

# **THE ASSURED UK MALT TECHNICAL STANDARD**

**Version 4.6**

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# ASSURED UK MALT MANUAL

## LIST OF CONTENTS

ITEM	Page
<b>INTRODUCTION</b>	
AUKM Scheme	4
AUKM Scope	4
AUKM Scheme Rules	4
<b>Structure of the AUKM Standard</b>	
<b>The Standard is organised into 8 principle sections, which denote the main areas covered by the Standard. Each section is sub-divided into specific and detailed criteria.</b>	
<b>SECTION 1</b>	
<b>Management Requirements</b>	
1.1 General requirements	9
1.2 Policy statement	9
1.3 Organisational structure	10
1.4 Documentation and data control	10
1.5 Record keeping	11
1.6 Internal audits and periodic reviews	11
1.7 Preventive and corrective action	12
1.8 Complaints	12
1.9 Client contracts	13
<b>SECTION 2</b>	
<b>Food Safety Plan</b>	
2.1 HACCP	14
2.2 TACCP	17
2.3 Traceability	17
2.4 Product withdrawal and/or recall	18
<b>SECTION 3</b>	
<b>Personnel</b>	
3.1 Personal hygiene	19
3.2 Contractors	20
3.3 Training	20
<b>SECTION 4</b>	
<b>Site &amp; Premises</b>	
4.1 Buildings	21
4.2 Cleaning	21
4.3 Pest control	22
4.4 Glass	22
4.5 Metal removal	23

**SECTION 5****Equipment**

5.1	Process plant & equipment	23
5.2	Planned preventative maintenance	23
5.3	Calibration	24

**SECTION 6****Transport**

6.1	Transport vehicles	24
6.2	Ship transport and containers	25

**SECTION 7****Process Controls**

7.1	Malting operations	25
7.2	Utilities	26
7.3	Grain and malt storage	27

**SECTION 8****Product controls**

8.1	Material supply	29
8.2	Product packaging	29
8.3	Product testing	30
8.4	Laboratories	31

<b>Appendix I</b>	<b>– Glossary of Abbreviations</b>	<b>32</b>
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<b>Appendix II</b>	<b>– Associated Literature</b>	<b>33</b>
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# INTRODUCTION

## AUKM Scheme

1. The MAGB AUKM Scheme is a voluntary scheme developed, owned and implemented by the Maltsters Association of Great Britain to certify malt products.
2. The aim of the Scheme is to ensure safe and high-quality malt products are produced through the adoption of appropriate supplier, process and customer controls. It verifies that the industry is meeting its obligations under applicable food safety related legislation, codes of practice, and malting industry best practices.
3. AUKM is a Product Certification Scheme delivered by a Certification Body accredited to International Standard ISO 17065. To become AUKM certified a malting business shall be assessed by the Certification Body and demonstrate full compliance with the current standard version of the AUKM Standard.

## AUKM Scope

1. The AUKM standard encompasses all the operations and associated activities of a Scheme participant that has a bearing on the safety and specification of the malt products supplied, including raw material procurement and supplier approval, production process controls, and finished product controls.
2. All malt products produced by the Scheme participant shall be included in the audit scope or, with the agreement of the Certification Body, clearly excluded from the scope of the certification. Where malt products outside the certification scope are handled, these shall not adversely affect the safety of certified products.
3. Audits will include as appropriate:
  - the selection, sourcing and receipt of raw materials
  - the process by which malt products are produced
  - the storage of raw materials and malt products
  - the compliance with customer requirements and specifications
  - Distribution
4. Malting operations fully meeting the requirements of this Standard will be able to demonstrate to customers and other interested parties that best practice in malting operations have been followed and food safety and quality hazards are effectively controlled.
5. AUKM is open to any company involved in the production and sale of malt products subject to complying with the Scheme rules and the AUKM Standard.

## AUKM Scheme Rules

### 1. New Applicants

Contact the Certification Body nominated by MAGB to apply for certification.

The Certification Body will ask for various company details, such as;

- Name, address and contact details
- Nature and scale of operations
- Sites to be covered by the certification
- Existing approvals/Other approvals required? (eg BRC, TASC etc)

The Certification Body provide a quotation, which once accepted and signed by the Applicant, they will make contact to arrange the Initial Assessment.

### 1.1 Initial Assessment

This will be conducted by a technical specialist with extensive practical experience of the malting industry, who visits each site covered by the scope of the certification and conducts a thorough audit, to confirm conformance with the AUKM standard. If there are any aspects not carried out in accordance with the AUKM standard, the Assessor will identify these as “non-conformances”.

A written report is provided at the end of the visit summarising details of the visit and listing any non-conformances that have been identified.

### 1.2 Certification

New Applicants are required to respond to any non-conformances within 28 days of the assessment [14 for a major] giving the Certification Body a clear description of actions taken to resolve the problem and prevent re-occurrence. The Applicant shall also enclose a copy of any supporting information to confirm what action has been taken (e.g. copies of documents, photos etc). In cases where documentary evidence is not sufficient to confirm completion of non-conformances, the Certification Body will need to carry out a short revisit to the Applicant’s site.

When the Certification Body confirm all non-conformances have been fully resolved, they will issue a Certificate of Conformance, which will be valid from the date that certification is awarded.

## 2. Routine Assessments

These must be carried out at all certificated sites every year and must be carried out within one month of the expiry date shown on the certificate to allow a back-to-back continuation certificate to be issued.

The Certification Body will conduct a full Routine Assessment of each site in the same manner as the original “Initial Assessment”. If any non-conformances are identified they are reported, and must be responded to, the same way as the Initial Assessment.

Applicants and companies already approved to the AUKM standard shall inform the Certification Body, within 5 working days of details being known, of any change to their business that is relevant to their certification, typically:

- Company ownership
- Sites
- Scope of operations
- Key Personnel
- Distribution

### Non-Conformances

- 1 The objective of the audit is to provide a realistic reflection of the standard of the malting operation and level of conformance against the AUKM Standard. Non-conformances may be raised either from initial audits for new Scheme participants or from surveillance audits for existing Scheme participants.
- 2 A non-conformance is a failure to conform with the requirement of:
  - The AUKM Standard
  - The malt business’s own procedures
  - Relevant legislation
  - Relevant industry Guides or Codes of Practice
  - To supply safe and high-quality malt products
- 3 Following identification of any non-conformance, the business must undertake corrective action to remedy the issue and develop an action plan to address the cause and corrective preventive action. When a non-conformance has been raised, the business shall not gain/retain certification until the non-conformance has been resolved satisfactorily.

#### 4 Classification of non-conformances

Classification	Cause
Critical	There is a significant failure to comply with food safety or legal requirement.  A recurrence of a Major Non-conformance raised at the preceding audit.
Major	A substantial failure to implement a specific requirement of any clause of the AUKM Standard, or there is significant doubt as to the safety, legality, or quality of the malt products supplied.  A recurrence of a Minor Non-conformance raised at the preceding audit.
Minor	A partial failure to fully implement a requirement of the AUKM Standard, or there is insufficient evidence to demonstrate implementation. The safety, legality and quality of the product supplied is not compromised.
Observation	An observation is when an improvement to the participant's systems could be implemented. Observations may be raised during audits, and are points noted by the assessor that: <ul style="list-style-type: none"> <li>• Are not a contravention of the Standard but could assist the participant or the MAGB</li> <li>• May constitute a non-conformance, but the assessor is unable to confirm this during the audit</li> </ul> Observations do not preclude certification and implementation is at the malting operation's discretion

#### 5 Response to Non-conformances

Classification	Response
Critical	Certification is refused for new Scheme participants or suspended in the case of existing Scheme participants. Re-audit is required.
Major	Certification is not granted to new Scheme participants until the non-conformances are rectified. Plan of corrective action must be submitted by all participants within 14 days of the audit with closure no more than 60 days after the audit. The corrective action must remedy the issue, address the root cause and prevent recurrence. Timescale for submission of evidence must be agreed with the Certification Body. Verification of the effectiveness of corrective actions is undertaken by the Certification Body before certification is granted or renewed.  For existing Scheme participants certification continues subject to verification of the effectiveness of the corrective action within the agreed timescale by the Certification Body. Failure to implement corrective actions satisfactorily within the agreed timescale will lead to suspension of certification.
Minor	Certification is not granted to new Scheme Participants until the non-conformances are rectified. Plan of corrective action must be submitted within 28 days of the audit. The corrective action must remedy the issue, address the root cause and prevent recurrence. Timescale for submission of evidence must be agreed with the Certification Body. Typically, within 28 days of the audit with closure no more than 60 days after the audit. Verification of the effectiveness of corrective actions is undertaken by the Certification Body before certification is granted or renewed.

	For existing Scheme participant's certification continues subject to verification of the effectiveness of the corrective action within the agreed timescale by the Certification Body. Failure to implement corrective actions satisfactorily within the agreed timescale may lead to suspension of certification.
<b>Observation</b>	<i>No response required. Observations do not preclude certification.</i>

### Suspension and Withdrawal of Certification

- 1 The Certification Body in consultation with MAGB, may suspend or withdraw a participant's certification when the participant has:
  - A critical non-conformance that has, or is likely to have, an adverse effect on product safety or legality
  - Any non-conformance against the AUKM Standard which is not resolved satisfactorily or within the agreed timescale
  - Refused to provide appropriate evidence or access to part of the production site for an audit
  - Failed to pay relevant fees
  - Failed to comply with AUKM Scheme rules or the Certification Body's terms and conditions.
  - Brought the AUKM Scheme into disrepute
- 2 Participants that have had their certification suspended due to food safety, legality or major non-conformance issues must have a follow-up audit within an agreed timeframe (typically 30 calendar days) to confirm the non-conformances have been fully resolved, for their certification to be re-instated.
- 3 Businesses that have had their certification withdrawn will be required to have a complete re-audit as if they were a new Scheme participant.
- 4 Participants that have had their certification suspended due to minor non-conformance issues or non-payment of fees must show all matters are resolved within an agreed timeframe (typically 30 calendar days) to have their certification re-instated or withdrawn.
- 5 Participants that no longer require AUKM certification and will withdraw from the Scheme, must inform the Certification Body in writing at the earliest possible date. The date of removal from the scheme will then be arranged between the participant and the Certification Body. The participant will be asked to return their certificate.
- 6 Suspended or Withdrawn participants shall not claim to be AUKM certified. They must also notify existing customers immediately on their change of status.

### Appeals and Complaints

- 1 Complaints about either a AUKM participant or Certification Body should be directed to the Certification Body in the first instance. The Certification Body is accredited by UKAS and works to strict codes of conduct and documented procedures. If participants are not satisfied with the way in which the Certification Body manages the complaint, they may refer the matter to MAGB.
- 2 A participant has the right of appeal against decisions made by the Certification Body. Appeals are dealt with in the same way as complaints.
3. Appeals must be made in writing to the Certification Body within 14 days of being advised of the decision that is the subject of the appeal. The Appellant must provide full and factual details of the justification for the appeal.
4. If the Certification Body does not support the decision on which the appeal is based then the erroneous decision will be reversed.

5. If the Certification Body supports the decision on which the appeal is based then an independent appeals board is convened within 30 days of receipt to review and rule on the appeal. Both the Certification Body and the Company are entitled to attend the appeals panel meeting and present information.
6. The independent appeals panel makes a ruling based on the information supplied by the Appellant and the Certification Body. The ruling of the Appeals Panel is binding and final on the Certification Body and the Company.

### **Ownership and Use of the Assured UK Malt logo.**



The 'Assured UK Malt' logo is copyright material, owned by the Maltsters Association of Great Britain, and registration as a certification mark has been applied for. It is a condition of use that the Mark shall not be used in any printed advertisements or printed publicity matter directed primarily to the market in the United Kingdom and in the Isle of Man or in retail point of sale display cards distributed by the Registered Proprietor for use within the United Kingdom and in the Isle of Man without indicating that it is a certification mark.

Use of this logo is only permissible with the formal written agreement of the Maltsters Association of Great Britain.

This logo can only be used if the company is registered with MAGB as an Assured UK Malt supplier, supplying malt that fully complies with the terms and conditions of the Assured UK Malt Technical Standard.

### **Liability**

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# 1 Management Requirements

## 1.1 General Requirements

The Company shall develop and implement an effective Management System that addresses all of the requirements of the AUKM Standard. The Management System must be regularly reviewed at least annually to ensure it remains current, effective and continues to reflect the needs of the business.

Clause	AUKM Requirements	Guidance
1.1.1	The Company shall prepare a policy document that indicates how the requirements of the AUKM scheme have been interpreted and implemented within the business.	<p>For businesses with ISO 9001 systems, it is likely that the Quality Manual will be an existing document that fulfils this need, with some adjustment.</p> <p>For those that do not have ISO 9001 documentation in place, the “policy document” would need to explain in general terms (i.e. a summary) how the business has complied with the requirements of the AUKM scheme and provide references to the detailed procedures, instructions, documents etc that contain the working detail of the systems.</p> <p>In all cases it is acceptable for a Company to use and adapt existing systems, documents, manuals and forms etc to comply with AUKM. It is not expected that a company will duplicate systems already in use.</p>
1.1.2	The Company shall develop and implement working procedures and detailed instructions that are needed to control activities in the manner required by the AUKM standard.	The extent to which these working procedures are documented will be dependent on the nature of the work covered by the procedure, the methods used and the skill/training needed by the staff

## 1.2 Policy Statement

The Company shall have a clearly defined and documented policy statement, regarding compliance with the AUKM Standard that is understood by everybody in the company.

Clause	AUKM Requirements	Guidance
1.2.1	<p>The Company shall document a policy that states its intention to comply with the Assured UK Malt Standard to meet its obligations for:</p> <ul style="list-style-type: none"> <li>• Product Safety</li> <li>• Product Legality</li> <li>• Good Manufacturing Practice</li> <li>• Product Quality</li> </ul>	<p>This is only expected to be a brief (typically one page) document that is prepared and endorsed by, typically, the Managing Director or equivalent.</p> <p>This policy can be combined in a statement that also deals with other standards, such as ISO 9001, but it must still be clear and unequivocal about AUKM.</p>
1.2.2	The Company shall ensure that the policy is communicated to, and understood by, all employees.	Systems and procedures are worthless unless they are known and understood by everybody in the business. All employees should have a reasonable understanding of

		the reason for having the AUKM standard, how important it is and their role within the system.
1.2.3	The policy shall be reviewed annually, or sooner if there are significant changes to the business, to ensure it remains current and suitable for the needs of the business.	Policies of this type are not likely to change regularly but it is important to check it to make sure that it is still correct and appropriate.

### 1.3 Organisational Structure

**The UK malting company must ensure that all employees clearly understand their job function, responsibility and reporting relationships within the Company**

Clause	AUKM Requirements	Guidance
1.3.1	All employees shall be made aware of their responsibilities, the levels/limits to their authority and the organisational structure of the company, particularly for staff involved with product quality, safety, legality. Deputies shall be nominated for all key members of staff.  All personnel, permanent and temporary, shall be informed of their duties, authority and responsibilities in documented job descriptions or written instructions.	Employees should be made aware of the extent of their authority (particularly for important activities such as decisions regarding non conforming product, customer contracts, purchasing, product release etc).  Employees should understand who they report to.
1.3.2	The Company shall ensure that adequate resources are put in place to meet the requirements of the AUKM Scheme and relevant legislation.	The company must consider what resources (typically personnel, equipment and facilities) are needed to fulfil their obligations under the AUKM scheme and relevant legislation (health and safety facilities/equipment) and make sure that these are available.

### 1.4 Documentation and Data Control

**The Company shall ensure that all documents and data relevant to the management of product safety, legality, quality and good operational practice are available, and effectively controlled.**

Clause	AUKM Requirements	Guidance
1.4.1	All documents and data shall be properly authorised, distributed and controlled such that all employees have access to the correct version of all documents and data needed to carry out their duties effectively/correctly.	It is important that documents are checked and approved by a competent person before they are issued. Unless documents are identified with a version number or date it is hard to be sure that the right version is in use. The distribution of documents should be recorded so that new versions can be issued to the right people when the document changes and old versions either removed or protected from being used in error.
1.4.2	The company shall ensure that systems are in place to identify the need for any changes	The company must be aware of factors that are likely to cause documents/data/systems

	to documents, data and operational systems.	to need updating, these would typically include:  Legislation National standards Customer requirements Internal reviews (e.g. internal audits)
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## 1.5 Record Keeping

**The Company shall maintain records to demonstrate the effective operation of management systems and compliance with the AUKM scheme.**

Clause	AUKM Requirements	Guidance
1.5.1	The company shall make sure that records required by the AUKM scheme are kept in suitable conditions that prevent deterioration and enable easy retrieval.  Businesses shall maintain their electronic records in a manner that maintains the security of those records against fraudulent access	Generally paper records need to be kept in dry conditions and should be indexed and identified in some manner to allow somebody to find them again.  Computer archive media needs to be kept in conditions recommended by the manufacturer.
1.5.2	Records shall be kept for a minimum of three years. The company shall identify any records that need to be kept for longer for either regulatory or good practice.	Most product records will have served their purpose after 3 years but some records (e.g. personnel/training) are still very relevant and the company must identify which ones still need to be kept when the three-year period has expired.

## 1.6 Internal Audits and Periodic Reviews

**The Company shall carry out a programme of audits and reviews to ensure the company operations are effective in producing malt that is safe, legal and meets customer requirements.**

Clause	AUKM Requirements	Guidance
1.6.1	The Company shall plan and conduct internal audits as a means of determining whether company operations are effective and comply with planned arrangements.  The audit programme needs to ensure that all parts of the standard are included annually.	The company needs to have a plan of the audits they intend carrying out. The plan must ensure that all systems and activities required by the AUKM standard are covered.
1.6.2	Audits shall be carried out by a competent person that is independent of direct responsibility for the work being audited.	In this context, competent means that the auditor has the capability to perform an audit by virtue of experience/training and has a good working knowledge of the subject being audited.  Independence means that the auditor is not auditing their own work.

<b>1.6.3</b>	<p>Audit findings, including any deficiencies, shall be recorded and circulated within the company. Audit reports shall record conformance and non-conformance</p> <p>If any deficiencies are reported, records shall be retained to indicate that they have been fully resolved within a reasonable time. See 1.5.2</p>	<p>The audit report needs to be issued to appropriate members of the company management (i.e. those with overall responsibility for the area being audited) for information and also appropriate members of operational staff that may need to use the information to correct problems or for general awareness.</p>
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## 1.7 Preventive and Corrective Action

**The Company shall ensure that procedures exist to eliminate the cause of actual or potential threats to product safety, legality or quality.**

Clause	AUKM Requirements	Guidance
<b>1.7.1</b>	<p>The company shall identify potential problem areas by reviewing appropriate sources of information in order to take preventive action.</p>	<p>This is the “pro-active” part. The company needs to review key sources of information that will reveal whether there are emerging problems that could be mitigated by taking immediate action rather than waiting for the problems to occur.</p>
<b>1.7.2</b>	<p>The company shall investigate the root cause, correct the non-conformance and ensure that actions are taken to prevent a re-occurrence of the problem.</p>	<p>This is the “re-active” part. The company needs to review any problems (typically non-conformances, complaints, test result failures etc) not just to resolve the immediate problem, but also to consider what changes or improvements might be needed to prevent the problem occurring again.</p>
<b>1.7.3</b>	<p>The company shall keep records of corrective and preventive actions taken</p>	<p>Records need to be kept of the reviews carried out, the actions taken and the results.</p>

## 1.8 Complaints

**The Company shall have systems to record, review and respond to complaints.**

Clause	AUKM Requirements	Guidance
<b>1.8.1</b>	<p>The company shall establish and implement a system for recording complaints relating to the supply of their products.</p>	<p>The company needs to record all complaints, preferably in a central system within the site. Best practice is to acknowledge receipt of the complaint and let the person/customer know how the complaint will be handled.</p>
<b>1.8.2</b>	<p>All complaints shall be reviewed promptly and action taken to establish the basis of the complaints.</p>	<p>The company needs to review what the person or customer is saying and to determine the basis of the complaint. If complaints prove to be well-founded the company must consider the possible effect on other customers and products.</p>

	The review shall also consider the potential effect of the complaint/investigation on other products.	This review may well need technical input and evaluation of a sample of the disputed product.
<b>1.8.3</b>	The company shall report the complaint review findings to the Customer and take actions required to resolve the complaint. The company shall keep records of the complaint review and any actions taken. See 1.5.2	It is necessary to report the findings back to the customer promptly. If the review found that the company was at fault the records need to show that the customer was satisfied with the actions taken to remedy the problem. Simple records need to be kept of the reviews carried out, the actions taken and the results.

## 1.9 Client Contracts

**The Company shall ensure that all client requirements are thoroughly reviewed prior to acceptance of the contract.**

Clause	AUKM Requirements	Guidance
<b>1.9.1</b>	All contracts are subject to Terms & Conditions which shall be mutually agreed by both parties.	The company should put a system in place to check that what the customer is ordering is understood and possible to achieve, not only in terms of the product specification but also in terms of non-product criteria, such as delivery times etc.  The system must ensure that if the customer is vague or inaccurate in their enquiry/order, the Company must clarify what is really required before the order is confirmed.
<b>1.9.2</b>	The company shall formally review and manage any changes to customer orders that are requested by the customer during the contract.	If the customer needs to change any aspect of the contract or order the company must make sure that the changes to the contract are fully checked before accepting and once accepted, are then fully implemented.
<b>1.9.3</b>	The company shall ensure that the customer order requirements are disseminated to the relevant departments and personnel within the company.	The company needs to make sure that adequate systems are in place to advise all departments and relevant personnel of the details of the customers' order.
<b>1.9.4</b>	The company shall keep records of the review of the customer contract requirements. See 1.5.2	The company should keep a record of the review and acceptance of the contract, including all of the contract requirements.

## 2 Food Safety Plan

### 2.1 HACCP

Companies shall develop and implement a HACCP system that follows the [Codex Alimentarius Commission guidelines](#) as a means of identifying and managing the risk of food safety hazards occurring or persisting through the malting process. MAGB document references are: [HACCP / TACCP](#)

Clause	AUKM Requirement	Guidance
2.1.1	<p>The HACCP team shall prepare a HACCP plan.</p> <p>The HACCP team shall maintain records appropriate to the HACCP system and its implementation.</p>	<p>As a minimum, the HACCP plan should document how all the clauses detailed in section 2.1 are implemented.</p> <p>Records should include as a minimum monitoring results, corrective actions, validation activities, verification results and reviews of the HACCP plan and details of resulting changes.</p> <p>The retention period for HACCP documentation and records should be defined</p>
2.1.2	Senior management shall be committed to food safety management and the implementation of HACCP.	This commitment should be defined in the policies and business objectives of the company.
2.1.3	<p>The malting operation shall use a multi-disciplinary HACCP team to develop and maintain the HACCP system. Key personnel identified as HACCP team members shall have adequate training and experience.</p> <p>A HACCP Team Leader or nominated team representative shall be appointed to co-ordinate the work of the HACCP Team.</p> <p>The Team Leader shall be able to demonstrate competence in the understanding of HACCP principles and their practical application.</p>	<p>The size of the team should be appropriate to the size and complexity of the malting operation. The members of the team shall be personnel with specific knowledge and expertise of each aspect of the operation of the facility.</p> <p>The team leader must have adequate knowledge of HACCP principles and have attended a recognized training course. Where the team leader has not attended a recognized HACCP course there should be available written justification</p>
2.1.4	<p>The HACCP system shall be underpinned by effective prerequisite programmes.</p> <p>The Prerequisite Programmes shall be clearly defined including the hazards controlled, how they are checked and the remedial action to be taken if not complied with.</p>	<p>Prerequisite programmes (PRPs) are preventative controls that adhere to the general principles of food safety, and provide the basic environmental and operating conditions, including within the premises, for equipment used and personnel, that are required for the production of safe and quality malt products.</p> <p>Pre-requisites are activities that are covered by systems specified elsewhere and are not unique to a particular process step. Typically, this will include requirements specified in the AUKM scheme, the MAGB HACCP Guide for Malting, etc.</p>

<b>2.1.5</b>	The HACCP team shall clearly define the scope of the study including the start and end point, the products covered, and the categories of biological, chemical and physical hazards.	The scope (terms of reference) should also specify the relevant legislation, relevant codes of practice, guidelines and reference documents used in the development of the HACCP system. The list of the PRPs may also be referenced in the Scope.  The team must have sufficient expertise to be able to identify the hazards to food safety and to know what is/is not acceptable in the finished product, plus the legislation.
<b>2.1.6</b>	The HACCP team shall prepare a full description of the products under study.	The product description should define the key parameters of the products including factors which influence the safety of the products. Reference to a specification may be made where appropriate.
<b>2.1.7</b>	The HACCP team shall define the intended use of the product by the customer.	Malt is used predominantly as the basic raw material for beer and spirit, with a much smaller quantity used in the food industry, (e.g. bread, biscuits, breakfast cereals and bedtime drinks). Co-products may be used for animal feed.
<b>2.1.8</b>	The HACCP team shall identify all operational steps in the process as defined in the Scope of the study and document as a process flowchart.	The flowchart would normally be presented as a series of boxes showing the sequence of individual stages from material receipt through every step of production and storage to dispatch. If there are several production lines that differ in any aspect, then each must be shown in the flowchart.
<b>2.1.9</b>	The HACCP Team shall conduct a hazard analysis to identify and list the food safety hazards that could occur in the process that would make it unfit for its intended purpose.  The HACCP team shall ensure the decision process takes account of the risks associated with the hazard identified.  The cause/source of the hazards shall be appropriately defined.  The control measures for the identified hazards shall be defined.	This requires the Company to know and understand the food safety issues that relate to the use of the malted grain or co-products in their customers' processes.  Where relevant the decision process should include the consideration of the likelihood of the hazard occurring, and the severity of the hazard and its consequential effects.  Appropriate control measures prevent, eliminate or reduce the hazards to acceptable levels. Those controls that form part of the prerequisite programme should be identified, additionally they may include operational prerequisite programmes. OpPRPs are usually specific to a defined process step.
<b>2.1.10</b>	The HACCP team shall identify, by the use of a logical approach and document the Critical Control Points of the process.  Records shall be maintained of the reasons for establishing whether a process step is a CCP or not. See 1.5.2	Critical control points (CCP) occur at steps where the hazard could persist without being identified or eliminated at any further step in the process.  Controls at CCPs are an action on the product at a specific process step, prevent

	<p>A decision tree may be used to help determine CCPs. Records shall be maintained including the findings and the decision tree used.</p> <p>OpPRPs shall also be included in the HACCP plan. Where relevant, the decision-making process to show how hazards are managed by OpPRPs shall be recorded.</p>	<p>or reduce a hazard to an acceptable level, manage a specific hazard, and require monitoring in real time.</p> <p>Controls at OpPRPs are generally preventative, reduce the likelihood of a hazard occurring, and may require real time monitoring.</p>
<b>2.1.11</b>	<p>The HACCP team shall establish critical limits which shall be met to ensure that each CCP is under control.</p> <p>Critical limits for the control measures for all CCPs that are measurable, or observable shall be established. Critical limits shall be such that they can be monitored in a real-time and timely manner prior to the product being dispatched.</p>	<p>Critical limits are set on the control not the hazard.</p> <p>Where relevant, critical limits for OpPRPs should also be recorded.</p>
<b>2.1.12</b>	<p>The HACCP team shall establish a monitoring system for all CCPs that confirm the critical limits have been met.</p> <p>The monitoring personnel shall be trained and competent in how to perform the monitoring.</p>	<p>The monitoring system should specify how the monitoring activity is performed, the personnel responsible, and the frequency of monitoring.</p>
<b>2.1.13</b>	<p>The HACCP team shall define corrective actions to be taken when monitoring indicates that a particular CCP is not under control and the responsibility for taking the actions.</p>	<p>There should be a pre-determined corrective action plan that is to be initiated when monitoring results show a deviation from the critical limit</p>
<b>2.1.14</b>	<p>The HACCP team shall establish procedures to confirm that the HACCP system is working effectively. This shall include validation, verification and review</p> <p>The HACCP team shall review the HACCP system annually as a minimum or sooner if there are any changes that could affect product safety or change to scope. A HACCP review shall be conducted after a recall. and in response to any changes in products, processes, legislation or any other factors that may affect the safety of the finished product.</p> <p>A formal review of the HACCP system shall be undertaken to ensure its continuous effectiveness and improvement. The HACCP shall be reviewed every 12 months as a minimum.</p> <p>Records of validation and verification activities shall be maintained. See 1.5.2</p>	<p>The HACCP plan should be validated to confirm its capability, that is safe product can be produced. This should include all CCPs, OpPRPs and PRPs where relevant.</p> <p>The procedures for the verification of the HACCP system should be stated. This should provide evidence there is conformance with the HACCP plan and that it is working effectively, and a safe product is being produced.</p> <p>Guidance for undertaking a HACCP review for a malting business are given in the MAGB HACCP Protocol.</p>



	The HACCP review shall be recorded and findings implemented.	
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## 2.2 TACCP

Companies shall consider the need for a TACCP system to protect against malicious threats and associated risks.

Clause	AUKM Requirements	Guidance
2.2.1	The malting operation shall consider the need for a TACCP system and implement one if deemed necessary.  If a TACCP is not appropriate to the business, then the reasoning shall be documented.	A guidance document is available from MAGB. More detailed information is available at: <a href="http://food.gov.uk/sites/default/files/media/document/pas962017.pdf">food.gov.uk/sites/default/files/media/document/pas962017.pdf</a>
2.2.2	The need for a TACCP system shall be reviewed annually, or sooner if there are any changes, to ensure it remains current and suitable for the needs of the business.	

## 2.3 Traceability

Material used in production must be traceable to the source of supply through to finished product.

Clause	AUKM Requirements	Guidance
2.3.1	The company shall be able to identify and trace what is received, identify and trace what is made from what, when and how, and identify and trace where finished product is sent.	In terms of legislation, the traceability requirement is to identify from whom and to whom product has been supplied; industry good practice extends this to match inputs with outputs. The focus is, therefore, on supplier traceability (the one step back), internal process traceability, and customer traceability (the one step forward). This is in turn is linked to efficient record keeping.  The requirements for traceability apply to all materials used in the production of malt and co-products including processing aids and packaging materials.  It is recognised that it may not be possible to directly trace a batch of raw material to a finished product in malting operations. In many cases, individual batches of materials may be joined together (where several batches are combined to form a single unit) or split (where a single unit is split into separate batches). For example, in and out of storage units where the storage unit contains materials from several suppliers, and the combined materials in a storage unit is split for use in different production runs. The aim must be to identify each batch that

		constitutes a joined unit and the batches that are split from it.
<b>2.3.2</b>	<p>The traceability system shall be tested by a designated and competent person (or persons) at least every 12 months and follow the path of production backward and forward through the process.</p> <p>*Records of the test need to be maintained and kept. See 1.5.2</p>	A physical test of the traceability system should be undertaken which includes collation of relevant documentation and records, e.g. by selection of a finished product lot or raw material batch

## 2.4 Product Withdrawal and/or Recall

**The Company shall establish procedures to manage product withdrawal and/or product recalls, in order to minimize or eliminate risks arising from nonconforming material.**

Clause	AUKM Requirements	Guidance
<b>2.4.1</b>	<p>The company shall establish documented procedures to review incidents promptly, in order to determine the effect on the safety, legality and conformity of the affected products.</p> <p>Product Recall Procedures shall include as a minimum:</p> <ul style="list-style-type: none"> <li>• Identification of personnel who make up the recall management team with roles and responsibilities defined</li> <li>• Up to date contact details for the recall management team, customers, suppliers, regulatory authorities, Certification Body</li> <li>• Guidelines for deciding when a product recall shall be initiated</li> <li>• An Incident Log</li> <li>• A procedure for traceability (one up/one down) for all products subject to recall</li> <li>• Records of recovery or disposal of affected product.</li> </ul> <p>The recall procedure shall ensure that consideration is made to situations where a malt recall impacts on other material e.g. feed</p> <p>The procedure shall be documented.</p> <p>The MAGB and the Certification Body SHALL be informed within five working days in the event of a product recall.</p>	<p>As soon as information indicates that products might be/are out of specification there must be a well-thought through and documented system that comes into play to investigate the situation and decide the correct course of action.</p>
<b>2.4.2</b>	<p>The system shall ensure that customers are advised immediately if an incident occurs that affects delivered product.</p>	<p>If the investigation indicates that the problem extends to a product actually delivered to a customer, they must be informed immediately and advised if a product recall is considered necessary.</p>

	<p>The company shall have planned arrangements for the recall of products delivered to customers.</p> <p>Product Recall Procedures shall include that specified in 2.4.1 as a minimum:</p> <p>The procedure shall be documented.</p> <p>The product recall system SHALL be challenged at a frequency determined by risk assessment and at least every 12 months, to prove its effectiveness.</p>	<p>This system relies on effective internal systems, records and traceability. It is a system that only gets used in an emergency and therefore it must be trialed (e.g. with a “dummy” emergency) so that it is known to work and therefore can be relied upon when needed.</p>
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## 3 Personnel

### 3.1 Personal Hygiene

**The company shall develop requirements for personal hygiene to minimise the risk of product contamination from personnel, and for control of contractors and visitors.**

Clause	AUKM Requirements	Guidance
3.1.1	<p>The requirements for personal hygiene shall be documented and communicated to all personnel.</p> <p>A personal hygiene policy shall include as appropriate:</p> <ul style="list-style-type: none"> <li>• suffering from infectious diseases</li> <li>• hand washing</li> <li>• covering cuts and grazes</li> <li>• watches, jewellery and loose items</li> <li>• eating, drinking and smoking</li> <li>• protective clothing</li> </ul>	
3.1.2	<p>The company shall ensure that the health status of employees is suitable before they are allowed to come into contact with the product.</p> <p>A return-to-work questionnaire or similar interview arrangement shall be in place when an employee returns after an illness (e.g. diarrhoea) that could compromise food safety, or after travel to a country that is known to be at risk of communicable disease.</p>	
3.1.3	<p>If eating, drinking and smoking are allowed these activities shall only take place in designated areas.</p>	<p>These activities should not be in production areas. Signage indicating no eating, drinking or smoking should be in place as appropriate.</p>
3.1.4	<p>Visitors to sites shall be made aware of food safety and hygiene procedures appropriate to the nature and duration of their activities on site.</p>	<p>For visitors to the site, it is sufficient to read an induction notice at reception and to sign an acknowledgement.</p>

	Records shall be maintained - See 1.5.2	
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### 3.2 Contractors

**The Company shall ensure that Contractors operate in such a manner that business integrity and food safety is maintained.**

Clause	AUKM Requirements	Guidance
3.2.1	<p>The Company shall ensure that all contractors working on site operate in such a manner that business integrity is maintained.</p> <p>The Company shall ensure that all contractors have read the local rules for working on site prior to any works taking place. The company shall ensure that contractors are aware of all food / feed safety issues relevant to that site and that all areas are left neat, tidy and food / feed safe before leaving site.</p>	<p>The use of contractors may be necessary to undertake specific tasks to production facilities including maintenance and development activities. The company should ensure they work in an appropriate manner that does not compromise food safety and health and safety requirements.</p> <p>Contractors should be made aware of the personnel hygiene rules and sign an acknowledgement. Records should be maintained.</p>
3.2.2	The company shall ensure that all contractors sign in and out on a daily basis and records maintained. See 1.5.2	

### 3.3 Training

**The Company shall ensure that all employees are evaluated, trained and monitored to ensure that they are competent and fit for the work they are required to undertake.**

Clause	AUKM Requirements	Guidance
3.3.1	<p>The Company shall identify and provide any training that is needed to ensure employees (both permanent and temporary staff) are competent, safe and legal for the work they are required to undertake.</p> <p>Records of training shall be retained and kept up to date and reviewed every 12 months. See 1.5.2</p> <p>It is essential that training and monitoring systems ensure both employee safety and food safety within the factory.</p>	<p>Training must cover work related activities to ensure that employees are able to carry out the work to an acceptable standard, and also cover general site/legislative requirements (e.g. health and safety, health status etc).</p> <p>Competence may be determined through training, work experience or qualification.</p>

## 4. Sites & Premises

### 4.1 Buildings

The production and storage facilities shall be of suitable construction and be maintained to facilitate the production of safe product.

Clause	AUKM Requirements	Guidance
4.1.1	All buildings housing storage or processing areas or plant will be maintained in a condition that ensures food safe production.	Building fabric and structure will be maintained in a manner appropriate for its age without compromising food safety particularly in processing or storage areas. Where buildings are old, and the fabric not easily maintained it may be advisable to have covered or protected vessels.
4.1.2	Housekeeping schedules shall be established and maintained to ensure a suitably clean and tidy environment within and around buildings.  Procedures shall be implemented and documented to ensure appropriate standards are achieved.	A housekeeping audit can be undertaken to check standards are achieved.

### 4.2 Cleaning

Cleaning systems shall be in place which ensure appropriate standards of hygiene are maintained to facilitate the production of safe product.

Clause	AUKM Requirements	Guidance
4.2.1	Surfaces in processing areas shall be easy to clean and resistant to abrasion. The company shall document the cleaning regime and keep records of cleaning carried out. See 1.5.2  Procedures shall be implemented and documented to ensure appropriate standards are achieved.	Cleaning is essential and must be well-planned with records available to confirm that it has been done.  A hygiene audit can be undertaken to check standards have been achieved.
4.2.2	Cleaning and disinfection products shall comply with national legislation/company policies and be labelled/stored in a manner that prevents them from contaminating raw materials, process streams or the finished product.	Products and cleaning materials need to be food grade, used as specified by the manufacturer and kept away from the product to prevent contamination.
4.2.3	Empty cleaning material containers shall not be re-used for other purposes.	
4.2.4	The company shall keep a record of the chemicals on site and retain a copy of the relevant safety data sheets that are accessible and available for reference, when needed.	Chemicals kept on site must be recorded and the safety data sheets held so that, in the event of any problems, it is clear what actions must be taken. It is also necessary to ensure that any facilities (e.g. eye wash) or personal protective equipment specified

		in the data sheets are available to Operators and that the Operators are aware of the need to use them.
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### 4.3 Pest Control

The Company shall have effective pest control measures implemented on site.

Clause	AUKM Requirements	Guidance
4.3.1	<p>The company shall develop and implement a pest control programme using a trained specialist. This will include records of all treatments and inspections, details such as follow up actions (in the case of pest activity-and any additional actions raised at visits – e.g. proofing and housekeeping) bait plans, MSDS (for chemicals), and training when using own staff.</p> <p>The programme shall ensure that all products, processes and other sensitive areas are suitably protected from pest activity.</p> <p>When the pest control programme is carried out by an employee, it shall be in accordance with legislation and recognised best practice.</p>	<p>The programme can be developed and operated in-house or sub-contracted.</p> <p><a href="https://www.gov.uk/pest-control-on-your-property">https://www.gov.uk/pest-control-on-your-property</a></p> <p><a href="https://www.bpca.org.uk">Pest Management Codes of Best Practice   pest control standards (bpca.org.uk)</a></p>
4.3.2	<p>The company shall ensure that all storage, processing, packaging and dispatch areas are protected against the ingress of pests. Waste materials shall be regularly cleared away to avoid attracting pests.</p> <p>Records of all treatments and inspections shall be kept. See 1.5.2</p>	

### 4.4 Glass

Glass, ceramic tiles and brittle plastics shall be excluded or protected against breakage where there is a risk of product contamination.

Clause	AUKM Requirements	Guidance
4.4.1	<p>The company shall document a glass policy which stipulates where glass and brittle plastics may or may not be used or taken into the plant.</p> <p>The company needs to identify where glass/ brittle plastic is not acceptable within the site and make sure that employees understand the need to comply with these requirements.</p>	
4.4.2	<p>Any glass, ceramics or brittle plastic that is situated in the plant shall be recorded in a (regularly updated) register and a</p>	

	<p>documented procedure available to deal with the discovery of broken glass and the actions to take.</p> <p>If there is any fixed glass in the storage or production areas this needs to be listed in a “glass register” and checks carried out by a designated and competent person (or persons) at a specified frequency based on the level of risk to the product to make sure the glass is still intact or undamaged.</p>	
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## 4.5 Metal Removal

**Metal removal equipment shall be in place to protect product from contamination.**

Clause	AUKM Requirements	Guidance
4.5.1	In accordance with the HACCP study, metal detection systems shall be placed in a suitable position in the product flows to remove any metal objects. The type and location shall be documented.	The site HACCP study will identify the specific site/process requirements for positioning metal detection systems to remove metal from both the product and co-product streams.
4.5.2	<p>Procedures shall be in place for the inspection, cleaning and strength testing of magnets.</p> <p>Magnets shall be cleaned on a regular basis and debris found evaluated.</p> <p>Records of magnet checks, including debris found on magnets, shall be maintained. See 1.5.2</p>	

## 5. Equipment

### 5.1 Process Plant and Equipment

**Process plant and equipment shall be suitable for the intended purpose and not constitute a risk to product.**

Clause	AUKM Requirements	Guidance
5.1.1	All process plant and equipment that comes into contact with the product shall be constructed of hygienic materials that are suitable for the purpose.	All process equipment and facilities must be made of suitable materials that can be cleaned.
5.1.2	Only food grade lubricants and oils shall be used where product contact is likely	

## 5.2 Planned Preventative Maintenance

A maintenance programme shall be implemented to prevent product contamination and reduce potential for breakdowns.

Clause	AUKM Requirements	Guidance
5.2.1	<p>The company shall establish a planned maintenance programme and ensure that all equipment is kept in a safe and operational condition.</p> <p>Records shall be maintained See 1.5.2</p>	<p>A planned maintenance programme is important not only to prevent production downtime but to prevent poorly maintained equipment contaminating the product and also to keep the workplace safe for employees. All equipment needs to be covered but the frequency of actual maintenance is clearly dependent on factors such as the age/condition of the equipment, frequency of use etc.</p>
5.2.2	<p>Equipment used for the application of pesticides and other agrochemicals shall be specifically covered by the maintenance programme, calibrated and a record kept.</p> <p>The accurate placement of the correct dose of pesticide in the target area is a fundamental requirement.</p> <p>Preventative maintenance shall be scheduled and carried out at least in line with manufacturers recommendations.</p>	<p>If application equipment does not operate effectively this may have a significant effect on the efficacy of the pesticide and/or influence residues in products.</p> <p>Calibration timing should reflect the frequency of use and nature of the equipment.</p>

## 5.3 Calibration

The Company shall ensure that all equipment used to inspect, measure, test or control specified processes within defined limits is calibrated.

Clause	AUKM Requirements	Guidance
5.3.1	<p>The company shall establish a record of all equipment that requires calibration, indicating for each item of equipment:</p> <p>The re-calibration interval The accuracy required The calibration results The calibration method</p> <p>If equipment is found to be outside the accuracy tolerance when calibrated, the company shall carry out an investigation to check the consequences on the integrity of the product.</p> <p>Reference materials shall be traceable to a national standard.</p> <p>The records indicated shall be kept ensuring that the calibration system is working effectively. See 1.5.2</p>	<p>Equipment that is used to check the conformity of the product to specification requirements or to monitor processes within defined limits needs to be calibrated with reference to a national standard where one exists (e.g. the National Physics Laboratory or UKAS certified facility) to make sure it is sufficiently accurate for the purpose and the readings can be trusted.</p>



## 6. Transport

### 6.1 Transport Vehicles

The Company shall ensure that material transported in vehicles is safe and in conditions that will not cause contamination or degradation of the product.

Clause	AUKM Requirements	Guidance
6.1.1	<p>Vehicles used for the transport of products shall be fit for the purpose and do not present a risk to safety, security or quality of products.</p> <p>Records of inspections shall be maintained. See 1.5.2</p>	<p>The company needs to ensure prior to loading that vehicles are in a clean condition, free from strong odours which may cause taints, and in a suitable condition to prevent damage to products during transport.</p>
6.1.2	<p>The company shall ensure that the haulage of all grain, malted products and co-products complies with the requirements of the TASC Code of Practice for Road Haulage or an equivalent protocol.</p>	<p>Compliance to the AIC requirements can be confirmed by checking the AIC website for the list of approved Hauliers or by the company auditing Hauliers themselves. The TASC code is available at <a href="http://aictradeassurance.org.uk/latest-documents/tascc-haulage-code-of-practice/">aictradeassurance.org.uk/latest-documents/tascc-haulage-code-of-practice/</a></p>

### 6.2 Ship Transport and Containers

The Company shall ensure that material transported by sea is safe and in conditions that will not cause contamination or degradation of the product.

Clause	AUKM Requirements	Guidance
6.2.1	<p>For shipments in bulk by sea, the requirements of the TASC Code of Practice or equivalent shall be observed.</p> <p>The GM and allergen requirements of the TASC code shall also be applied to shipments in bulk by boat.</p>	
6.2.2	<p>Containerised shipping: where malt is shipped in metal containers (e.g. 20- or 40-foot containers), these will be suitable to keep the malt food safe during transit to the customer.</p> <p>A container checking system will be in place and records kept by the malting company. See 1.5.2</p> <p>For each shipment checks shall be made to ensure no holes are present that would allow rain, water or rodent ingress, absence of deleterious taint or extraneous debris from previous loads or cleaning activities. Door seals will be checked for integrity.</p>	

## 7. Process Controls

### 7.1 Malting Operations

The Company shall ensure that production is carried out in a controlled and defined manner.

Clause	AUKM Requirements	Guidance
7.1.1	<p>The company shall ensure that production is planned within the following processes, as required, to meet customer contract and product specifications:</p> <ul style="list-style-type: none"> <li>• Steeping</li> <li>• Germination</li> <li>• Kilning</li> <li>• Deculming</li> <li>• Blending</li> </ul> <p>Each of the malting processes shall be carried out under controlled conditions</p>	<p>Production needs to be planned to the extent necessary to ensure that customer delivery requirements can be achieved.</p> <p>Process and raw material requirements will need to be varied to produce a product that meets the customer product specification. The Company needs to ensure that effective systems are in place to:</p> <ul style="list-style-type: none"> <li>• Plan production requirements</li> <li>• Make sure Operators know what to do</li> <li>• Monitor product operations</li> </ul> <p>Vary production parameters, as needed.</p>
7.1.2	<p>The company shall control process parameters such as temperature, time and moisture within limits defined within the company for the type of malt being produced.</p>	<p>The company must ensure that each stage of production is controlled within defined limits to meet customer specifications and systems ensure that Production Operators are clearly aware of the process requirements.</p>
7.1.3	<p>All processing aids shall be suitable for food use, clearly labelled and stored securely in suitable conditions. The company shall establish documented protocols and methods of use. Processing aids shall only be used when permitted or directed by customer product specifications.</p> <p>The use of processing aids shall comply with relevant legislation and be food grade.</p>	<p>Processing aids such as Gibberellic acid, Sulphur dioxide or peat smoke can be used where specifically permitted in the customer product specification (or other customer written instruction) but must only be used in accordance with written methods and any relevant legislation.</p> <p>Any processing aid must be clearly identified or proven to be “food grade” (peat in the case of Smoke).</p>

### 7.2 Utilities

The company shall ensure that water, air and other utilities used in production are effectively controlled to ensure they do not represent a contamination risk.

Clause	AUKM Requirements	Guidance
7.2.1	<p>A documented risk assessment shall be undertaken for all water used in the process including water drawn from boreholes and water from re-processing. Any sources of water on site which are deemed unsuitable for use shall be entirely separated from the compliant supply and effective systems put in place to prevent cross contamination.</p>	<p>Water that comes into contact with the product either as part of the malting process or for cleaning the process equipment must be fit for purpose and offer no contamination to the grain and the final malted product that would adversely affect food safety. A risk-based assessment shall be made and documented, and appropriate control measures enacted. Cognisance should be</p>

	If water storage tanks are used, they shall be secure and fit for purpose.	taken of EU and/or national drinking water legislation with specific explanation of deviation from these standards. If water is available on site which is deemed unfit for use in production process or cleaning, then the company must ensure that measures are in place to prevent it from coming into contact with the product.
<b>7.2.2</b>	Air intakes for air used in processing shall be sited, constructed and maintained to avoid sources of pollution and contamination (e.g. microbial).	The HACCP study should consider the individual circumstances prevailing at the site and consider what precautions are necessary to prevent air intakes drawing in unsuitable air for process applications.

### 7.3 Grain and Malt Storage

**The Company shall ensure that storage conditions for cereal grains and malt are suitable to keep the product safe, traceable and to prevent deterioration.**

Clause	AUKM Requirements	Guidance
<b>7.3.1</b>	<p>Grain shall be stored in sound, dedicated stores and protected from water and pest ingress.</p> <p>The company shall have a documented stores cleaning schedule. Stores shall be comprehensively swept or vacuumed to remove residues and fumigated or treated with approved insecticides after complete discharge and prior to re-filling.</p> <p>The company needs to take extreme care that cleaning chemicals are legal and food safe are used and that they are stored used correctly.</p> <p>Simple cleaning records need to be kept. See 1.5.2</p> <p>A record of the cleaning and the inspection shall be kept. Only chemicals that conform to national legislation and are approved by the malting and brewing industries shall be used. All agrochemicals shall be clearly labelled and may not be transferred to alternative containers – they shall be stored in a secure place away from the production areas. See 1.5.2</p> <p>Operators using pesticides shall be trained and also registered, as required by national legislation and a record kept of the application of all chemicals. Any chemicals used shall be approved under national legislation and also by the latest BBPA list as suitable for intended purpose. The dose of chemicals used shall be controlled and</p>	<p>Cleaning is important and needs to be controlled by a well thought through plan that identifies not only what cleaning is required but when and how it should be carried out.</p> <p>The latest update to the BBPA/Campden BRI list of agrochemicals suitable for use on cereals for malting and brewing can be found here  <a href="https://www.ukmalt.com/technical/8-food-and-feed-safety/pesticides-agrochemicals/">https://www.ukmalt.com/technical/8-food-and-feed-safety/pesticides-agrochemicals/</a></p> <p>Stores need to be secured when access is not needed for monitoring or filling/emptying operations. The stores must be constructed so that they keep the weather and pests out.</p> <p>A housekeeping audit can be undertaken to check standards are achieved.</p>

	<p>conform to national and industry limits. Records shall be kept and include the chemical used, the dose, the date of application and the responsible Operator. See 1.5.2</p> <p>Stores shall be kept secure against any form of unnecessary and unauthorized access.</p> <p>Stores shall be constructed of durable material that protects contents from the elements and pests.</p>	
<p><b>7.3.2</b></p>	<p>The company shall comply with the principles set out in the HGCA Grain Storage Guide and HGCA Topic sheet No. 60 (ensuring good germination in malting barley).</p> <p>Grain shall be stored in sound dedicated stores and protected from water ingress.</p> <p>Grain with a moisture level in excess of 18% shall not be stored for more than a total of 2 weeks. The company shall carry out periodic spot tests on grain in store to detect the presence of “Ochratoxin A” based on risk assessment.</p> <p>If grain is to be long term stored the grain shall be quickly dried to below 13% moisture and held at a temperature of less than 15°C.</p> <p>Grain held within flat stores shall be monitored for insect activity through the use of insect traps. A plan of trap layout will be available, traps shall be regularly inspected with a frequency based on risk assessment, and a record kept of findings and any actions taken.</p> <p>To ensure that grain quality is maintained, flat stores shall be sampled at appropriate intervals. A plan of sampling points will be available and a record kept of analytical data at each sampling interval. See 1.5.2</p> <p>Grain held in vertical silos shall be monitored for insect activity and quality.</p> <p>The temperature of the grain shall be recorded and actions taken to deal with any upward trend in temperature, based on temperature checks which will be carried out at a frequency based on risk assessment.</p>	<p>Further information and guidance are given in the HGCA documents – this must be followed and will be evaluated during the AUKM audit.</p> <p>The Grain Storage Guide can be downloaded at <a href="http://ahdb.org.uk/grainstorage">ahdb.org.uk/grainstorage</a></p> <p>This will normally be by traps, temperature monitoring, or by movement to another silo with sampling during transfer.</p>

	<p>The storage shall be constructed and managed so as to eliminate the risk of inter-mixing between different grades, varieties and types of grain.</p> <p>All controls applicable to on-site stores shall also apply to company off-site storage. If responsibility for an off-site store is contracted out, then the store operation shall be inspected at least once every 12 months</p>	
7.3.3	<b>Malt and co-products shall be stored in sound, dedicated stores, and protected from moisture uptake and insect infestation.</b>	

## 8. Product Controls

### 8.1 Material Supply

**The Company shall ensure that all material used in the supply of the malt to the customer is from acceptable, approved sources and does not compromise AUKM requirements.**

Clause	AUKM Requirements	Guidance
8.1.1	The Company shall ensure that all material used in the supply of the malt to the customer is from acceptable, approved sources and does not compromise AUKM requirements.	The Company must ensure that products (e.g. grain, packaging materials, processing aids etc) and services (e.g. transport) that are purchased / subcontracted are suitable and of the correct specification to meet the customer's contract requirements.
8.1.2	<p>The Company shall evaluate and select suppliers based on their ability to meet specified subcontract requirements.</p> <p>The company shall be able to demonstrate that they use effective and appropriate methods of evaluating and selecting suppliers.</p>	The Company needs to ensure that it evaluates its suppliers in a manner that confirms that the Supplier really can provide the correct product or service. This might involve carrying out an audit, requiring them to hold certain specific approvals (e.g. farm assurance for Barley, TASC for haulage, etc) or other means.
8.1.3	<p>The Company shall provide suppliers with clear unambiguous information that specifies the products or services that are being purchased.</p> <p>The Terms &amp; Conditions for purchase of grain shall state that the only agricultural chemicals that can be applied to grain during its growth, harvest and storage are those that are named on the most recent version BBPA approved agricultural chemicals list.</p> <p>A record of purchased material and services shall be kept. See 1.5.2</p>	<p>The Company must ensure that they provide suppliers with all the information that they need and keep a copy of what was ordered.</p> <p>The latest update to the BBPA/Campden BRI list of agrochemicals suitable for use on cereals for malting and brewing can be found here  <a href="https://www.ukmalt.com/technical/8-food-and-feed-safety/pesticides-agrochemicals/">https://www.ukmalt.com/technical/8-food-and-feed-safety/pesticides-agrochemicals/</a></p>

<b>8.1.4</b>	The Company shall monitor the performance of suppliers.	Once critical suppliers (i.e. suppliers of grain, haulage, processing aids, packaging, co-products, binding agents etc) have been accepted and are being used, it is necessary to monitor their performance with a view to taking action if performance is not considered to be acceptable.
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## 8.2 Product Packaging

Product packaging shall be suitable for the intended use.

Clause	AUKM Requirements	Guidance
<b>8.2.1</b>	<p>Packaging materials e.g. bags, boxes, polypropylene sacks and plastic container liners.</p> <p>All packaging materials that come into direct contact with the final product will be in compliance with the requirements of applicable food safety legislation. No food packaging will be re-used.</p> <p>All packaging materials shall be identifiable and traceable (ref recall clause 2.4 above).</p>	<p>Certificates of conformity and packaging specifications, which include the migration properties of any chemicals within the packaging materials may aid demonstration of the suitability of the packaging for the transport of malt</p>
<b>8.2.2</b>	Packaging shall be stored under conditions that prevent contamination and minimise deterioration.	

## 8.3 Product Testing

The Company shall ensure that all material received and malt products are checked for product safety, legality and quality.

Clause	AUKM Requirements	Guidance
<b>8.3.1</b>	<p>The Company shall ensure that suitable checks are carried out on all grain before use to ensure that it is acceptable and meets the purchase specification.</p> <p>Records shall be maintained of checks</p> <p>As a minimum, checks shall cover:</p> <ul style="list-style-type: none"> <li>• Insects</li> <li>• Foreign material</li> <li>• Mould</li> <li>• Moisture</li> <li>• Ergot</li> <li>• Grain Passport available (showing use of pesticides)</li> </ul> <p>If grain is not farm assured, the Company shall ensure that the HACCP system</p>	<p>Correct and acceptable raw materials are essential to producing acceptable malt to customer specifications, so checks carried out at Goods Inwards are vital.</p> <p>The company should carry out the specified basic checks (and the extra “due diligence” checks based on risk assessment), to make sure that the grain (and other product related material purchased by the company) are safe and fit for purpose.</p> <p>Assured grain gives confidence that the application of pesticides is controlled and recorded. The Company must therefore consider within the HACCP system what additional risks and control measures are</p>

	<p>comprehensively addresses the additional risks to product safety that the unassured grain may pose.</p> <p>In addition, “Due Diligence” testing in raw materials and finished product shall be carried out on a risk-based approach for:</p> <ul style="list-style-type: none"> <li>• Mycotoxins</li> <li>• Pesticide residues</li> <li>• Heavy metals.</li> <li>• Any other contaminants deemed to be a risk</li> </ul>	<p>relevant in cases where unassured grain is used.</p> <p>The results of checks carried out at goods inwards/intake need to be recorded in a form that makes it possible to see what checks were done and the results.</p>
<b>8.3.2</b>	Malt samples shall be tested based on risk assessment to ensure that the finished malt does not exceed 5ppb of NDMA.	
<b>8.3.3</b>	Other products and materials shall be checked for compliance with the purchase order requirements on arrival and a record kept.	Typically processing aids, product packaging etc.
<b>8.3.4</b>	The company shall ensure delivery drivers are directed to the correct intake point and are prevented from unauthorised tipping.	The company must make sure that drivers are only able to tip in the correct intake point.
<b>8.3.5</b>	Records of material received and the storage location shall be kept enabling material traceability. See 1.5.2	It must be possible to trace the origin of a batch of material/products to the supplier. As material enters the facility it is recognised that it will be batched up and traceability may be to several known suppliers rather than just a single supplier.

## 8.4 Laboratories

**The Company shall ensure that sampling and testing schemes are actioned to evidence adequate control of product quality**

Clause	AUKM Requirements	Guidance
<b>8.4.1</b>	The Company shall ensure the validity of analytical results by appropriate management of internal laboratories and/or by engaging external laboratories based on their performance and accreditation status.	
<b>8.4.2</b>	<p>The Company shall ensure that internal laboratories have written analytical procedures, trained staff and that equipment is maintained and calibrated as appropriate to the application. The Company shall implement an analytical quality assurance (AQA) program to validate appropriate actions taken to identify and rectify any out of specification results or trends.</p> <p>Analysis and testing schedules, sample storage periods and the reporting and</p>	AQA programmes typically incorporate the use of check malts and barleys, trend charts (statistical process control) and participation in a recognised proficiency testing scheme e.g. MAPS

	storage of results will be defined in documented procedures.	
<b>8.4.3</b>	The company shall ensure that both internal batch samples and out-loading/delivery samples are retained for a minimum of six months	These samples will form a key part of the traceability trail and therefore the company may wish to retain particular samples for longer than the minimum period of time.



# Appendix I

## Glossary of Abbreviations

Abbreviation	Full name
<b>AHDB</b>	Agricultural & Horticultural Development Board
<b>AIC</b>	Agricultural Industries Confederation
<b>BBPA</b>	British Beer and Pub Association
<b>CBRI</b>	Campden BRI
<b>CCP</b>	Critical Control Point
<b>CODEX</b>	Codex Alimentarius
<b>COPR</b>	Control of Pesticide Regulations
<b>COSHH</b>	Control of Substances Hazardous to Health
<b>DEFRA</b>	Department for Environment, Food and Rural Affairs
<b>GM</b>	Genetically modified
<b>GMO</b>	Genetically modified organism
<b>HACCP</b>	Hazard Analysis Critical Control Point
<b>HGCA</b>	Home Grown Cereals Authority (became AHDB)
<b>MAGB</b>	Maltsters Association of Great Britain
<b>MAPS</b>	Malt Analysis Proficiency Scheme
<b>OTA</b>	Ochratoxin A
<b>OpPRP</b>	Operational Pre-Requisite Programmes
<b>PRP</b>	Pre-Requisite Programme
<b>SWA</b>	Scotch Whisky Association
<b>TASCC</b>	Trade Assurance Scheme for Combinable Crops
<b>TACCP</b>	Threat Analysis Critical Control Point
<b>UKAS</b>	United Kingdom Accreditation Service
<b>VACCP</b>	Vulnerability Analysis Critical Control Point

# Appendix II

## Associated Literature

### Publication (All publications – current version)

- [The MAGB HACCP Guide to Malting](#)
- [AHDB Grain Storage Guide](#)
- [HGCA Introductory Guide to Malting Barley](#)
- Red Tractor [Combinable Crops & Sugar Beet Standards](#)
- Scottish Quality Cereals [Farm Assurance Scheme Standards](#)
- British Beer and Pub Association [Technical Note on Agrochemicals for use on brewing raw materials](#)
- [TASCC Scheme - Code of Practice](#)
- Information on malting barley and malting can be found on the [MAGB website](#)
- Information on '[Assured UK Malt](#)' can be found on the MAGB website
- [Codex Alimentarius](#) Commission Food Hygiene Basic Texts. Includes guidelines for the application of HACCP principles.
- [HGCA Topic Sheet 60](#)
- [The MAGB TACCP/VACCP Guide for Malting](#)