Co	IL18	10%	10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	10	10%	90%
<b>TOTALS</b>		<b>12%</b>	<b>677</b>	<b>11%</b>	<b>65</b>	<b>6%</b>	<b>119</b>	<b>0%</b>	<b>112</b>	<b>0%</b>	<b>308</b>	<b>0%</b>	<b>212</b>	<b>5%</b>	<b>130</b>	<b>0%</b>	<b>114</b>	<b>13%</b>	<b>244</b>	<b>1958</b>	<b>10%</b>	<b>90%</b>
Swedish non-food retailer	NF1	25%	8	NT	NT	NT	NT	NT	NT	15%	13	NT	NT	NT	NT	NT	NT	NT	NT	13	20%	N/A
Large UK D-I-Y retailer	NF2	13%	8	NT	NT	NT	NT	NT	NT	17%	12	NT	NT	NT	NT	NT	NT	NT	NT	12	15%	N/A
Large UK non-food retailer	NF3	0%	8	NT	NT	NT	NT	NT	NT	9%	11	NT	NT	NT	NT	NT	NT	NT	NT	11	5%	N/A
Large UK electrical retailer	NF4	25%	8	NT	NT	NT	NT	NT	NT	8%	12	NT	NT	NT	NT	NT	NT	NT	NT	12	17%	N/A
<b>TOTALS</b>		<b>16%</b>	<b>32</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>12%</b>	<b>48</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>48</b>	<b>14%</b>	<b>N/A</b>

KEY: NT = NO TEST TAKEN    N/A = NOT APPLICABLE