PRODUCT SPECIFICATION

"Conwy Mussels"

PDO (X) PGI ( )

1 RESPONSIBLE DEPARTMENT IN THE MEMBER STATE

Department for Environment, Food and Rural Affairs (Defra)
Area 3A
Nobel House
Smith Square
London
SW1P 3JR
United Kingdom
Tel: +44 20 7238 6951
Email: protectedfoodnames@defra.gsi.gov.uk

2 GROUP

Name:	Conwy Mussel Group
Address:	The Quay Conwy LL32 8LF United Kingdom
Tel.:	01492 592689
Fax:	01492 592689
E-mail:	thomasowenjones@hotmail.com
Composition:	Producers: 5 Fishing boats. Processors: 4 in unit.

3 TYPE OF PRODUCT

Class 1.7: Fresh fish, molluscs and crustaceans and products derived there from	

4 SPECIFICATION

4.1 Name:

"CONWY MUSSELS"

4.2 Description:

"Conwy Mussel" is the name used to describe the common mussel or Mytilus Edulis from the Conwy Estuary in North Wales. Conwy Mussels are harvested in the designated area using the traditional method of hand raking during the mussel fishing season which is from September 1st to April 30th.

"Conwy Mussels" have a hard dark black or brownish shell which are oval in shape and pointed at one end, they usually have a smooth exterior or have barnacles attached to them depending on where they have been raked from. For example in some locations on the river bed the mussels are encased in mud which prohibits the barnacles from attaching themselves, however those which are located on a sandy or rocky part of the estuary are often found with barnacles, as they can attach to the shell of the mussel with relative ease.

The mussels can range in size from 4.5cms to 10 centimetres long at which time they would be a minimum of 2 years of age.

As the "Conwy Mussel" is a more mature mussel than other mussels when harvested, it is large, fleshy and meaty with a high meat content and high meat to shell ratio . Conwy Mussels are known for their succulent, juicy and rich salty taste with a chewy fleshy texture. Freshly caught Conwy Mussels should be odour free. The subtle differences in taste of the Conwy Mussel are due to them being a large more mature mussel and the environment where the Conwy Mussel grows with its mixture of salt sea water and fresh river water.

4.3 Geographical area:

The designated area applies to the area in which it is authorised that Conwy Mussels can be removed. This authorisation applies to the part of Conwy Bay and Estuary which lies below the high water mark of Spring tides and which is enclosed by lines drawn between the points A B and C set out below and the position of the railway bridge over the Conwy River (grid reference N53 Degrees' 280.278 W 003 Degrees' 823.611) plus the Conwy Quay.

	Latitude	Longitude
A	53 20.341'N	003 52.790'W
B	53 17.461'N	00354.949'W
C	53 16.672'N	003 53.760'W

4.4 Proof of origin:

This application refers to mussels caught within the designated area within the Conwy Estuary using the traditional method of hand raking.

The River Conwy is routinely monitored for quality by the Environment Agency.

The mussel beds at the estuary of the River Conwy are protected by Fisheries Byelaws to aid conservation. These Byelaws were formulated by the Conwy Mussel Men Committee (who later became the Conwy Mussel Development Group), Conwy County Council and the North Western North Wales Sea Fisheries Committee and is agreed and enforced by the Welsh Assembly Government. The Byelaws state that Conwy Mussel fishermen.

- Must rake from a boat no greater than 15 metres in length.
- Must use their licence on a regular basis at least once in a season
- Must only catch mussels using pitch pine rakes which are no greater than 1 metre in width.

All mussel fishermen require a licence or “Mussel permit” to harvest Conwy Mussels from the Conwy Estuary and all licence holders must abide by the above Byelaws. Each permit has a unique permit number and is valid for one season only – from 1st September to 30th April. At the end of the season the fisherman has to apply for a new permit for the following season. The permit is issued by the North and North Western Sea Fisheries Committee and ensures that a record is kept of all fishermen licensed to harvest Conwy Mussels. The licence/permit allows a fisherman to:

1. Rake for mussels within the designated geographical area.
2. To fish for ‘any’ type of shellfish present in the Conwy Estuary
3. To either: sell their catch or to move it for purposes of re seeding within the boundaries of the designated geographical area.

The Conwy Mussel fishermen operate by harvesting no Conwy Mussels less than 4.5cms in length at which time they would be a minimum of 2 years of age this complies with the Fisheries Byelaws.

In order to allow for full traceability of Conwy Mussels the following documentation is kept.

Return Form

As part of the licence, each fisherman is required to record each catch/harvest of mussels (or ‘tide’) by a Return Form which is issued by the Welsh Government. Each fisherman is required to record each catch/harvest on a daily basis and return these sheets once a month to the Welsh Government Inshore Fisheries Department. The authorisation number on the return form corresponds to the licence holder. A copy of the Return Form is also kept by the fisherman.

The return form specifies:

- Date of harvest
- Geographic area fished
- Quantity or weight of mussels harvested
- Which purification plant they are submitted to

- Name and address of the fisherman

Registration Document

In order to comply with EC Regulation No 853/2004 a Live Shellfish Registration Document is required to be kept by both the fisherman and the purification plant, This records the following information:-

- Name of details of the fisherman
- Food Authority where shellfish landed
- Date of harvest
- Location of production area
- Name and quantity of shellfish being moved
- Place of destination including EC approval number CW006 which relates to the purification plant on Conwy Quay.
- Address of purification centre

Prior to purification the mussels are tipped into baskets which are check weighed and the weight recorded. Records are kept of the depuration system by a Purification Tank Operation Record or similar, recording traceability of the mussels, water circulation, water temperature, salinity, dates and times. These records are checked routinely by local Environmental Health Officers (EHO)'s or similar and also by the Centre for Environment Fisheries and Aqua Science (CEFAS). The processor (purification plant) keeps a record of traceability of who the mussels were bought from and where the mussels were sold to. This can be traced by the dispatch label corresponding to the Conwy purification plant which isCW006

Once the mussels have been through the purification process, they are then sorted and inspected to ensure only live animals go into the food chain, and that they meet the following minimum requirement;-

- Nothing smaller than 4.5cms
- Nothing with more than 50% barnacle cover
- No damaged shells
- No half shells
- purified

Once the inspection has been carried out they are bagged according to customer requirements and the bags are labelled. The labelling is very specific and includes the date, species name, and a dispatch approval number which corresponds to the EC approval number CW006 which refers to the name of the purification plant.

All the above records ensure that there is full traceability throughout the supply chain.

4.5 Method of production:

All Conwy Mussels grow naturally from seed beds in the Conwy Estuary within the designated geographical area mentioned above. The mussels grow and are harvested in this area. The mussels grow in tightly packed clumps attaching themselves to rocks and stones on the sandy seabed with its byssus thread. These threads are secreted as a thick fluid, which goes hard when it is in contact with the water, holding the mussel in position.

The mussel spawns in the spring; when the larvae float in the plankton before settling down to colonise new areas. Mussels can reabsorb their threads and move around in the area until they find the ideal place to settle, but older mussels seldom move.

During the summer months when water is warmer the mussels are left to breed or spawn. As spawning occurs during the summer there is a closed season between the1st May to 31st August when mussel fishing is not allowed. This prevents damage to the spawning populations at this critical time of year. It is a criminal offence to gather Conwy Mussels during the closed season. During this time the flesh inside the shell becomes sinewy and reduced in size.

The mussel feeds by drawing in seawater and extracting food or plankton from the sea water before letting out clean water. Any bacteria that are in the water remain in the mussel's stomach, which is why purification is so important.

The production of plankton is dependent on climatic conditions and nutrients within the water. The deeper the water, the more plankton or food available for the mussel to feed on and the larger, healthier and stronger the mussel becomes It is the combination of these factors that gives the Conwy Mussel its distinct but subtle flavour.

Hand - raking the Mussels

During the mussel fishing season (which runs from 1st September to 30th April,) the mussels are collected from the river bed by a traditional fishing method using long hand-rakes from small boats. The boats (according to the byelaw mentioned above,) have to be less than 15 metres long this prohibits large dredging boats being used to collect Conwy Mussels. These small boats which are small shallow draft fishing boats traditionally used for fishing are called "dory's and are operated by one man per boat. Collecting the mussels takes place by hand raking, which requires practice and is a skill that has been passed down through generations.

This process is unique for several reasons:

- A pitch pine hand-rake is used as this can bend without breaking and is an excellent material for use in all weathers, as it dries well. A pitch pine hand rake also does not easily splinter and so is safer for the fishermen to use. The hand rake is a minimum of 3 metres long and has a unique heavy steel head of steel teeth equally spaced apart to allow smaller mussels less than 4.5 centimetres to fall through. Each fisherman services the head on his pole regularly to ensure that the mussels are the right size to be removed from the river bed.
- Raking the mussels takes time and care and is a skill that has been passed down over many years and takes a number of seasons to perfect. The maximum raking time is in "slack water" which is approximately three hours, one and a half hours before low tide and one and a half hours after low tide. It

would be physically impossible with a long rake, to rake the mussels outside these times when the water would be tidal.

- The design of these traditional rakes ensures any mussels less than 4.5cms long fall through the gaps in the rake and can continue to grow. It takes 2 years for the mussels to reach that size thus ensuring that Conwy Mussel are a minimum of 2 years of age and reach the right maturity to possess their characteristic large and fleshy qualities when harvested.
- Hand raking is therefore a sustainable practice which allows only those mussels which are the right size to be collected on the rake head and smaller ones fall through to the sea bed ensuring that younger mussels are not removed from the river bed before they are mature. A hand rake is also "gentler" on the mussel beds which allows them to recover quicker during the closed season.

Following the raking process, the mussels are stored on a floating pontoon in mussel bags made of cotton and locally known as "carrot sacks", until they are moved into the purification unit for processing. On the pontoon, they will initially be washed with salt water to remove any debris such as mud or weeds that has mixed in with the mussels following the raking process.

Conwy Mussels are fished seasonally from 1st September to 30th April and the method of fishing is traditional, sustainable and environmentally friendly ensuring that the mussel beds are retained for future generations.

Prior to the start of purification the mussels are tipped into baskets which are check weighed and washed again with potable tap water before being loaded into the purification plant. The purification process takes a minimum of 42 hours to complete a cycle. It consists of up to 750kgs of mussels submerged in sea water in a large steel tank. This sea water is then pumped through ultra violet tubes, which kills any harmful bacteria in the water, and pumped back into the tank. The filter system circulates the water at the same time as the mussels filtering the water. The combination of the mussels and the circulation of the water through the UV light increases the purity of the water over a period of up to 42 hours ensuring that any bacteria are completely flushed from the mussel's stomachs.

Purification makes the mussel completely clean and safe to eat without harming it or altering its flavour. Once this has happened, the mussels open slightly and a thin layer of froth appears on the top of the tanks.

Post purification

The fresh, raw mussels are inspected and any mussels smaller than 4.5cms, dead mussels, mussels with broken shells or mussel shells that are covered with more than 50% barnacles are hand removed. They are then weighed and put into bags of various sizes according to customer requirements, and labelled which includes date, species, name/number of purification plant and states that all Conwy Mussels must be sold live. Finally the fresh raw mussels are kept refrigerated and stored at temperatures between 1-5 degrees Celsius until they are sold.

4.6 Link:

The taste and appearance of the Conwy Mussel is determined by the unique environment in which the mussel grows. The production and mix of plankton (on which the mussel feeds) is dependent on climatic conditions, nutrients, biology and mineral content of the water in the designated geographical area.

The Conwy Estuary is a deep estuary and the Conway Mussels are large because they grow in deep water. The deeper the water, the more plankton or food available for the mussel to feed on and the larger, healthier and stronger the mussel becomes. The deep estuary also causes the water to circulate as well as changing through each tide; this produces an environment with a unique level of salty sea water and sweet river water.

The River Conwy is routinely monitored for quality by the Environment Agency and is recognised as one of the cleanest rivers in Europe and as such has historically undergone numerous directed ecological researches. The very high water quality along the whole length of the river and its catchment area is due to the combination of several factors:-

- Firstly, there is a lack of industry in the area. Traffic and industrial fumes are minimal compared to larger cities, thus water quality is much higher compared to rivers running through major cities.

- Secondly, the type of farming practiced along the riverbanks is primarily environmentally sympathetic farming, operating riverside buffer zones to minimise phosphate and nitrate run off from any intensive agricultural practices. In addition there are large areas of land adjacent to the Conwy River where woodland is the primary form of land use which again acts as a buffer and minimises run off of pollutants from the surrounding land into the river.

- Lastly there is minimum fishing activity in the estuary. The Conwy Estuary is not a busy port and traffic from large boats is minimal which means that the mussel beds are not disturbed by human activity. No dredging or commercial fishing, besides mussel fishing, takes place on the estuary, so the mussel beds remain unharmed by such activities.

The end of the Conwy Estuary runs into the sea. It is in this area where the salt water from the sea mixes with the fresh water from the River Conwy (approx half a mile in length) that the Conwy Mussel is formed. The mixture of the salt water from the sea and the fresh water from up the Conwy valley gives the Conwy mussel its unique succulent, juicy and distinct taste.

The mussel beds are naturally forming in the Conwy Estuary where there is a natural mix of high quality salt and fresh water and it is here where the mussels spend all their lives and are harvested. This gives the Conwy mussels a stronger taste and hardens the shell; compared to man produced rope grown mussels. As the Conwy Mussel is a more mature mussel when harvested (a minimum of 3 years), it is larger, fleshier and meatier than rope grown and dredged mussels.

It is the combination of all these factors that ultimately affects the organoleptic characteristics of the mussel and gives the Conwy Mussel its distinct but subtle flavour.

The characteristics of the “Conwy Mussel” is linked to the area on the basis of the local tradition of the use of hand raking, (or harvesting), of the mussel which is

unique to the area, and is a skill that has been passed down through generations. “Conwy Mussel” fishermen use unique boats which are small and shallow drafted; traditionally used for mussel fishing, and called “dory’s and operated by a one man crew.

The fishermen use a traditional method of fishing which involves the skill and know-how of using long hand held pine rakes to fish mussels from the estuary bed. There are four families that dominate the use of the traditional mussel fishing methods in Conwy, and this skill has been passed down through two generations of these four Conwy families for over 150 years.

“It is a skill that can only really be taught by an experienced fisherman and will probably take 5-6 seasons to master it”

Thomas Jones Conwy Fisherman, speaking to the Guardian News and on BBC News Wales October 2006

“Fishing for Conwy Mussels is a trade unchanged for centuries.”

History Points website 2011

The strong link between the designated area and the product is evident from historical records. The Conwy Estuary has been an important centre for mussel gathering for over 500 years and before the Second World War, there were 74 mussel licences held in Conwy. Most of the mussels were sold to large English towns in the Midlands such as Nottingham and Birmingham. However, as the importance of the supermarket increased, mussels were imported and the demand for Conway Mussels has declined. Currently there are now only 12 mussel licences operating from the Conwy Estuary

The use of the name Conwy Mussel as a quality product has grown through the hard work of the Conwy Mussel Development Group. Conwy Mussels are well established and highly recognised by the food industry both in the UK and worldwide? It is used by many top chefs and regularly appears as a named ingredient on their menus. Many renowned restaurateurs and agri-food businesses have demonstrated their preference for these mussels.

Graham Tinsley, Welsh National Culinary Team Manager and Executive Chef at Conwy Castle says;-

“Conwy Mussels are simply the best as they are succulent and juicy. The shells can be a bit gritty sometimes because of the barnacles, but that’s why they are as good as they are a natural product and it takes minutes to scrape them off”

Celebrity Chef Phil Vickery says;-

“The amazing thing about Conwy Mussels is just how large they are…..and the Conwy Mussels are tastier, fatter and juicier than the rope grown versions.

4.7 Inspection body:

Name: ENVIRONMENTAL HEALTH WALES

Address: Conwy County Borough Council

Tel.: 03708 506 506

Fax: 03708 506 506

E-mail: enquiries@environment-agency.gov.uk

The inspection body conforms to the principles of EN 45011 standard.

4.8 Labelling:

N/a