Quality Audit of the Port of Brixham

Seafish Report No. CR 176

February 2000

The Sea Fish Industry Authority

Seafish Technology

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M. Myers
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Summary

This report presents the findings of a Quality Audit of the fishing port of Brixham that examined the quality of raw material supplies to the port, standards of physical infrastructure, operating practices and management controls.

The quality of fish supplied to the market is generally very good although improvements could be made with regard to gutting and temperature control by day boats.

The port suffers from major problems of lack of space, poor road access and inadequate infrastructure, partly as a consequence of its physical geography. The design and layout of the market and associated facilities were found to pose serious problems of operational efficiency, quality control and food safety that are compounded by the lack of agreed standards, procedures and controls.

Many of the problems arise from having to work on a pier that requires all handling operations to e conducted along a narrow quay apron. Recommendations are made for improving access to the market and for demolition of part of the market building to improve the logistics of handling operations, quality control and personal safety.

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Appendices

1. Introduction

The increasing demands of the corporate food sector and the requirements of food safety legislation have given impetus to the need to raise quality and operating standards within the fish industry.

In the ports sector where responsibility for structures, equipment, services and the conduct of staff is vested in numerous and diverse organisations, the lack of unitary command and authority can give rise to problems of control, particularly over standards. It is essential in such an environment that standards affecting food safety are clearly defined and effectively enforced, not only to meet statutory requirements, but also to protect and promote the image of fish as a safe and wholesome food.

Beyond the basic requirements of food safety, high standards of care are necessary when handling fish products of a perishable and delicate nature in order to achieve the quality of product demanded by the market.

In response to the recommendations of the Industry Task Force and trade demand, Seafish has introduced an initiative targeted at raising standards in the ports sector by means of quality audits. The audits examine and report on the quality of raw material supplies to the port, standards of physical infrastructure, operating practices and management controls. Action is then encouraged and supported at a local level as necessary.

The scope of the audit covers the operations from landings at the quayside (or over-landed deliveries to the market) to the despatch of fish from the market after sale. It does not cover standards on fishing vessels or within fish processing units. The report is confidential to the trade and the Local Authority and is not for publication.

This report presents the findings of a quality audit of the port of Brixham undertaken in February 2000. It was carried out with the full collaboration of fishermen, Brixham Trawler Agents (BTA), buyers/merchants and the Local Authority.

2. Background

Brixham is a traditional fishing port of significance, not just locally but in national terms. It is the home port to a fleet of 35 beamers and 60 small trawlers that in 1998 made landings in excess of £17 million.

The port suffers however from major problems of lack of space, poor road access and inadequate fisheries infrastructures, largely as a consequence of its physical geography. Recent developments however, both physical and commercial, at the competing port of Plymouth have given rise to increased frustration by some sectors of the Brixham industry at the conditions under which they have to operate. See minutes of the meetings of harbour users on the 19th October 1999 and fish buyers on the 21st October 1999in appendicies I and II.

The problems are well known to the Local Authority, Torbay Council, owners of the harbour, but the recent granting of Objective 2 status to the region offers opportunity for funding of development on a strategic scale that could address them. The Council has appointed a consortium of consultants comprising; Llewelyn Davies, Scott Wilson Kilpatrick, Roger Tym and Partners and Nautilus to undertake a Harbour Regeneration Study that includes leisure, tourism and fishing interests and targets European funding under Objective 2.

Although Seafish is not part of the formal consortium it is supporting the study by making the results of this audit available for consideration by the Council and their consultants, particularly with regard to the physical infrastructures.

3. Survey Procedures

Over the period 20th to 25th February 2000 a small team of fish technologists and quality assurance officers monitored the landings and sale of fish on Brixham market from both day-boats and beamers.

Forty-two boxes of whitefish species were inspected from landings made by 19 boats, and an assessment made of freshness quality, standards of washing and gutting, temperature control and evidence of physical damage. Wherever possible the assessments were made immediately the boxes were landed. Seventeen boxes were from beamers and twenty-five from day-boats. Freshness quality was judged using the Torry Sensory Assessment technique. Temperatures were also taken throughout each box and notes made of icing practice and the care and technique used in filling the boxes. Discussions were also held with crew members to establish the trip length and any vessel operating practices or equipment that may affect fish quality (e.g. fishroom insulation/chilling, fish handling systems, washing/gutting machines etc).

Assessment of the standards of physical infrastructure, operating practices and management controls was undertaken using a structured approach of observations and discussions with fishermen, shore-gangs, salesmen/agents, buyers/merchants and ports management.

4. Raw Material Supplies

4.1 Freshness Quality

The overall average freshness of landings was 9.2 on the Torry Assessment scale in a range 7.5 to 10.0 (for details of Torry Scoring and its relationship with eating quality and EU grades see Appendix III). The average was 9.5 for day-boats and 8.8 for beamers (who work four to six days).

Table 1 shows the maximum and minimum freshness scores for the species sampled and details of the number of boxes.

Table 1 - Details of Freshness Scores

Species	Boxes	TFS (max)	TFS (min)
Brill	1	9.5	9.5
Cod	8	9.5	8.5
Dovers	5	9.5	8.5
Lemons	6	9.5	9.0
Ling	1	9.5	9.5
Place	9	10.0	8.5
Pollack	3	9.5	9.0
Pouting	2	9.0	7.5
Whiting	7	9.5	8.0

The overall score of 9.2 is remarkably high indicating very good levels of fish freshness on Brixham market. Even the whitings, which are often treated poorly, due to their low value scored relatively high at 8.0 and the pouting an acceptable 7.5.

A score of 9.5 for day-boats in winter would be expected but 8.8 for the beamers is deserving of praise.

4.2 Gutting and Washing

Spoilage of fish after death is caused by enzymatic and bacteriological action, particularly within the gut cavity. By removing the gut contents and washing the fish, the rate of spoilage may be reduced. It must, however, be undertaken efficiently or the bacteria from the gut cavity can be spread to the cut flesh, which promotes spoilage.

Standards of gutting in the samples examined are shown in Table 2.

Table 2 - Standard of Gutting

	Day Boats	Beamers	Overall	%
Poor	3	2	5	12
Average	11	10	21	50
Good	11	5	16	38

The results represent quite good standards of gutting with only 12% rated as poor. Many of these were so rated because the cut extended excessively into the fillet material of the flesh as shown in figure 1.

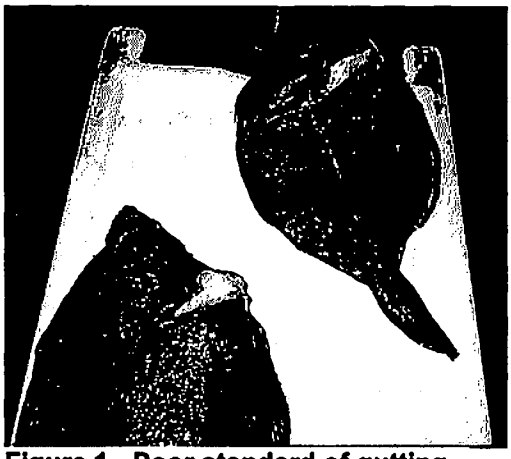

Figure 1 - Poor standard of gutting

The standard of washing by both day-boats and beamers was good with only 7% rated poor as shown in table 3.

Table 3 - Standard of Washing

	Day-boats	Beamers	Overall	%
Poor	2	1	3	7
Average	11	11	22	52
Good	12	5	17	41

4.3 Temperature Control

Temperature control is by far the most significant factor affecting the rate of deterioration of fish. Typically, whitefish remains acceptable for about ten or eleven days after capture when well iced, but this can be reduced to a day or two if left unprotected at summer ambient temperatures.

Table 4 shows the average and range of fish temperatures for both day-boats and beamers. Note that ambient temperatures were between six and eight degrees centigrade.

Table 4 – Fish Temperatures on Landing

	Day-boats	Beamers
Maximum temperature	11.5	4.5
Minimum temperature	0.6	-1.1
Average	4.5	-0.1
Boats using ice	14	17
Boats not using ice	11	0

Temperature control by the beamers (average –0.1) was too good if anything with some boats freezing fish by having their fishroom refrigeration set too low. Some prime bass and monk tails were frozen solid which is not good practice. All the beamers used ice, some having their own on-board icemakers. Temperature control by the day-boats however was not so good with 44% using no ice at all. If this were repeated in warm weather condition then more serious problems of quality loss would likely be encountered.

4.4 Physical Damage of Product

There was no evidence of bruising or crushing caused by overfilling of boxes at sea and minimal damage of any kind that might be attributed to poor handling or extended tow times etc.

4.5 Scheduling of Supplies to the Market

Little attempt is made by either the agents or the PO to co-ordinate the landings of the beamer fleet to regulate supplies through the week and landings tend to peak on Fridays putting some pressure on infrastructures and services. Supplies to merchants are maintained by the day-boats and the concentration of landings does enable economic loads for onward distribution.

The trawler agents get reasonable notification of landings from the beamers that can be made available to merchants.

5. Physical Infrastructures

5.1 Background

Brixham has developed as a fishing harbour over centuries with the original 'New Pier' being constructed in 1799. The existing fish jetty, offices, fish market and ice plant were built in 1971 and further extended in 1985 to cater for the growth and needs of the beamer fleet. Figure 2 shows a plan of the harbour and fisheries infrastructures.

The development of the port has always been constrained by the acute shortage of space and it is acknowledged that the design, layout and specification of the infrastructures no longer provide for the efficient operation of the industry. A Harbour Feasibility Study by EPD Consultants in 1997 commissioned by the Council identified many of the problems.

5.2 Quays

Unloading berths at the market are generally adequate in terms of quayside length and depth of water. Lay-by and servicing berths however are less than adequate, particularly for the larger beamers because of the depth of water in the MFV basin and competition from leisure/tourist boating activities. This also results in management problems in maintaining access to dedicated berths for unloading, icing and bunkering. The north side of the New Fish Pier is vulnerable to bad weather from NNE to NNW, particularly in winter.

Bunkers are taken on East Quay remote from the fish market. There is evidence of subsidence in the area of pump number one.

Quay surfaces are otherwise in good condition with the exception of some localised damage in the area of the loading bay of the market.

Quayside lighting, ladders and safety equipment meet statutory requirements. Illumination of the East Pier at the time of the audit however was poor due to the lighting provided at low level being obstructed by oil drums and gear.

5.3 Fish Market

Although the market has adequate capacity in terms of floor area for display, its design and layout pose major problems of operational efficiency, quality control and food safety.

Many of the problems arise from having to work on a pier that requires all handling operations to be conducted along a narrow quay apron. The merchants units, shellfish tanks and ice plant that are located toward the end of the pier add to the chaos with their products, waste and consumables also having to be handled along the quay.

The area in which fish is displayed for sale is not insulated or refrigerated and affords little temperature control of product. It features large metal doors and glazing on the landing side that faces south-east. The chill store is inadequate both in terms of its capacity and hygienic construction, and the need to handle whitefish landings through areas contaminated by cuttle ink to and from it spreads ink everywhere and creates a poor

image. Temporary chill storage is also provided by two refrigerated trailers permanently parked in the loading bay (and restricting access).

The loading bay itself is unsuited for use by the larger size of refrigerated articulated vehicles due to the height restriction under the offices and the lack of manoeuvring area available.

The market is also poor by modern standards of hygienic design with regard to the prevention of access by pests and wind-born contaminants, particularly the open areas used for handling cuttles, the loading/despatch areas and the use of large up-and-over doors in the market. Efforts have been made to restrict roosting by netting of overhead pipework and ducting in the area used for handling cuttles but with limited success. Insectocutors are fitted in the market but for long periods of the day the doors are open.

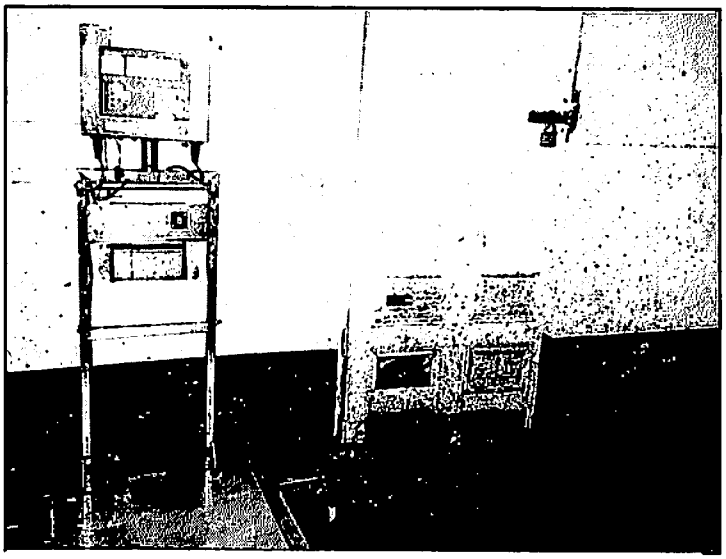

Figure 3 - Wooden doors used on the market in poor condition

The wooden doors of the market stores and merchants units are also unhygienic and some poorly maintained (figure3).

The market meets statutory requirements with regard to the supply of potable water for cleaning purposes, the standard of lighting and signage of prohibited practices.

It was not established into what system waste waters from the fish market, merchants units and the shellfish tanks on the pier discharge to. Drainage of the box washing area was direct to the harbour. Consent is required for discharge into local waters.

Staff facilities on the ground floor of the market are only available for males and are most basic comprising w.c., urinal and wash-hand basin. The supply pressure to some of the taps needs adjustment as the delivery is much too fierce. Facilities for females are only available on the first floor of the office complex. No facilities are provided in the merchants units. Knee-operated wash-hand basins are available at the entrance to the sales area of the market, which during the audit was used for storage of hand pallet trucks and inflatable life rafts. BTA have a staff canteen in the office block and use is also made of the Seaman's Mission on Overgang Road.

The fabric of the market building also suffers from a degree of neglect, with attention required to:

- damaged and broken market doors
- broken market glazing
- damaged electrical fittings
- damaged tiling in the gents w.c.
- lighting tubes out in the market
- damaged and missing surface water drainage down-pipes
- poor floor surface around the drainage gully in the area of the day-boat sales

5.4 Market Plant and Equipment

Figure 4 - Ice trolley of unhygienic design and the storage of packaging materials in the market

The two electronic grading lines in the market used for Dover soles and the mobile weigh scales are purpose designed and hygienically constructed in stainless steel and food grade materials, as are the working surfaces of the tables used for manual grading. The trolleys used for handling of ice however were of unhygienic design and construction and poorly maintained (figure 4).

The fork lift trucks used in the market were mostly gas powered but some diesel trucks were also used contrary to regulations.

All fish boxes and tubs were purpose designed in plastic and the use of the stack-nest design of box enables them to be handled directly by fork lift without the need for the use of pallets. Wooden pallets were in use however for storage of packaging materials that should not be in the market.

5.5 Facilities and Equipment for Cleaning and Waste Control

BTA undertake the washing of all market boxes using a Semi-Stal automatic tunnel washer in an enclosed area next to the chill. Staining of boxes by cuttle ink is a problem and badly soiled boxes may also be soaked. Clean boxes are stored in the market or on the open quayside due to lack of space in the box-washing area. Storage on the quayside obstructs cleaning operations and access to vessels for purposes of delivery or service etc.

Cleaning of the market and quays is undertaken by harbour staff by means of sweeping and hosing down, or by jet washing as appropriate. Mechanical floor scrubbing equipment is also available but is not used as it is claimed not to be as effective.

Figure 5 - Processing waste on the quay

For ships garbage and trade wastes two lidded 9 cubic metre industrial skips are provided on the quay opposite the main entrance and one open 19 cubic metre skip on the knuckle of New Pier/East Quay. A waste oil reception tank is also provided next to the larger skip. See also comments in Appendix I(e). Facilities for storage and removal of trade wastes generated by fish merchants on the pier are inadequate (figure 5).

5.6 Power, Water, Fuel and Ice Supplies

Power supply boxes are located around the harbour for use by boats but are frequently out of order, often due to improper use (see also Appendix Id).

Adequate provision is made for taking of potable water on the quays and in the market. Power and water are currently included in overhead charges.

Fuel oil may be taken on the New Pier, remote from fish handling operations. There are two 90 gallon per minute pumps suitable for use by the Beamers and one 20 gallon per minute pump suitable for the day boats. There is reported to be some congestion around the fueling berths, particularly when leisure boats are using the Pier. Storage capacity is also limited and requires frequent servicing by road tankers (up to five a day) that adds to quayside congestion. Attention may be required to the trigger mechanism of the delivery hose of one of the pumps that accidentally discharged itself on retrieval from one boat during the audit creating a spillage in the harbour. Equipment reliability was reported to be a problem.

Adequate supplies of crushed plate ice are available from the ice plant that has capacity of 60 tonnes per 24 hours and storage for 80 tonnes. Ice is now available 24 hours per day Sunday to Thursday and other times by agreement.

5.7 Vehicular Access, Parking and Gear Storage/Mending

Vehicular access to the harbour and market, and the lack of space for loading/unloading, parking, gear storage and the working on nets/warps etc, is a major problem both in terms of operational efficiency and in maintaining acceptable standards of cleaning and hygiene.

The market loading bay and manoeuvring area particularly are inadequate for the numbers and size of vehicles in use today (figure 6). Due to the deficiencies of the loading bay large fish-transport vehicles often have to park across the entrance to the harbour for loading by fork truck, blocking or restricting access and giving rise to concern for public safety.

Open storage of trawl doors, nets etc, is available at a compound at Oxen Cove but access is by road only and gear must be landed at the harbour and transported through the town. There is also limited storage for gear on pallet racking on East Quay.

Figure 6 - Inadequate loading area

5.8 Fish Transport

The standard of fish transport ex-market was generally high with all trunker vehicles being insulated and refrigerated. Most other vehicles were at minimum covered.

6. Operating Practices

6.1 Product landing, Handling and Holding

Landings made at the market quay are usually transferred with the minimum of delay either into the market or chill, but the conditions of hygiene are poor. The quay apron is contaminated by surface water drainage from the roof, delivery of lube-oil to boats, and unclean quay surfaces. The need to handle product through an area contaminated by cuttle-ink to and from the chill spreads ink everywhere creating cleaning problems. Landings were also made to the East Pier which should be discouraged due to its contamination by fuel-oil etc. Diesel fork trucks used in handling operations in the market should be restricted to use on the quays only.

Temperature control through the landing and sale operations is generally good with sensible use made of the chill. Icing of fish on display on the market however could be improved, particularly of fish landed by the day boats that are not using ice. Temperature control, pest control and security would be better served by stricter discipline in the closing of market doors when not in active use.

6.2 Grading, Weighing and Sale

Although accuracy of size grading is not measured by the audit, some processors, particularly those selling into the catering market, where critical of the standards of hand-grading. Quality grading is nominal with landings by Beamers defined as 'A' and landings by day boats as 'E'. It satisfies the purposes of the EU price withdrawal scheme but does not serve as an accurate product descriptor for buying purposes.

There were no reported problems with the sale weights of boxes other than with cuttles. It was reported (Appendix I(m)) that much of the cuttles were tipped and the weight judged by volume.

The morning sale is conducted by three salesmen who respectively cover, Dover soles, Beamer landings and day boat landings by means of the traditional 'shout' auction. It is conducted quickly and efficiently but lacks transparency. Not all landings are sold through the market.

6.3 Cleaning and Hygiene

The general standard of cleaning in the port is very poor and reflects badly upon the industry and the Council. The fabric of the market building was dirty as was the landing quay, toilet facilities, chill store, box-washing area and loading bay (figure 7). The nature of the soiling would suggest that it had been neglected for some time.

Figure 7 - Poor standard of hygiene of loading bay area

Cuttle-ink contamination of the market particularly creates major problems and presents a very poor image. On-going activities and the storage of boxes, equipment, processing wastes and packaging within the market or on the quayside also add to the problems of efficient cleaning, but much more could and must be done to improve standards.

Figure 8 - Car driving through market

Handling of drums of lube-oil should not be permitted on the market quay and oil drums should not be left on, or landed to, the market quay. Likewise landings of fish should not be made at the fueling berths for risk of contamination of product. The use of diesel fork trucks should be restricted to quayside operations. Fork trucks, vans and cars should not be permitted within the market (figure 8).

Standards of personal hygiene are also poor, with smoking and drinking on the market, standing on boxes and low standards of dress (figure 9.0). Toilet facilities although dirty were well equipped with soap and towels etc.

Figure 9 - Poor standards of hygienic practice on the market

Pest control measures could also be improved with evidence of infestation by birds in both the loading bay area and the market. At least one bait box was empty and lidless (figure 10)[1].

Figure 10 - Empty bait box

[1] This box was later identified as one used by a previous contractor.

7. Management Structures and Controls

7.1 Management Structures

Brixham harbour is owned by Torbay Council being administered by its Strategic Services Directorate under the control of a Harbour Sub-Committee of elected members and co-opted industry advisors. It is managed locally by its Harbour Master and staff of six[1] who have responsibility for cleaning, maintenance, security and administration.

A Harbour Liaison Forum provides for representation of harbour interests but has no executive status. It meets quarterly. The associations of Fish Buyers and Trawler Owners have recently been reformed after a period during which they were moribund.

The commercial activities of landing and sale and the provision of fuel, ice and box-washing services are undertaken by BTA.

The polarisation and division of responsibilities that exists between the Council as landlords and the trade as tenants would appear to limit the ability to operate strategically and in a dynamic and commercial manner. It also limits the ability to control and co-ordinate operations and enforce standards through its terms and conditions of business.

To safeguard the long-term prosperity of the port and the local businesses that depend upon it, it is necessary for the port to develop a strategic plan for the future. Key considerations of a strategic plan should be that of; Management and Organisation, Training, Physical Infrastructures, Supplies, Ancillary Services and Marketing (both of product and port services).

7.2 Management Controls (Standards)

Generally there is a lack of agreed standards, procedures and adequate controls with regard to quality control and food safety on the market, arising from lack of authoritative management[2]. It is essential that where infrastructures are in communal use, management functions, authority levels and interface arrangements between users are clearly defined, understood and agreed. This is not the case. Most significantly there is no code of practice or rules governing acceptable standards on the market, no documented cleaning schedules and no programme for quality control of product.

Although there is no formal routine maintenance programme of structures, harbour staff do undertake monthly inspections and report any actions required in respect of the infrastructures listed in Appendix IV. Judged by the defects listed in section 5.3 however there is a case for more detailed inspection, particularly of the market structure and for more frequent inspection.

Environmental Health Officers of the Local Authority make weekly checks and reports relating to food safety issues. They cover product quality, fish transport, pest control and staff facilities (Appendix V). Standards of cleaning and waste management are not

[1] Since the audit it has been agreed that a Night Dock Manager be appointed.
[2] Since the audit BTA has appointed a Fish market Manager.

specifically mentioned. In the event of the need to take action the Local Authority would in effect have to take action against itself as owners of the harbour.

A formal Waste Management Plan has been approved by the MCA that provides adequately for ship's garbage and waste oil etc but greater control should be exercised with respect to wastes generated by processors.

Pest control is contracted to a specialist company that makes monthly inspections.

Water supply used for the production of ice is regularly checked to confirm that it meets statutory requirements and the evaporative condenser water treated and tested to protect against Legionnaires' disease.

8. Proposed Development Options

The harbour regeneration study currently being undertaken by the consortium of consultants for Torbay Council includes leisure, tourism and fishing interests and considers a range of capital cost options for the future. the study is in its early stages and the detail of the options are still being formulated and are unknown to Seafish.

A low cost option is reported to include 'the enforcement of tough new hygiene and food safety rules and the shifting of all storage capacity elsewhere'. The enforcement of food safety legislation however is **not an option for the future**, it is an existing statutory requirement. Arguably it is not possible to enforce food safety legislation given the deficiencies of the existing physical infrastructures. Without addressing the major problems of: lack of space, poor road access and inadequate infrastructures the industry will undoubtedly continue to decline, losing out to competing ports and markets. Establishing standards by enforcement of food safety legislation alone however will not secure the future of the harbour.

Major investment options include the construction of a northern breakwater and the reclamation of land between it and the fish market to improve access and provide the space for commercial development. Previous studies have proposed similar development but have failed to address the inadequacies of the fish market and access to it.

The detail of any major development needs to be based on a strategic and business plan that encompasses considerations and infrastructures beyond the scope of a port quality audit (particularly with regard to vessel servicing and repair). Ideally a new market and ancillary infrastructures would be built on reclaimed land to modern standards that would allow straightforward transfer with least disruption. At minimum it is suggested that consideration be given to:

a) Access and parking being created to the rear of the fish market by infill of the redundant slipway and reclamation in order that fish could be removed direct from the market by road transport (figures 11 and 12).

b) Partial demolition of the market building and the upgrading of the rest of it to improve the logistics of the handling operations, quality control, hygiene and personal safety (chill storage, staff facilities, box washing and storage, dedicated cuttle area, equipment stores, offices and salesroom).

c) Relocation of the fish merchanting/processing operations off the dock.

d) Creation of additional lay-by berths suitable for beamers.

A northern breakwater would provide shelter from winds from the NNW to NNE but is not essential to the above recommendations.

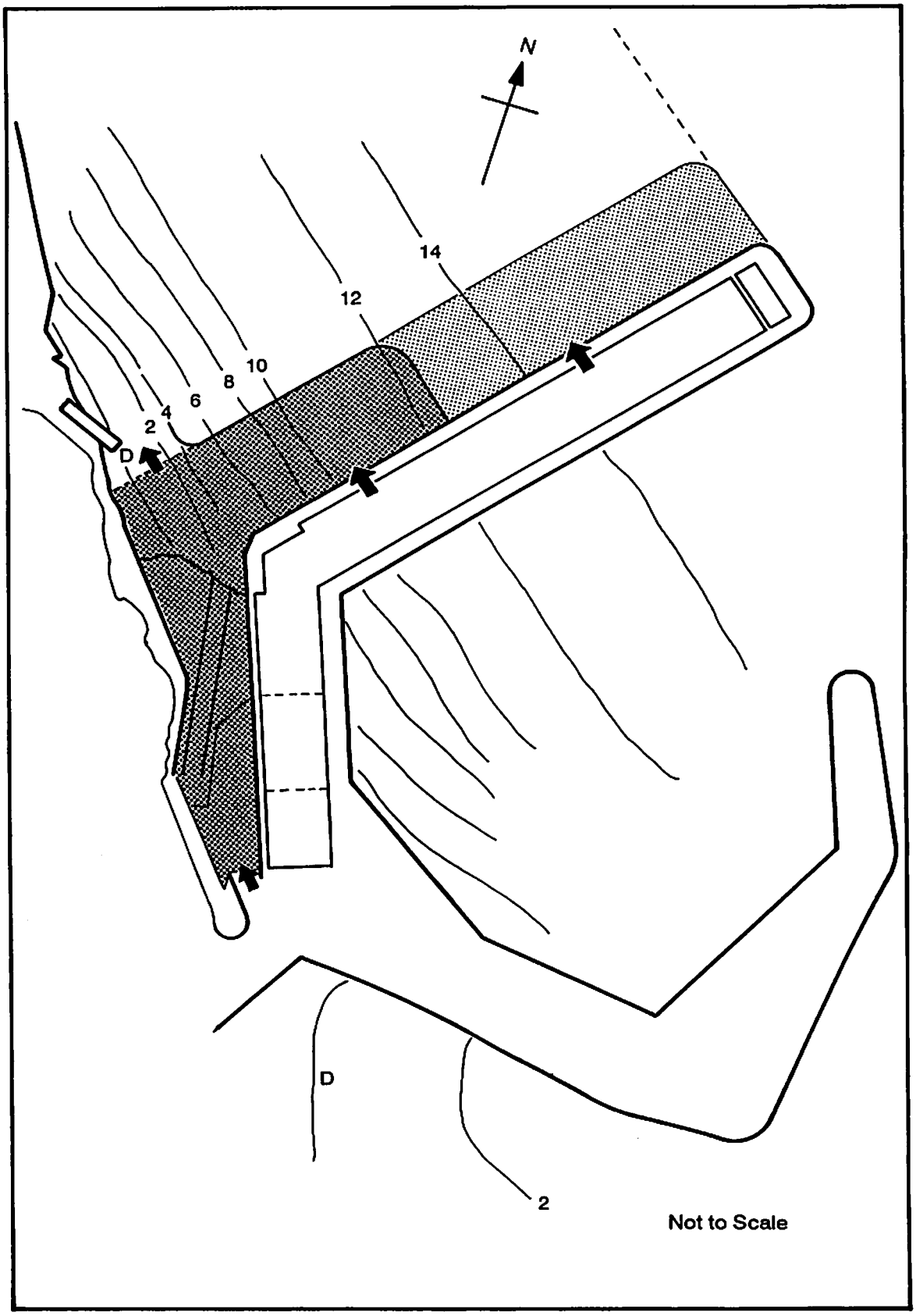

Figure 11 – Reclamation to provide vehicular access to Fish Market and Oxen Cove

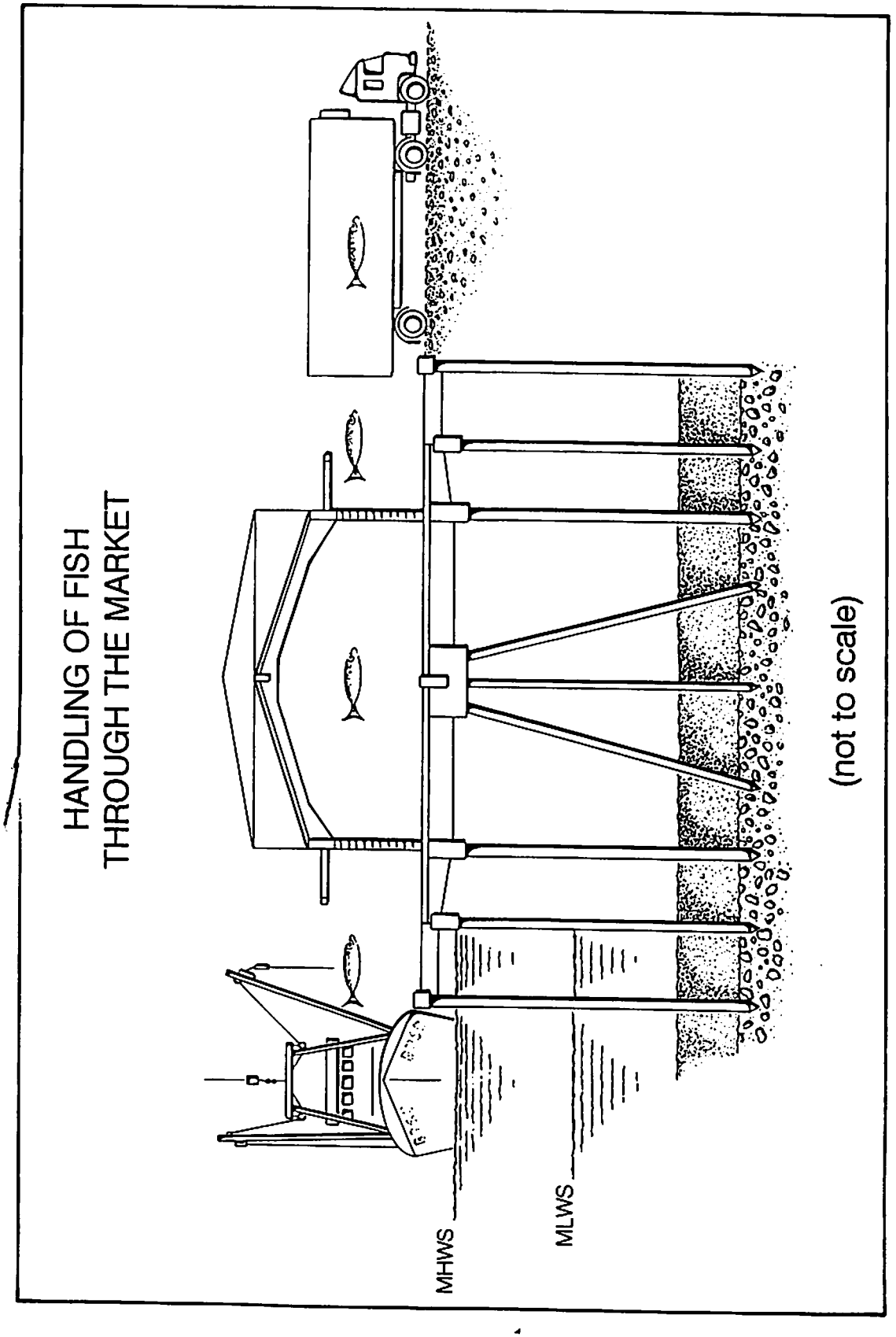

Figure 12 - Handling fish through the market

9. Recommendations

9.1 That BTA, SWFPO and the Trawler Owner and Fish Buyers' Association seek ways to encourage better icing practice by the day boats and improved standards of gutting as necessary.

9.2 That BTA/SWPO undertake periodic monitoring of the standards of size grading on the market to meet buyers' requirements and to ensure compliance with Fish Marketing Regulations.

9.3 That all fish, including cuttles, be weighed prior to sale.

9.4 That Torbay Council adopt systematic and documented procedures for cleaning and disinfection that cover building structures, quays, loading bays, plant and equipment.

9.5 That Torby Council and their contractors, County Mole and Pest Control, reinforce pest control measures on the market and dock estate.

9.6 That the Council and trade sectors agree standards of hygienic practice on the market (smoking, drinking, walking on boxes, dress, etc.) and effective means of enforcement.

9.7 That action be taken against cars and vans driving through the market. That diesel fork trucks be restricted to quayside operations.

9.8 That the monthly inspection report of the fish market be undertaken more frequently and in greater detail.

9.9 That the Harbour Regeneration Study consider means of addressing the major problems of lack of space, poor road access and inadequate infrastructures that contribute to the problems of operational efficiency, quality control and food safety.

At a minimum it is suggested that consideration be given to:

9.10 Demolition and rebuilding of the first section of the market building and the upgrading of the rest of it to improve the logistics of the handling operations, quality control and personal safety (chill storage, staff facilities, box washing/storage, dedicated cuttle handling area, equipment stores, offices, salesroom, truck storage and battery charging).

9.11 Access and parking being crested to the north of the market sales area by infill of the defunct slipway in order that fish could be removed direct from the market by road vehicles.

9.12 Relocation of the fish merchanting/processing operations off the dock.

9.13 Creation of additional lay-by berths suitable for beamers.

9.14 Review of sales methods and provision of forward information for buyers.

9.15 Review of commercial and administrative structures.

9.16 The development of a strategic/business plan for the port.

10. Acknowledgements

Seafish gratefully acknowledges the assistance given in this audit particularly by:

Paul Labistour, Harbour Master (and his staff)
Malcomb Cooke, Brixham Trawler Agents (and his co-directors and staff)
Phil Allen, Brixham Ice Plant
Chas Newman, Chas Newman and Sons
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Colin Langley, Chas Newman and Sons
John Harrison, Kingfisher (Brixham) Ltd.
Ian Perkes, Ian Perkes Ltd.
Rod Capel, Nautilus Consultants
Skippers and crews
Terri Antony, Environmental Health Dept, Torbay Council

Appendix I

Minutes of Harbour Users Meeting, 19th October 1999

Details of meeting of parties interested in the further development and improvements of the Port of Brixham held at the RNMDSF Brixham, 19th October 1999

Present

R Brown	R Fowler	D Landon
F Gibbs	H Winnon	B Dixon
M Sharp	M Walker	S Hill
A Philip	C Hendriksen	N Norris
N Watson	B Perkes	L Harvey
A Strike	T Becconsall	R Simonetti
R Smith	C Charlton	R Passmore
M Rogers	A McLeod	J Sanders
M Thomas	T Paul	J Hingley
A Scales	D Warwick	D Driver
P Boyce	C Warwick	D Barwick

The meeting was arranged to discuss the problems facing fishermen, fish merchants and other harbour users.

The meeting was chaired by John Sanders, 'Ocean Spirit'.

It has become apparent that Brixham is losing revenue to other markets, main Plymouth and it is our aim to recover this lost revenue by encouraging these vessels to return to landing in Brixham along with keeping those that land and use the port by improving service and facilities also to encourage overland fish and visiting vessels to land here.

I(a) The State of the Quayside

It was discussed and unanimously agreed that the state of the quay is unacceptable and that we should make a concerted effort to remove the gear from the quay as soon as possible and take advantage of the compound that is being set up at Oxen Cove, the Harbour Master is to be contacted and conditions and charges for use are to be discussed.

I(b) Berthing

The Harbour Master along with the Council should enforce the rules concerning berthing on the fuel and ice berths and general berthing arrangements should be reviewed perhaps by employing a Berthing Master for this purpose.

Berths on the north side of the fish quay are permanently taken up by non-fishing vessels, and visiting vessels only using port facilities for refits and repairs should be berthed in the inner harbour and not allowed to take up landing or mooring berths with no contribution to the port.

Small day boats should take advantage of the inner harbour when practical. This should be enforced by the harbour authorities.

I(c) Car Parking
The problem of parking on the quays is having the effect of gridlocking the fish quay and preventing service personnel gaining access to boats. There are many cars parked by fishermen and left there while they are at sea. It was suggested that a permit system be introduced for the market and that the car park at Oxen Cove be used. This must be enforced by the harbour authorities to free the quay for use by legitimate users. A yearly car park ticket costs approximately 30p. per day.

It was also suggested that harbour dues be increased to include a car park permit.

I(d) Electricity
There are not enough electricity boxes on the quay and those there are not being serviced and are in a bad state of repair with many points not working at all.

I(e) Rubbish
More rubbish bins and/or skips are needed to cope with the amount of refuse from boats and harbour uses. It was suggested that if better facilities were in place it would encourage use and therefore keep the quays tidier.

I(e) Waste Oil Tank
The waste oil tank should be re-sited and emptied on a regular basis, with a facility for pouring drums into it or for waste oil to be removed in 5 gallon drums.

I(f) BTA
It was agreed that the service provided by BTA is below the standard expected by trawler owners and well below standards at other ports. One of the reasons for this is a lack of middle management and liaison between directors and the market floor and in particular control of staff and their actions.

It was unanimously agreed that a third director should be appointed. It was suggested that terms of office for directors be for two years and the Managing Director be for five years to ensure that fresh ideas are always present within the company. At the end of these terms the directors would be able to offer themselves for re-election.

Many points and suggestions were raised on this subject.

I(g) Security
Market staff should be prohibited from parking their cars on the quayside or loading bay during working hours.

I(h) Ice
It was agreed that more staff are needed to be trained in the working of the ice plant and that ice be available with booking if necessary on a 24 hour basis.

I(i) Fuel
It is apparent that fuel prices are higher in Brixham than elsewhere. Some owners are buying their own fuel cheaper along with cheaper fuel available over the quay in Plymouth. This problem must be addressed. Also it was felt that it is unfair to sell fuel cheaper to vessels taking larger amounts as it is relative to grossing and should be the same for all.

I(j) Staff
A nucleus of full-time staff are necessary to ensure smooth running of the markets and sorting and weighing times be more flexible.

I(k) Weekends
Better availability to service during weekends are needed along with better organisation of fridge facilities to increase capacity and use of refrigerated lorries for the same purpose.

I(l) Auction
It was acknowledged that some research has been done to evaluate a clock system for the port and many owners and buyers alike felt that this is the way forward and that decisions and investment along these lines are inevitable and should therefore be pressed ahead with all possible speed as not to fall behind other ports.

I(m) Quality Control and Weights
To move forward to a clock system better quality control should be introduced now to help staff and buyers alike. When fish is being auctioned without being visually inspected it is paramount that the quality of the fish be uniform with the expectations of buyers and correctly marked. It was suggested that cuttle fish are not being weighed correctly and much of it is being tipped and guessed. This practice should not be allowed to continued.

I(n) Boxes
Box storage around the quay has become not only an eyesore but is preventing access to vessels by vehicles delivering to and servicing them. It was suggested that the east end of the market be used for this or some area be used solely for this purpose.

I(o) Settling Times
Moves should be made to ensure that vessels re settled earlier than at present. Many people are having to wait around all day after a trip at sea to receive their cheques. The system surrounding this should be studied and revised to make us competitive.

Conclusions

An extraordinary general meeting of Brixham Trawler Agents is to be called at the earliest opportunity to discuss and vote on the following.

1. The number of directors and their terms of office.

2. To elect a working committee of seven shareholders to have input into the running of the company.

3. To discuss the appointment of a third director or market manager and market staffing requirements.

4. Security.

Appendix II

Minutes of Fish Buyers Meeting 21st October 1999

Minutes of a Meeting
Held Thursday 21 October 1999 at 0730 hours

Present:

Martin Purnell	Channel
Nigel Ward	Channel
Matthew Endacott	Jacksons
Robert Simonetti	Roberts Fisheries
Dave Sowerby	Dave Sowerby Fish
Mr Smith	Smith
Alan Woodward	Woods Fish
Dave Jonas	Jonas
M Cook	S.W.F.
Nick Norris	S.W.F.
Ian Perkes	Ian Perkes
Chas Newman	Chas Newman & Sons
Daniel Newman	Chas Newman & Sons
Ronny Verbiest	Chas Newman & Sons
Steve Harris	S.W.F.
Dave Walker	D. Walker & Son
Neal Walker	D. Walker & Son
Greg Allen	Brixham Fish Marketing
Mark Owen	Samways
Lance Loram	Lorams
Len Harvey	Len Harvey W.F.M.
Stan Romain	Stan Romain
Tony Howes	A R Howes
John Pepper	Mainpass
Nick Summersby	Kingfisher
Steve Hill	Kingfisher

ITEM	DESCRIPTION	ACTION
	Chas Newman had been asked to act as a Chairman at this opening stage and to get the meeting started. The meeting was to establish whether there was sufficient support to convene a new Fish Buyers Association. There has been one in the past which only seemed to be supported when there was a problem.	

Chas Newman looked for volunteers to form a committee with a Chairman and Vice. People were asked from the chair if they would stand and no-one would. It was put to Nick Summersby that he could stand as Chairman and with that agreed, Robert Simonetti agreed to the post of Vice Chairman.

Mark Owen, Chas Newman, Ian Perkes and Nigel Ward all agreed to be the committee members.

This committee will stay in place for a maximum of one year at such time all members would stand down unless they wished to put themselves forward for re-election for another year.

The only way this Association would work is if every person played their part as it was generally agreed that the previous Association failed through lack of support.

This meeting followed on from a Boat Owners meeting on Monday 18 October at which some Fish Merchants were invited to participate.

The concern from the Boat Owners was as to the Management of Brixham Market, Quay etc and the desire not to see the Market grow smaller especially in the wake of the updating of Plymouth which was attracting boats away from Brixham because of the quality of facilities and operation.

The rest of this meeting was spent establishing the concerns shared by Boat Owners and Fish Merchants alike.

State of the Quay
Market Doors never closed
Diesel fork lifts on the buying floor
Cost of Fuel
Control of the Harbour
Operating hours
Parking
Security
Pilfering
Attitude of Management

Staff working practices - parking
Lack of staff training
Hygiene
Lack of a Market Manager to act as a bridge between Market Management and the floor
Market practices - grading, sorting fish, quality control
Local Council lack of involvement particularly with regard to the parking arrangements, rubbish disposal

The £110 a year permit fee for Oxen Cove equates to a few pence a day and there was a possibility that this could be reduced.

Now that there was a common goal between both parties this should be put to good use and all come together with one voice, taking the views and concerns to BTA and the Harbour Master who is regarded as the first point of contact representing the Council.

As many Boat Owners are shareholders of BTA they were going to call an EAGM within the criteria of the Articles of Association.

Local paper support should be sort to ensure some publicity for the case.

Date and Time of the Next Meeting: to be confirmed

Appendix III

Torry Freshness Assessment Scoring System

Torry Freshness Assessment Scoring System

The Torry Freshness Assessment Scoring System judges freshness quality using external appearance and odours as indicators of freshness on a scale zero to ten. Figure 8 overleaf shows the relationship between Torry Score, the number of days the fish is held in ice and eating quality.

The Seafish Guidelines for Fish Processors recommend that the fish they purchase should preferably be of Torry Score 8 or above (EU freshness Grade E), in order that their products have a good chance of retaining sweet, desirable flavours when they reach the consumer and the fish should be no lower than Torry Score 7, so that their products should not have undesirable sour or bitter flavours by the time they reach the consumer.

Note that temperature control is by far the most significant factor affecting the rate of deterioration of fish and that at temperatures above that of melting ice, spoilage is greatly accelerated, see Figure No. 13 overleaf.

Typically white fish remains acceptable for about 10-11 days after capture if well iced, but this can be reduced to a matter of a few days if left unprotected at summertime ambient temperatures.

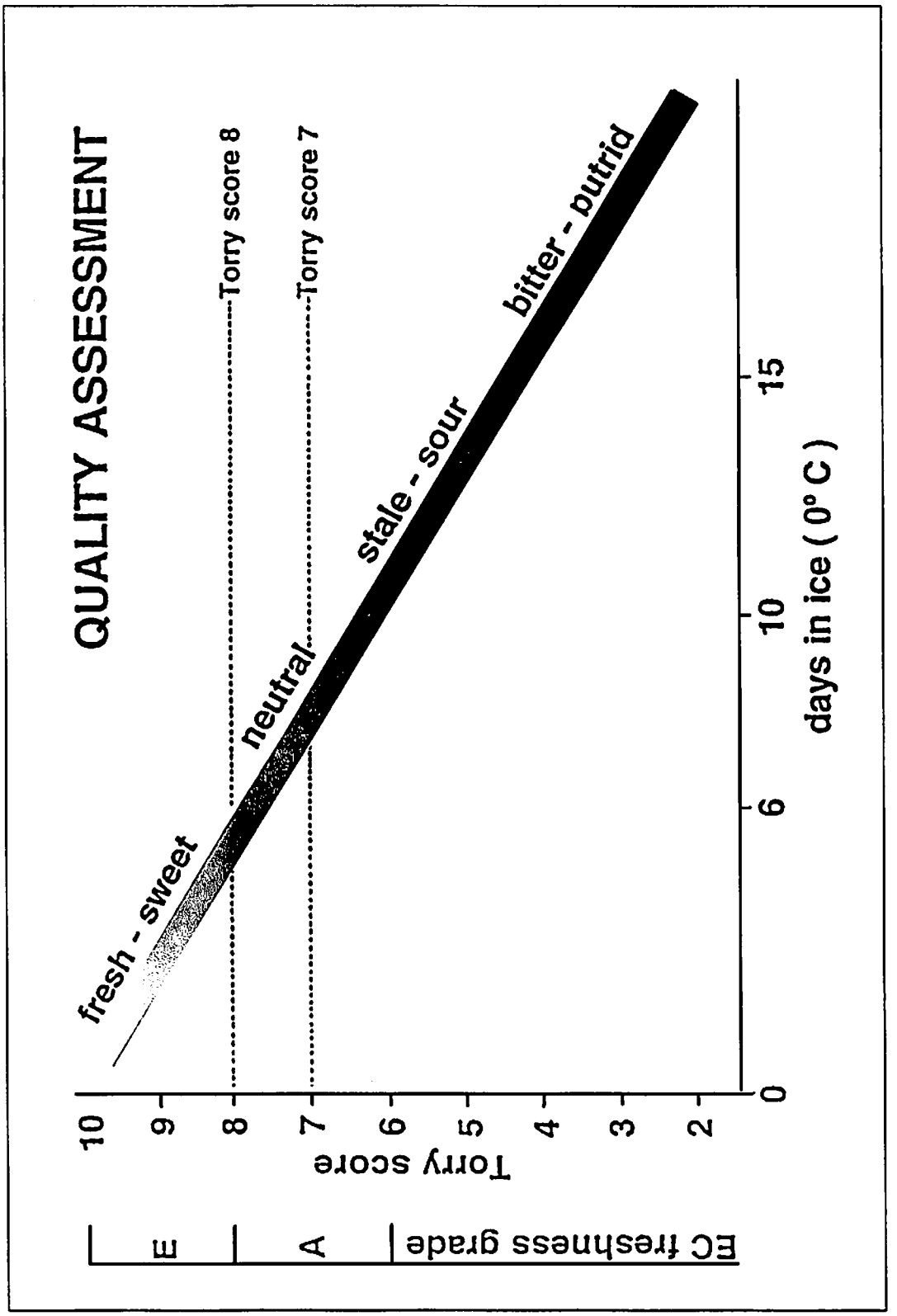

Figure No. 13 - Freshness quality assessment

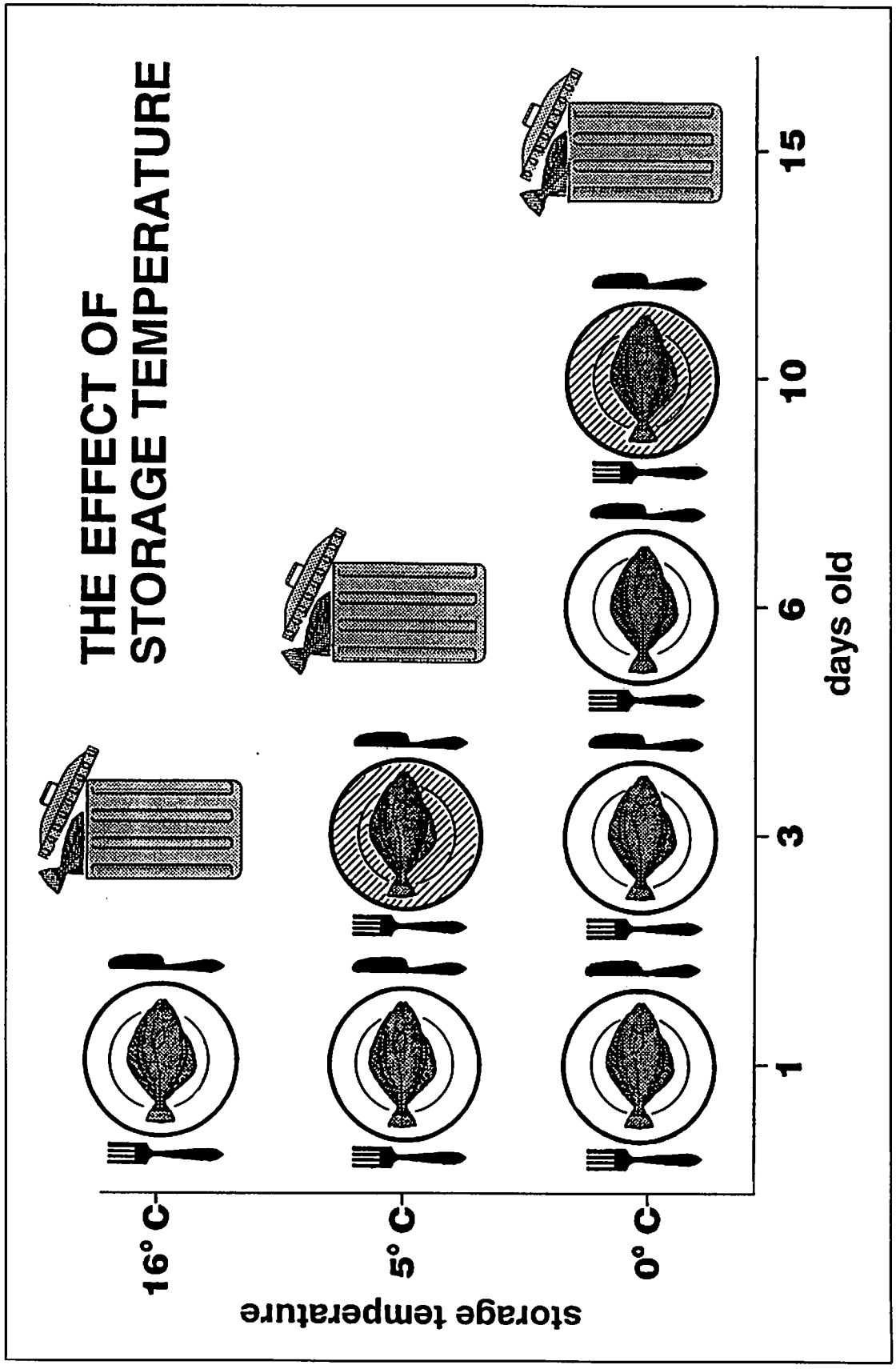

Figure No. 14 - The effect of storage temperature

Appendix IV

Fish Market Monthly Inspection Report

BRIXHAM HARBOUR MONTHLY INSPECTION REPORT
AREA: NEW FISH MARKET

Inspection By:	VINCENT BEARE			
Date:	24/1/00			
Weather:	DRY CLOUDY GOOD VISIBILITY WIND NE 2/3			
Tide Data:HW	0841	5.1	2108	4.7
LW	0202	0.5	1427	0.4

	Action		Urgency		
	Y	N	I	P	R
ACCESS					
Pier Surface		✓			
Mooring Bollards/Rings		✓			
Ladders/Steps		✓			
Fenders/Piles		✓			
Surface of Quay		✓			
Railings (where fitted)		✓			
Floor of Fish Market					✓
Loading Bay		✓			
LIFEBUOYS					
In Place		✓			
Safe to Use		✓			
Instructions		✓			
Line Attached		✓			
LIGHTING					
Nav. Lights		✓			
Nav. Lights Green		✓			
Floodlighting		✓			
Steps		✓			
PUBLIC FACILITIES					
Warning Notices		✓			
Hand Basins		✓			
Water		✓			
Electricity		✓			
Stores		✓			

COMMENTS:
(If action required include details of work to be done)
FLOURING BY ENTRANCE TO FISH MKT HOLES NEED FILLING, GRATING TO BE REMOVED IN DRAINAGE CHANNEL CENTRE OF MARKET
INSECTECUTORS TO BE FITTED.

KEY
Action: Y = Needed, N = Ok
Urgency: I = Immediate (within 24 hrs), P = Priority (within 5 days), R = Routine (within 21 days)

Appendix V

Local Authority Hygiene Inspection Report

FISH MARKET, NEW FISH QUAY, BRIXHAM START TIME:

QUALITY

TYPE	TALLY	FRESHNESS	TEMPERATURE

Vehicles: Registration No. ..... Type ..... Colour .....

Cleanliness: .....

Structure: .....

Hygiene Issues: .....

Pest Control

Bait Boxes Pest Proofing Insectocutors

WC facilities: .....

Other items .....

.....

Action taken .....

Inspection Type [F] **Visit Type** [B] **Unit** [C]

Action Type [PFP] **Action Details** [INS] **Date** [ ]

Officer [ ] **Number of units for visit** [ ]

TMA/crb/990544