



# HACCP STUDY: OLIO

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## 1. Introduction

### 1.1 Background

OLIO is a free app<sup>1</sup> that connects neighbours with each other and with local businesses so surplus food can be shared, not thrown away. This could be food nearing the end of its durability date in local stores, spare home-grown vegetables, bread from local bakers or surplus food collected from supermarkets. OLIO can also be used for non-food household items.

OLIO is super easy to use. To make an item available, users simply open the app, add a photo, description, and when and where the item is available for pick-up.

To access items, users simply browse the listings and request whatever takes their fancy and arrange a pick-up via private messaging.

Here at OLIO we believe that small actions can lead to big change. Collectively – one rescued cupcake, carrot or bottle of hand lotion at a time – we can build a more sustainable future where our most precious resources are shared, not thrown away.

This HACCP study has been produced to ensure that the supply of food collected by OLIO volunteers known as “Food Waste Heroes” (FWHs) through OLIO is safe and that all relevant legal requirements are met.

### 1.2 HACCP Team

The HACCP study has been produced by:

- **Saasha Celestial-One**, Co-founder and COO. Saasha has provided strategic oversight of the process and made executive management decisions regarding the food activities undertaken and the methods used.
- **Michael Barsties**, OLIO Community & Operations. Michael has added operational insight into the process to ensure that all food activities are properly identified and any procedures adopted are realistic and achievable.
- **Dr Andy Bowles** FIFST, Specialist Food Solicitor, ABC Food Law. Andy has used his technical and food law knowledge to assist in the preparation of this HACCP study.

### 1.3 Scope of study

This study considers the collection of surplus food from food businesses by FWHs and the supply of this food to members of the public who have downloaded and are using the OLIO App (OLIOers).

The study starts with the selection of suitable food businesses to form part of the scheme and ends with the reasonably foreseeable use of the food by the final consumer.

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<sup>1</sup><https://OLIOex.com/>

## 1.4 Product/process description

Food businesses which meet the requirements for supply to OLIO (see 2.3) are required to sign the “OLIO Surplus Food Donor Agreement” which clearly sets out the roles and responsibilities of the parties. Once accepted, an OLIO team member creates a team calendar for the food business and places an advert in the OLIO app to recruit local volunteers. Food Waste Heroes are selected in accordance with 2.2. For the purpose of this study, food has been placed into four categories:

**High Risk Hot Food:** This is collected hot from take-aways, restaurants and street food vendors and will include: curries, stews, soups, joints and portions of cooked meat, burgers, kebabs, cooked hot sausages, hot rice, gravies, hot sauces such as BBQ and chilli sauces, hot chicken and products such as nuggets.

**Other Hot Food:** Again, collected from take-aways etc this might include hot breads (not including breads stuffed with meat), pizza slices, individual sausage rolls and pies, beverages such as tea, coffee etc.

**High Risk Food:** This may be collected from any food business including supermarkets, delis, butchers etc and are “ready to eat”<sup>2</sup>, without further cooking, and usually require refrigeration. Such products include: ready to eat cooked meats, quiches, pate, sushi and sashimi, sandwich fillings, chilled pies and pasties, cheese, dairy products such as cream and yoghurts, coleslaws and prepared salads, dips, scotch eggs, filled sandwiches and rolls, cream cakes, prepared fruit and vegetables (ready to eat cut, sliced and or prepared portions), refrigerated “ready meals” including chilled soups, fresh juices, frozen foods.

**Low Risk Food:** This may be collected from any food business and includes prepacked shelf stable goods such as tinned and jarred food, packet foods like cereals, bread and bakery goods (except cream cakes), chocolate and confectionary, fruit and vegetables (except pre-prepared), biscuits, canned and bottled drinks, pre-packed raw meat and raw fish.

A simplified process flow diagram includes 7 key steps:

1. Selection of business
- ↓
2. Collection of food from food business by FWH
- ↓
3. Transport of food to FWH home
- ↓
4. Storage of food by FWH (this is not always the case)
- ↓
5. Advertising of food on OLIO App by FWH
- ↓
6. Collection of food by customer from FWH
- ↓
7. Use of the food by customer

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<sup>2</sup>“Ready to eat” means that the food is normally consumed without any further thorough cooking. The foods may be warmed by the consumer but this may not be sufficient to kill any dangerous bacteria hence the need to keep such foods cold.

## 2.Pre-requisites

### 2.1 Overview

OLIO are not involved in the preparation or processing of open high risk food and as such the flexibility provided in Regulation (EC) 852/2004, Recital 15 can be applied. In addition, guidance provided by the European Commission and Commission Notice confirm that the activities undertaken by FWHs can be safely controlled by the application of an appropriate Pre-Requisite Programme.

“Pre-requisites” are preventative practices that need to be in place to assure food safety. They are normally sufficient to control food safety hazards in food operations that do not include preparation or processing of food. Examples of pre-requisites include general hygiene rules, training of staff and traceability.

A hazard analysis (see 3 below) conducted by the HACCP team identified **temperature control**, **food allergen control** and **cleaning/disinfection of containers** and utensils as being of particular relevance to the activities of FWHs.

The following paragraphs cover pre-requisite requirements for the following topics:

- Food Waste Hero selection
- Supplier selection
- Personal hygiene
- Temperature control
- Allergen control
- Training of staff
- Prevention of cross contamination
- Traceability
- Product recall
- Provision of food information
- Cleaning and disinfection
- Waste disposal

### 2.2 Food Waste Hero selection

Interested OLIOers email [volunteer@OLIOex.com](mailto:volunteer@OLIOex.com) and are sent a link to a team calendar and an in depth introduction to the FWH programme (PDF). Volunteers choose their day(s) in the team calendar, including back up days. Volunteers are sent an email with link to the OLIO Volunteer Hub where they read, understand and accept the following:

- a. OLIO FWH Volunteer agreement
- b. Guidelines for being a FWH
- c. OLIO Food Hygiene Guidance for Food Waste Heroes.
- e. OLIO Food Allergens Factsheet
- f. OLIO Rules for high risk hot food

Once FWHs have read and accepted the above documents, they are classified as FWHs in OLIO's backend system. The time and date of acceptance are recorded. OLIO sends the FWH a link to

the Whatsapp group for their food business and a link to the Volunteer Facebook group. FWH joins WhatsApp group (pre-requisite for collections).

OLIO team member meets FWHs on their first collection days to provide orientation, provide FWH with their ID and a printed copy of guidelines and rules for handling and storing food.

The OLIO team member is actively involved in Whatsapp answering questions from volunteers and providing advice. After ~2 weeks a 'Captain' is identified as a natural leader who will take over ownership of group. The OLIO team member stays in group on 'mute' available as a resource as and when needed.

### 2.3 Supplier selection and control

In terms of food safety, food businesses will be selected to become part of this project by OLIO only if they have achieved a minimum score of "3" in the Food Hygiene Rating Scheme operated by the Food Standards Agency in partnership with local authorities.

### 2.4 Personal hygiene

All FWHs should wash their hands prior to handling high risk food. In food businesses, this should be done using the businesses' facilities but if this is not possible hands should be sanitised using a suitable hand gel.

Any FWH who has recently suffered from symptoms of vomiting and/or diarrhoea should not handle food until 48 hours after symptoms have stopped. FWHs must notify the team Captain if they have suffered such symptoms so that they are removed from the collection rota until recovered. Any open cuts or grazes on hands should be covered with a waterproof plaster.

### 2.5 Temperature control

Dangerous bacteria may grow in warm food and the longer that food is kept warm the more likely that it will become dangerous. The safe temperature zone for storing high risk food is below 8°C or above 63°C. Food must not be allowed to remain between these temperatures for very long unless it is shelf-stable, for example tinned food, biscuits, cereals or other dried foods that are sold from the supermarket shelf.

When collecting hot food it is important to decide whether the food will be supplied directly to the final customer hot or whether it will be cooled down, chilled and then re-heated by the customer.

Where high risk food is to be supplied hot, on collection from a food business it should be transferred into a thermal insulated bag and kept in this bag until delivered directly to the OLIO user who is collecting the food.

If the food is to be chilled, the food business should be asked to decant the food into small portion sized containers. These should be transported to the FWHs home within 1 hour and left at room temperature (max 1 hour) until hand warm when they should be transferred to the refrigerator (active chilling).

Other hot foods such as sausage rolls and pizza slices, should be placed into the FWHs refrigerator as soon as possible.

Chilled foods collected from businesses must be kept chilled until they are supplied to the final customer. On collection, the FWH should confirm that the food has been kept chilled and transfer it into their own refrigerator within 2 hours from collection from the food business.

## 2.6 Allergen control

There are two separate issues with respect to the responsibilities placed on food business operators regarding food allergen control.

Firstly, the law requires that accurate information is provided to consumers about the presence of 14 named allergens used in the preparation of food.

Secondly, food must be protected from contamination with any of the 14 named allergens.

There are different requirements for providing food allergen information depending on the method of supply of the food:

**Pre-packed food: Such as packets, tins and bottles.** Here the allergen information must be provided on the label in the name of the food or in the ingredients list and must be highlighted in some way. Typically, allergens are identified in **bold text** in the ingredients list.

**Non-prepacked food sold by caterers.** There are two ways that caterers (restaurants, take-aways etc) can provide allergen information. Either in writing at point of sale on a menu or notice or by providing the information verbally to customers on request as long as customers are given written notice that they may ask for the information.

**Food sold via the internet.** Prepacked foods must be marked with the allergen information as described above. Allergen information for non-prepacked food must be made available before the “purchase” is concluded and again on delivery.

The key issues for food supplied by OLIO to consumers is that accurate allergen information is collected from the food business and provided to the final consumer.

This is achieved in the following ways:

**Pre-packed foods** are supplied in their original packaging with intact labels. No unlabelled products will be supplied (eg a tin without a label).

**Non-prepacked foods:** Businesses are required to supply full allergen details with each food that they supply. If the FWH is unable to obtain the allergen information then the FWH must not collect the food from the business.

A general notice requesting users with food allergies to request information from the FWHs is posted on FWH listings in the OLIO app. In addition, FWH, on request by a user will either refer them to allergen information already available via the food business's website, OLIO's website, or will provide them with the information they collected from the food business themselves.

See 2.8 for prevention of cross contamination.

## 2.7 Training of Volunteers

The law requires that “food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity”. There is no requirement for formal food training or for food handlers to attain any particular qualification.

Training of staff in the safe methods of this pre-requisite programme is achieved by providing them with summary instruction sheets which include clear instructions on the safe handling of foods. Supervision is initially provided by a member of the team (in person or remotely via the Whatsapp group) but then performed on an ongoing basis by the volunteer squad ‘captain’.

Hot high risk food will only be collected by FWHs who have received additional instruction on the rules of hygiene for such foods.

## 2.8 Prevention of cross contamination

Cross contamination occurs when dangerous bacteria or food allergens are transferred from one food (in the case of bacteria this food is typically raw) to another ready to eat food. Cross contamination of ready to eat food can occur through direct contact with contaminated food or more commonly by indirect transfer via unwashed hands, dirty equipment/utensils/containers or by using the same work surfaces to handle both types of food.

Direct cross contamination can be prevented by keeping raw and ready to eat foods separate and by ensuring that foods containing allergens are separated from other foods. In particular, raw meat should only be collected where the packaging is intact and there is no seepage of blood.

Indirect cross contamination can be prevented by:

- Frequent handwashing especially before handling ready to eat food and after visiting the toilet.
- Adequate cleaning and disinfection of equipment, utensils and containers.
- Using separate work surfaces for handling raw and ready to eat food.
- Using different containers, utensils and equipment to handle allergenic ingredients and food containing these.
- Using separate bags to transport raw and ready to eat foods.

## 2.9 Traceability

The law requires that food business operators have in place systems and procedures to identify their suppliers of food and those businesses to whom they supply.

OLIO do not supply food businesses with food and full details of all food collected from food businesses for supply to consumers is collected on the app. As such full traceability is assured.

## 2.10 Product recall

Food business operators who merely supply food rather than prepare or process it are required to participate in product recall procedures as required. If OLIO are notified by one of their suppliers of a need to recall food we will:

- Place full details of the recall on our app.
- Notify FWHs of the recall for them to take local action if required.

## 2.11 Food Information

Prepacked foods, such as cans, packets and cartons must be labelled, in English, before supplied to the final consumer. FWHs are not expected to check the food labels except to ensure:

- The “use by” date has not expired
- The label is in English and intact.

FWHs should not collect tins/bottles etc where the label has fallen off or has been removed.

## 2.12 Cleaning and disinfection

Cleaning involves the removal of food debris, particles and residues whereas disinfection is the destruction of dangerous bacteria and removal of agents such as allergens.

The law requires that equipment, utensils, containers etc are effectively cleaned and where necessary disinfected. Wherever possible food business' containers and utensils should be used as they will already be subject to effective cleaning and disinfection regimes.

Cleaning and disinfection of utensils, equipment and containers is of particular importance when handling high risk hot food and loose other high risk food.

Where it is not possible to use food business containers etc, food grade containers (normally indicated by the presence of a wineglass and fork symbol on the container) should be used and washed using hot soapy water between used. You should ensure that such containers are clean and in good condition with no visible cracks or other damage. Recycled containers such as ice cream tubs will be fine as long as in good condition.



### 2.13 Transport arrangements

All food collected by FWHs should be protected from contamination whilst in transit. Methods to protect the food will vary depending on the type and nature of the food but the general rules will include:

- Ensure that, where appropriate, packaging and wrappers are intact.
- Food is kept away from pets and children.
- Journey times are never longer than 2 hours (1 hour for hot high risk food).

## 3 Hazard Analysis

A Hazard analysis has been carried out with respect to the handling of foods by FWHs which has identified the following significant hazards:

## Hazard Analysis High Risk Hot Food

Process step	Hazard	Hazard analysis			Control	Comment
		Likelihood	Severity	Significant		
1. Selection of business	Poor hygiene control Poor allergen control.	Medium Medium	High High	Y Y	PRP 2.3 Selection criteria	Only use pre-approved suppliers with FHS of 3 or above. Supplier contracts.
2. Collection of food by FWH	Contamination with pathogens  Growth of: <i>Clostridium perfringens</i> <i>Bacillus cereus</i>  Contamination from containers Contamination from equipment  Undeclared food allergens	Medium  High High  Medium Medium  Medium	High  Medium Medium  Medium Medium  High	N  Y Y  Y Y  Y	PRP 2.3 Selection criteria PRP 2.7 Additional training for FWHs  PRP 2.5 Temperature control PRP 2.12 Cleaning and disinfection  PRP 2.6 Allergen Control	Collect only from approved suppliers. Only approved FWHs to collect hot high risk food. Only collect hot food above 63°C Use equipment/containers from business. Only collect when allergen information provided
3. Transport by FWH	Contamination with pathogens Growth + toxin formation <i>Cl. Perfringens</i> and <i>B.cereus</i> .	Medium Medium	Medium High	Y Y	PRP 2.13 Transport criteria	Max transit time 1 hour. Keep hot food hot or begin cooling process
4. Storage by FWH	Contamination with pathogens Growth + toxin formation <i>Cl. Perfringens</i> and <i>B.cereus</i> .	Medium High High	Medium High High	Y Y Y	PRP 2.5 Temperature control	Active chilling of food within 2 hours of collection. Chilled to 8°C within 4 hours of collection.

	Growth of other pathogens					Stored at max 8°C Max 24 Hours
5. Advertising food on App	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Clear description of product. Link to declaration of allergens.
6. Collection by customer	Inadequate allergen declaration	High	High	Y	2.6 Allergen Control	Link to declaration of allergens.
7. Use by customer	Growth/survival of pathogens including <i>Cl.perfringens</i> and <i>B.cereus</i> .	Medium	High	Y	PRP 2.11 Food Information	

### Hazard analysis Other Hot food

Process step	Hazard	Hazard analysis			Control	Comment
		Likelihood	Severity	Significant		
1. Selection of business	Poor hygiene control	Medium	High	Y	PRP 2.3 Selection criteria	Only use pre-approved suppliers with FHRS of 3 or above. Supplier contract includes allergen control information.
	Poor allergen control.	Medium	High	Y		
2. Collection of food by FWH	Contamination with pathogens	Low	High	N	PRP 2.3 Selection criteria	Collect only from approved suppliers.
	Contamination from containers	Medium	Medium	Y	PRP 2.12 Cleaning and disinfection	Use equipment/containers from business.
	Contamination from	Medium	Medium	Y	PRP 2.6 Allergen Control	

	equipment Undeclared food allergens	Medium	High	Y		Only collect when allergen information provided
3. Transport by FWH	Growth of pathogens Contamination by pathogens	Medium Medium	Medium Medium	Y Y	PRP 2.13 Transport criteria	Max transit time 2 hours. Transit in sealed containers.
4. Storage by FWH	Contamination with pathogens  Growth of pathogens	Medium  High	Medium  High	Y  Y	PRP 2.12 Cleaning and disinfection  PRP 2.5 Temperature control	Storage in original containers. Active chilling of food within 2 hours of collection. Chilled to 8°C within 4 hours of collection. Stored at max 8°C Max storage time 24 Hours
5. Advertising food on App	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Clear description of product. Link to declaration of allergens.
6. Collection by customer	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Link to declaration of allergens.
7. Use by customer	Growth/survival of pathogens.	Medium	High	Y	PRP 2.11 Food Information	

Hazard analysis High Risk Food

Process step	Hazard	Hazard analysis			Control	Comment
		Likelihood	Severity	Significant		
1. Selection of business	Poor hygiene control Poor allergen control.	Medium Medium	High High	Y Y	PRP 2.3 Selection criteria	Only use pre-approved suppliers with FHRS of 3 or above. Supplier contract includes allergen control information.
2. Collection of food by FWH	Contamination with pathogens  Contamination from containers Contamination from equipment  Undeclared food allergens	Low  low low  Medium	High  Medium Medium  High	N  N N  Y	PRP 2.3 Selection criteria  PRP 2.12 Cleaning and disinfection  PRP 2.6 Allergen Control	Collect only from approved suppliers.  Mostly pre-packed. Best practice to use equipment/containers from business.  Only collect when allergen information provided
3. Transport by FWH	Growth of pathogens Contamination by pathogens	Medium Medium	Medium Medium	Y Y	PRP 2.13 Transport criteria	Max transit time 2 hours. Transit in sealed containers.
4. Storage by FWH	Contamination with pathogens  Growth of pathogens	Medium  Medium	Medium  High	Y  Y	PRP 2.12 Cleaning and disinfection  PRP 2.5 Temperature control	Storage in original containers.  Stored at max 8°C for fresh and -18°C for frozen. Max storage time 24 Hours for fresh.

5. Advertising food on App	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Clear description of product Link to declaration of allergens.
6. Collection by customer	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Link to declaration of allergens.
7. Use by customer	Growth/survival of pathogens.	Medium	High	Y	PRP 2.11 Food Information	

Hazard Analysis low risk food

Process step	Hazard	Hazard analysis			Control	Comment
		Likelihood	Severity	Significant		
1. Selection of business	Poor hygiene control Poor allergen control.	Medium Medium	High	Y	PRP 2.3 Selection criteria	Only use pre-approved suppliers with FHS of 3 or above.
2. Collection of food by FWH	<i>Contamination with pathogens</i>	Low	High	N	PRP 2.3 Selection criteria	Collect only from approved suppliers. Only collect when allergen information provided
	Undeclared food allergens	Medium	High	Y	PRP 2.6 Allergen Control	
3. Transport by FWH	Contamination with pathogens	low	Medium	N	PRP 2.13 Transport criteria	
	Growth of pathogens	low	Medium	N		
4. Storage by FWH	Contamination with pathogens	low	Medium	N	PRP 2.12 Cleaning and disinfection	Food stored in original containers.
	Growth of pathogens	low	High	N		
5. Advertising food on App	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Clear description of product Link to declaration of allergens.
6. Collection by customer	Inadequate allergen declaration	High	High	Y	PRP 2.6 Allergen Control	Link to declaration of allergens.
7. Use by customer	Growth/survival of pathogens	low	High	N	PRP 2.11 Food Information	Labelling information

						provided.
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## 4 Documentation

In accordance with Recital 15, Regulation 852/2004 and European Commission guidance, there is no requirement for documentation where the nature and size of the food business does not warrant it.

The food activities performed by FWHs are adequately controlled by the use of pre-requisites and no further documentation is deemed necessary to assure food safety.