Raw material management

Introduction

As a part of its sustainability program and its traceability system, OGT carefully manages the origin and method of harvesting of its raw material, *Ascophyllum nodosum,* as described in this document.
OGT currently processes only one raw material, and for this reason it is very important for the company to adhere rigidly to management and sustainability programme . This will protect the durability of the resource and ensure the sustainability of the business. Monitoring of the origin of the material is also important as being the first step of the traceability system. Traceability has been developed to trace the production, from the raw material to the end product and this is crucial in the event of safety issue related to the end product.

Origin of the raw material

The seaweed *Ascophyllum nodosum,* processing by OGT, comes from areas carefully chosen by OGT:

- Dungloe bay
- Mulroy bay
- Trawbreaga bay

Rotation of the cutting sites

The area of harvesting is shared between sub-zones: the location of harvesting changes regularly, depending on the weather, sea conditions, and the quantity of seaweed available. This method was defined to allow seaweed regrowth between 2 harvests and to always keep a defined quantity of seaweed in each sub-area. Through this splitting in sub-areas, we ensure a better monitoring of the quality of seaweed: Each area corresponds a code, included in the raw material batch number. Therefore, through this system, the traceability is also better ensured.

Method of cutting & harvesting

The harvesting is manual: after cutting from the seashore or from small boats, the seaweeds are grouped in lots of around 3-4 tons and stay in the sea for a couple of days to allow the seaweed to be washed before collection. The seaweed is then brought by boat (if offshore) to a shore access point before being transported by the haulier to the factory.
The seaweed cutting is done by independent cutters who are engaged under contract by OGT. The cutters are inspected on a regular basis to ensure that they are adopting all the guidelines contained in the companys management and sustainability programme.

All the seaweed processed by OGT is freshly harvested by hand by experienced harvesters, as it has been done traditionally for several centuries.

At low tide, the harvesters use a knife in order to cut the seaweed (*A. nodosum)* plant from the rock leaving at least 5 inches of the main shoot attached to rock; this gentle harvesting technique allows to the seaweed plant to replenish within 3 to 5 years.

Sustainability of the natural resource via proper harvesting technique; rotation schemes between sites and freshness of the resource are key *objectives* of OGT's Harvesting programme

Organisation of the supplying method in raw material

This is a necessary condition before the implementation of a traceability system and as a part of the resource monitoring.

The supplying in seaweed is done on a demand basis from the company (3 to 4 times a week and 14-15 tons each time, generally). Once at the factory, the raw material is checked to ensure it complies with the specifications defined by the company, and each delivery is recorded in the attached log sheet. The alga is unloaded and then stored in a defined area, behind the factory before to be processed within the following days.

Traceability

Scope

OGT produces liquid and dried extracts from *Ascophyllum nodosum*. This brown seaweed is harvested by independent cutters and then manufactured at OGT's factory. The following traceability system includes the identification of the main raw material (seaweed) and takes into account the different steps of the production process and the different parameters associated.

Objectives of a traceability system:

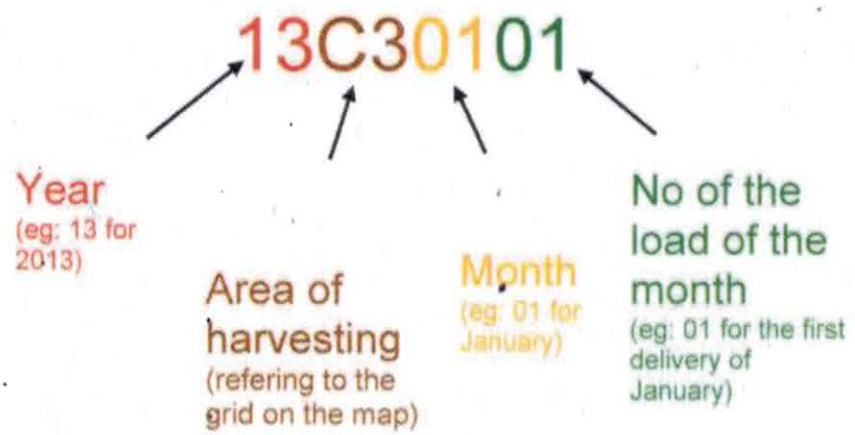
- Stop the defective batches
- Avoid the withdrawal and the recall of product

Criteria for an efficient system:

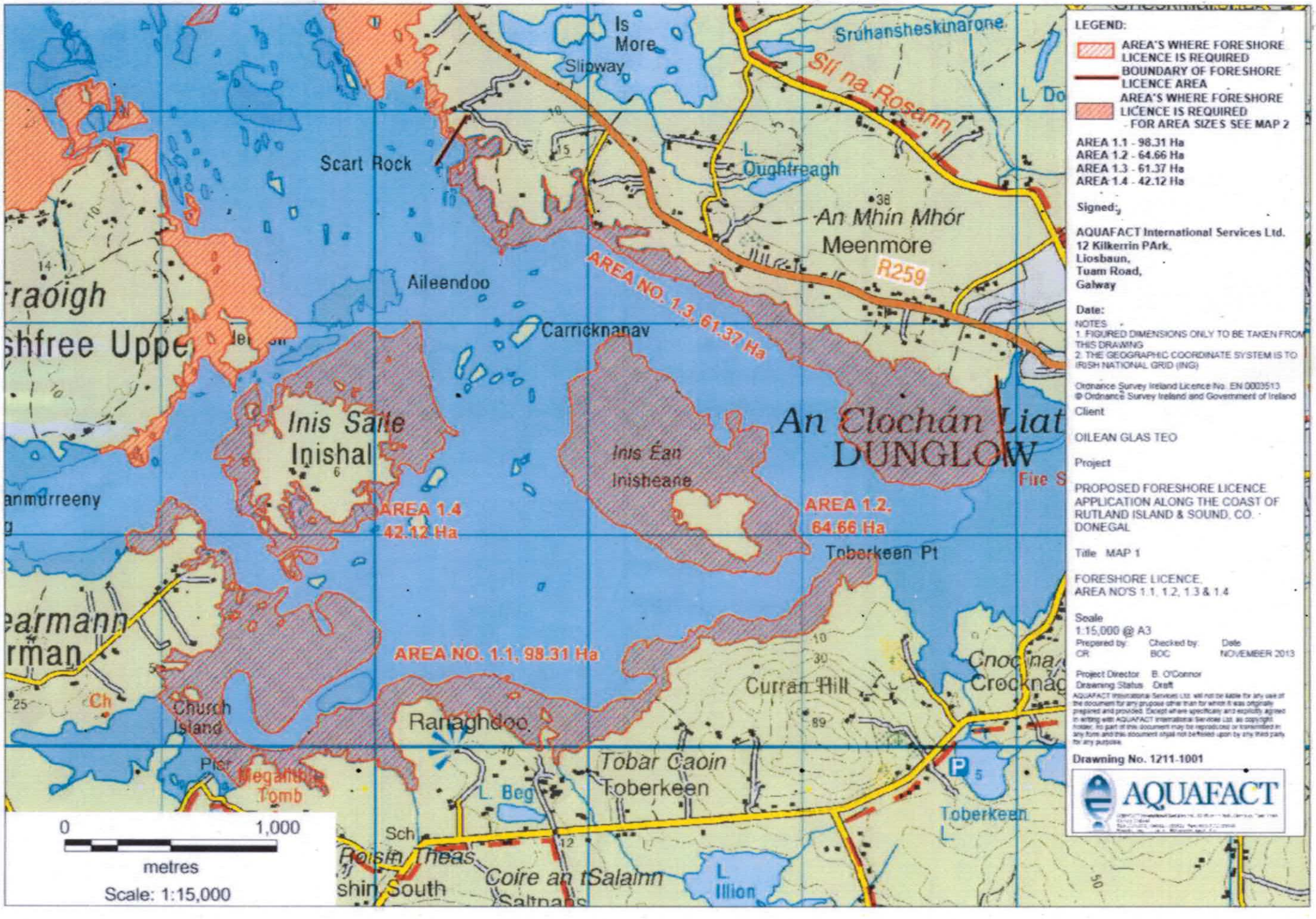
- *Reactivity*: Easy and quick identification of the potential defective batches
- *Reliability*: Identification of every whole defective batch
- *Targeted:* Identification and action only for the contaminated batch(es)

Identification of raw material lots

OGT's main raw material, *Ascophyllum nodosum*, is cut and harvested by independent cutters brought up to the company by a haulier contracted by the company as mentioned above. The cut seaweeds are identified depending on the harvesting sub-area and the date of harvesting *(see explanation on raw material batch number, below)*. The cut seaweeds are recorded by OGT when delivered to the factory *(seaweed consumption log sheet)*. A unique batch number is given to each load of seaweed received. This batch number corresponds to the year, sub-area of harvesting, month and number of delivery for the month (e.g.: 12E40306). The areas of harvesting are defined on the harvesting bay map *(see map attached)*.



Harvestor	Batch	Area	Date	Quantity (T)
	13C30101	1.1	18/11/2013	14.43
	13H0102	1.4	20/11/2013	14.72
	13D40103	1.2	23/11/2013	11.45



LEGEND:

AREA'S WHERE FORESHORE LICENCE IS REQUIRED

BOUNDARY OF FORESHORE LICENCE AREA

AREA'S WHERE FORESHORE LICENCE IS REQUIRED - FOR AREA SIZES SEE MAP 2

AREA 1.1 - 98.31 Ha
AREA 1.2 - 64.66 Ha
AREA 1.3 - 61.37 Ha
AREA 1.4 - 42.12 Ha

Signed:

AQUAFACT International Services Ltd.
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Tuam Road,
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Date:

NOTES
1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. THE GEOGRAPHIC COORDINATE SYSTEM IS TO IRISH NATIONAL GRID (ING)

Client

OILEAN GLAS TEO

Project

PROPOSED FORESHORE LICENCE APPLICATION ALONG THE COAST OF RUTLAND ISLAND & SOUND, CO. DONEGAL

Title MAP 1

FORESHORE LICENCE,
AREA NO'S 1.1, 1.2, 1.3 & 1.4

Scale
1:15,000 @ A3

Prepared by:	Checked by:	Date:
CR	BOC	NOVEMBER 2013

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