

From: Oct 83.

To:

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FILE WORK SHEET

SUBJECT Control & Safety of Floating Plant.

BRING UP		REMARKS	BRING UP		REMARKS
DATE	FOR		DATE	FOR	
		COPIED			

PLEASE REFER TO ENGINEERS

MICROFICHE NO. ENG. 473

FOR PREVIOUS ²⁵~~100~~ DOCUMENTS

Notes of Discussion - Le Clerc/Goord 5/8/85

Floating Plant - for fendering maintenance and minor works for Engineer.

Goord sought to know where we had got to in obtaining approval to proceed with a Hiab on the Drilling Rig.

D.G.M. had previously sought supporting information and had intimated that there was a need to show what economy could be achieved from the Hiab.

Le Clerc confirmed that Hiab approval by management was unlikely until the Engineer could state that the Hiab was a necessary preliminary to the conclusion of Transport No. 4 to hydraulic power and that when both those plants has been thus modernised, and provided that the backlog of hardwood work had been sufficiently reduced, No. 1 transport could be scrapped.

There would always be a need for a second, on standby, plant such as the drilling rig on another Transport to replace No. 4 when it is broken down on survey.

Goord to confirm.

B R Le Clerc
CHIEF ENGINEER TO THE BOARD

C.C. Assistant Chief Engineer (Works) to note
Assistant Chief Engineer (Civil) to note

CONFIDENTIAL

MEMO TO: CHIEF ENGINEER
FROM: ACTING WORKS MANAGER

DATE: 30 April 1984

Three matters of major concern have arisen over the last month which I have not had adequate time to follow through to a satisfactory conclusion:-

1. Asbestos Insulation in the Work Area

(Reference Workshop Manager's memorandum (1) and Department of Health letter attached.)

The enginerooms of the Bucket Dredger "Kerinui" and Floating Crane "Hikinui" have similar insulation coatings. An analysis has been carried out by the Department of Health on samples from the "Kerinui" and found to contain blue and white asbestos, as well as calcite. Similar coatings have been found in other areas in the Board and have been satisfactorily dealt with in the past:-

- (a) Eastern wall and columns at No. 1 Off Wharf Store.
- (b) Winch house 600 ton slip.
- (c) Ferry Buildings first floor lunchroom.

Two solutions available are:

- (1) To encapsulate the asbestos in some material which will inhibit flaking, or,
- (2) To completely remove the asbestos and replace with some alternative insulation.

The encapsulation process is by far the cheapest method of containing loose asbestos flakes.

Unfortunately major annual surveys on the two vessels concerned have just been completed and any remedial action taken will force the shutdown of the plant.

At this time few of the Board's staff are aware of the existence of the coatings on these vessels however, I fear if adequate action is not taken, the matter could have grave industrial repercussions on these vessels. At the moment, the material is reasonably stable. However,

Mr Gray } Please coordinate action to encapsulate or
 Mr Burns } remove asbestos in Kerinui and Hikinui
 unless it is proved to have been made safe.
 Urgent action is sought. Dec 8/5/84

Mr Burns please give attention to the other matters raised in this memo. Mel.

Mr Gray please add asbestos item to memo on Sullander for GM to rule on future life of the tug. Mel.

remedial work should be undertaken without delay.

Forman Insulation contract to the Board for all insulation work and because of the health hazards associated with asbestos work the Union have not contested coverage for this work in the past.

The annual survey work list from the Tug "Aucklander", for survey due June this year, has been returned from the Harbour Department and is presently in the hands of the Mechanical Engineer. This work list contains an item - "Replace all asbestos in the engineroom".

The Mechanical Section are evaluating this requirement.

The remedial work on the insulation of these vessels needs to be examined and suitable decisions and action be implemented without delay. The Board has an obligation to provide safe working areas for their staff.

I recommend that further more detailed examination be carried out on the surface coatings on "Hikinui" and "Kerinui" to establish if the asbestos is stable enough to be encapsulated. If the asbestos is stable then Forman Insulation be contracted to carry out the work with minimum disruption to the operational requirement of the plant.

The "Aucklander's" work involves reinsulation of the boilers. When this requirement is evaluated the limited life of this tug should be taken into consideration. Total replacement of this asbestos has been estimated as high as \$40,000!

2. Sand/Grit Blasting and Associated Problems

Refer attached memorandum (2) from the Workshop Manager. This memorandum is self-explanatory and highlights the growing problem of suitable areas to carry out paint preparation and spray painting.

As a recent example, spray painting was carried out at the back of the Hobson Street Workshop, adjacent to the fishing landing with the resulting overspray damaging a parked car. A substantial insurance claim was lodged against the Board as a result.

Similar claims could be forthcoming at Beaumont Street if some action is not taken to contain oversprays and grit contaminated air.

This leads me to the third item of concern.

3. Periods of Time, Involvement of Labour, and Usage of Materials on Plant Surveys

The Workshop manager's memorandum also makes mention of the problem of over-maintenance of Board's plant, especially floating plant.

Recently the survey of the Floating Crane "Hikinui" took one month to complete, the "Kerinui" four months, Towboat "Mana" two months and "Kaha" three months.

Various factors cause these extended surveys.

(a) Lack of labour through:-

- (1) Shortage of manpower.
- (2) Lack of manpower planning by individual Foremen.
- (3) Lack of job priorities.

(b) Lack of overall job co-ordination:-

- (1) Minimal co-ordination and advice with Purchasing and Stores Department over supply of materials and spares (i.e.) paints etc.
- (2) Lack of job co-ordination between various work forces - Painters, Boilermaker, Outside Contractors.

Also, lack of co-ordination on an intersection and interdepartmental basis - Works Section and Electrical Section. Works Section and Operational Departments.

(c) Lack of Effective Job Planning

- (1) For total survey.
- (2) Day to day.

(d) Lack of Reporting and Progress Facility

Weekly Foremans meeting could be used as the vehicle to discuss progress, to set targets etc. The intention was to use this meeting as a format to discuss and co-ordinate surveys but in practice this does not happen as Foremen in the main are not trained in:-

- (1) Manpower planning and setting priorities.
 - (2) Documentation of progress.
 - (3) Logical problem solving.
 - (4) Liaison with other sections.
- (e) Lack of Control

Responsibility for controlling and co-ordination of surveys is not clearly defined - who is responsible for overall result?

Conclusions

Need for more attention to be given in the following areas:-

- (1) Clear indication of who is in control of the survey.
- (2) Clear definition of the responsibilities and authority of the controller. The controller should have a flair for organisation and planning, and control of personnel. He should have ready access to technical advice as necessary.
- (3) The survey needs to be planned in a professional manner taking into account defined work, and allowances made to cover unforeseen contingencies.

The survey plan should be continually updated taking any such factors into account. Individual tasks should be shown on a planning board as either "awaiting action, proceeding, or completed" and show the time scale and labour requirement involved. The weekly Foremens Meeting could provide a suitable avenue to take such changes into account.

This meeting is presently attended only by Foremen who report to the Workshop Manager. During survey periods all Foremen plus an appropriate liaison agent from the floating plant (possibly Chief Engineer) involved in the survey should report to the meeting.

- (4) The financial budget allowed should not necessarily mean the amount of money to be actually spent. The survey cost should be monitored as it progresses.

- (5) Liaison between sections needs to be on a more formal basis. Adequate notice should be given of requirements so that spares, materials, labour and tools can all be organised efficiently and be made available at the required time. Key members of other departments should be invited to appropriate planning meetings to get the feel of the requirement (i.e.) Assistant Purchasing and Stores Officer to attend when ordering of materials etc, is organised. Electrical Engineer - when electrical work is required etc.
- (6) Given that there are adequate controls, Board's plant, labour and tools should be utilised, if possible, in preference to casual use of outside agencies.
- (7) Where possible, taking into account weather conditions, the painting of plant should be carried out on a "running survey basis". This would mean that major mechanical overhauls could take place in the winter months.

Presently the major surveys peak during the summer season when labour is short due to holidays.

RECOMMENDATIONS

Further training of Foremen is required in practical aspects of:-

- (a) Work planning and setting work priorities.
- (b) Allocation of labour and manpower control.
- (c) Effective teamwork and leadership.

Many of the Foreman have completed the Supervisory Training Course. However, there is a further need to gain practical experience on the job systems training, taking into account their own specific problem areas.

Under present circumstances, this might be a long process, but the future success of this area will rely on action being taken now so that in the short term when the next series of major surveys are due, the supervisors will have a better knowledge with suitable systems and an understanding of what is required, and in the long term, the surveys can be carried out with least amount of disruption to their operation.



I. MAICH
for WORKS MANAGER

Encls

cc: IPM

6/4/84

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TO WORKS MANAGER
FROM WORKSHOP MANAGER

RE. ASBESTOS CLADDING IN ENGINE -
ROOMS OF F.C. HIKINUI & B.D. KERENUI

DURING THE ANNUAL OVERTHAUL (1984) OF THE
BUCKET DREDGE KERENUI A CERTAIN AMOUNT
OF ENGINE ROOM INSULATION WAS DAMAGED.
OWING TO THE HEALTH/LABOUR DEPT.
WARNING ON WORKING WITH VARIOUS
INSULATIONS A SAMPLE WAS TAKEN AND
SENT FOR ANALYSIS THE TEST RESULTS
SHOW IT CONTAINED CROCIDOLITE. (BUG)
AT THIS STAGE NO CONCERN IS FELT FOR
THE HEALTH OF ANY HARBOUR BOARD
STAFF AND THE ABOVE FACTS ARE KNOWN
TO FEW PEOPLE. BUT, I CAN IMAGINE
A TIME WHEN THE RUNNING OR MAINT-
ENANCE OF THE KERENUI ENGINE ROOM
COULD CAUSE INDUSTRIAL & HEALTH PROBLEMS
I BELIEVE THE F.C. HIKINUI ENGINE-
ROOM IS OF SIMILAR CONSTRUCTION
BUT I AM LOATH TO START ANY
CONTROVERSY BY COLLECTING SAMPLES FOR
ANALYSIS AT THIS POINT IN TIME
TWO SOLUTIONS ARE AVAILABLE AND

BSTA COULD BE EXPENSIVE, ENCAPSULATION
OR REMOVAL. COSTS FOR BOTH
ALTERNATIVES SHOULD BE ESTIMATED
AND CONSIDERED

J.E. Jay
w/m

PLEASE FIND DEPT OF HEALTH REPORT
ATTACHED

Address all communications to
The Medical Officer of Health.
Telegraphic Address:
Health, Auckland.

Reply reference
...8B/7/3/3.



DEPARTMENT OF HEALTH
DISTRICT OFFICE

BLEDISLOE STATE BUILDING, AUCKLAND

P.O. BOX 5442
TELEX NZ 2573
TELEPHONE:
792 900

4 April 1984

The Manager
Forman Insulation
P O Box 12-194
AUCKLAND

Dear Sir

The results of the samples submitted to this office for asbestos content analysis have been analysed and results are as follows:-

- (3) Kerinui Auckland Harbour Board - contained crocidolite (blue asbestos) and some chrysotile (white asbestos) and calcite.

If there are any further enquiries please do not hesitate to contact this office.

Yours faithfully

A handwritten signature in dark ink, appearing to be 'J W Jury', written over a horizontal line.

(J W Jury)
for Medical Officer of Health

To: THE WORKS MANAGER

Date: 18 April 1984

From: THE WORKSHOP MANAGER

REF 6/1

RE SAND/GRIT BLASTING AND ASSOCIATED PROBLEM

On the 10th April the upturned hull of DP4 was being grit blasted by Contractors on the AHB 200 Ton Slipway. The slipway trolley was lowered to the extreme bottom of the slipway and the Contractors used were V.H. Farnsworth. A quote had been accepted for a blast and paint (Intertar) to our normal paint specifications for steel hulls.

During the grit blasting procedure in the afternoon a Contractor (name unknown) approached the Foreman Shipwright to complain of the dust nuisance to the private yacht on the hard at McMullen and Wings yard adjacent to the AHB Carpenters Shop at Beaumont Street. Although every reasonable precaution was taken and the wind was in the easterly quarter some dust was obviously air borne.

As the possibility of grit dust, sand and paint being carried in the wind exists there is always the possibility of insurance claims being made against the AHB.

At the slipway area we are now almost totally surrounded by private "property" that is prone to the above mentioned contamination. In my opinion only two satisfactory solutions exist

- (a) total enclosure
- (b) a modified paint programme

In light of the relative costs involved the only viable alternative is another paint programme or at least a modified one. In considering the modified paint programme one must assess the probability of planned obsolescence. The "Boards Hulls" are kept to a very high standard and will, at the end of their service life, show minimal deterioration.

With conventional paints a serviceable hull could be maintained with a rate of deterioration in keeping with the age of the vessel. An admirable example of deterioration, albeit uncontrolled, is the Tug Aucklander. Other plant which has stood up well is Transport No.1 and 4.

... ..

Finally, if the size of insurance claims does not swing the balance away from sand/grit blasting, I feel that before long the "industrial" problems will.

J.E. Fagan
WORKSHOP MANAGER

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ge.

THE GENERAL MANAGER

14 June 1984

THE CHIEF ENGINEER

THE SHIPPING (AUTOMATIC PILOT AND TESTING OF
STEERING GEAR) REGULATIONS

Refer Harbour Association of N.Z. Circular 84/126

The preliminary draft of the above regulations has been studied and comments received from the Harbourmaster with regard to the proposed changes (copy attached).

No Board's vessel is equipped with automatic pilot.

Tug "Aucklander" is equipped with emergency steering and helm indicators which would be subject to inspection and testing. As stated by the Harbourmaster these tests are already part of routine procedures on the tug.

Floating Crane "Hikinui" and the three "Voith" tugs are the only other vessels over 24 metres in length which come under the main clauses of the regulations. They have no steering gear as such and therefore the regulations would not apply.

Clause (7), which refers to vessels under 24 metres in length, sets out that steering gear should be periodically checked and tested, also where auxiliary steering is fitted involving changeover procedures that operating instructions relating to the changeover are displayed on the vessel.

With reference to (7) this clause is acceptable and an instruction has been given for the procedures to be displayed on each vessel involved.

B.R. Le Clerc
CHIEF ENGINEER TO THE BOARD

JMB:JMH

Enc.

c.c. Harbourmaster: for information
Mechanical Engineer: to note and arrange to have displayed on each vessel where applicable "Emergency Steering Changeover Procedures".



Auckland Harbour Board



715 Gen.

Memorandum

To: THE CHIEF ENGINEER

Date: 7 June 1984

From: THE HARBOURMASTER

DRAFT M.O.T. :- "THE SHIPPING (AUTOMATIC PILOT & TESTING OF STEERING GEAR) REGULATIONS

The above draft regulations are acceptable with regard to Harbour Department tugs, as such required relevant inspections and tests are already part of routine procedures.

Chris Blair

HARBOURMASTER



file

Mr Bray

Mechanical Engineer

File JB 13/6

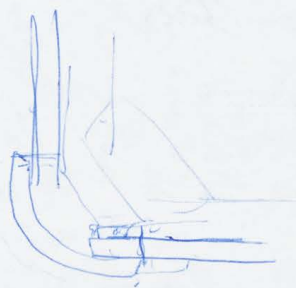
To note re combined reply.

[Signature]

7/6



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THE HARBOURS ASSOCIATION OF NEW ZEALAND

Telegraphic Address
HARUNION
WELLINGTON

PANAMA HOUSE (SECOND FLOOR)
22/24 PANAMA STREET
WELLINGTON
TELEPHONE 728050/1
TELEX HARANZ 30258

All Correspondence to be
Addressed to
CHIEF EXECUTIVE
P.O. BOX 1765
WELLINGTON 1

29 May 1984

Memorandum to -
Chief Executive Officers

Circular 84/126

THE SHIPPING (AUTOMATIC PILOT & TESTING OF STEERING
GEAR) REGULATIONS

Enclosed please find a preliminary draft of regulations proposed by the Marine Division, Ministry of Transport. When the attached regulations are introduced it is intended that appropriate amendment will be made as a substitute for S.238A of the Shipping & Seamen Act 1952.

The Ministry of Transport has requested comment and I would be pleased if you would forward any comment to this office no later than Tuesday 26 June.

J Murray
Chief Executive



Encl

- cc
- 1. HM : To draft response by 20/6 - conjunction with 4/6
 - 2. 4/6 : " " " " " " " " " "

Mechanical Engineer's Please arrange.

Mr Murray

please arrange *Blc*

SS 31/5.

Blup 13/6

AMENDED DRAFT

14 May 1984

THE SHIPPING (AUTOMATIC PILOT AND TESTING OF
STEERING GEAR) REGULATIONS 1984

ORDER IN COUNCIL

At the Government Buildings at Wellington this day of

Present:

PURSUANT to the Shipping and Seamen Act 1952, His Excellency
the Governor-General, acting by and with the advice and consent
of the Executive Council, hereby makes the following regulations.

REGULATIONS

1. Title and commencement - (1) These regulations may be
cited as the Shipping (Automatic Pilot and Testing of Steering
Gear) Regulations 1984.
(2) These regulations shall come into force on the date of
their notification in the Gazette.

2. Interpretation - In these regulations, unless the context
otherwise requires:

"The Act" means the Shipping and Seamen Act 1952:

"appropriate authority", in relation to special rules,
means any person empowered by law to make those
special rules;

"automatic pilot" means a device for automatically

operating the steering gear to steer the ship;
it does not include any wind-operated self-steering
equipment connected to the tiller or rudder of sailing
craft;

"New Zealand waters" means -

- (a) The territorial sea of New Zealand as defined in
section 3 of the Territorial Sea and Exclusive
Economic Zone Act 1977: and
- (b) The internal waters of New Zealand: and
- (c) All rivers and other inland waters of New Zealand:

"officer of the watch" means the person in charge of
the navigational watch;

"qualified helmsman" means a person trained or sufficiently
experienced to steer that type of ship;

"restricted visibility" means any condition in which
visibility is restricted by fog, mist, falling snow,
heavy rainstorms, sandstorms or other similar cause;

"steering gear control system" means the equipment by
which orders are transmitted from the navigating bridge
to the steering gear power units, and comprises trans-
mitters, receivers, hydraulic control pumps and their
associated motors, motor controllers, pipes and cables;

"steering gear power unit: means:

- (a) in the case of electric steering gear, an
electric motor and its associated electrical
equipment; or

(b) in the case of electro-hydraulic steering gear, an electric motor, its associated electrical equipment and connected pump; or

(c) in the case of other hydraulic steering gear, a driving engine and connected pump;

other expressions defined in the Act have the meaning so defined:

3. Application

These Regulations apply to:

- (a) New Zealand ships;
- (b) Other ships within New Zealand waters.

Provided that nothing in these Regulations relating to the use of an automatic pilot shall override special rules made by an appropriate authority for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by sea-going ships.

Use of the Automatic Pilot

4. - (1) The master of every ship to which these regulations apply shall ensure that an automatic pilot, where fitted, shall not be used in areas of high traffic density, in conditions of restricted visibility nor in any other hazardous navigational situation unless it is possible to establish manual control of

the ship's steering within 30 seconds.

(2) Before entering any area of high traffic density, and whenever visibility is likely to become restricted or some other hazardous navigational situation is likely to arise, the master shall arrange, where practicable, for the officer of the watch to have available without delay the services of a qualified helmsman who shall be ready at all times to take over the manual steering.

(3) The change-over from automatic to manual steering and vice versa shall be made by, or under the supervision of, the officer of the watch, or, if there is no such officer, the master.

(4) The master of every ship to which these regulations apply shall ensure that the manual steering gear is tested (a) after continuous use of the automatic pilot for 24 hours and (b) before entering any areas where navigation demands special caution.

5. Operation of Steering Gear

In areas where navigation demands special caution the master of every ship to which these Regulations apply shall ensure that the ship shall have more than one steering gear power unit in operation when such units are available and capable of simultaneous operation.

Steering Gear - Testing and Drills

6. - (1) The master of every ship to which these regulations apply of 24 metres in length or over shall, within 12 hours before departure of the ship, cause the steering gear to be checked and tested so as to ensure that it is working satisfactorily in accordance with the following:

(a) The test procedure shall include, where applicable, the operation of the following:

- (i) the main steering gear;
- (ii) the auxiliary steering gear;
- (iii) the remote steering gear control systems;
- (iv) the steering positions located on the navigating bridge;
- (v) the emergency power supply;
- (vi) the rudder angle indicators in relation to the actual position of the rudder;
- (vii) the remote steering gear control system power failure alarms;
- (viii) the steering gear power unit failure alarms; and
- (ix) the automatic isolating arrangements and other equipment required for steering gear.

(b) The checks shall include where applicable:

- (i) the full movement of the rudder according to the required capabilities of the steering gear;
- (ii) a visual inspection of the steering gear and its connecting linkage; and
- (iii) the operation of the means of communication between the navigating bridge and the steering gear compartment.

Provided that in the case of ships regularly engaged on voyages of short duration within New Zealand waters the tests of the steering gear need only be made once in every week but the checks as in (1) (b) of this regulation shall be carried out prior to the commencement of each voyage.

(2) The owner shall provide simple operating instructions, with a block diagram showing the changeover procedures, for the remote steering gear control systems and steering gear power units, and the master shall ensure that they are permanently displayed on the navigating bridge and in the steering gear compartment.

(3) A person shall not supervise the operation or maintenance of the steering gear unless that person is familiar with the operation of the steering systems fitted on the ship, and where applicable, with the procedures for changing from one system to the other.

(4) In addition to the routine checks and tests prescribed in subclauses (1) (a) and 1(b) of this regulation, the master shall ensure that emergency steering gear drills which practise emergency steering gear procedures take place at least once every 3 months. These drills shall include, where applicable, use of direct control from within the steering gear compartment, the communications procedure with the navigating bridge and the operation of alternative power supplies.

(5) In ships required to keep an official log book the date time and place that the said routine checks and tests are carried out shall be recorded by the master in the official log book.

Steering Gear - Checks and Tests on ships of less than 24 metres.

7. - (1) The master of every ship to which these regulations apply of less than 24 metres in length shall periodically cause the steering gear to be checked and tested so as to ensure that it is working satisfactorily. In the case of fishing boats and ships carrying passengers and/or cargo for hire and reward the interval between testing shall not exceed 1 month supplemented by the following checks at intervals not exceeding 1 week:

(a) the full movement of the rudder according to the required capabilities of the steering gear; and

(b) a visual inspection of the steering gear and its connecting linkage.

(2) Where auxiliary steering is fitted involving changeover procedures the owner shall ensure that simple operating instructions relating to the changeover are displayed on board.

EXPLANATORY NOTE

(This Note is not part of the Regulations)

These Regulations prescribe requirements as to the operation, testing and drills to be carried out in respect of the steering gear, giving effect to Regulation 19-1 and 19-2 of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea 1974.

FILE NOTE FOR CHIEF ENGINEER

INFLATABLE LIFERAFTS

The current establishment of inflatable liferafts grouped according to make and age is as follows:-

<u>Make</u>	<u>Vessel</u>	<u>Size</u>	<u>Date of Manufacture</u>
Elliott	"Auckland" "	20 man	2/58
"	"Kaha" "	4 man	9/58
"	"Mana" "	4 man	12/58
"	"Hikinui" "	10 man	10/62
R.F.D.	"Horanui" "	6 man	1/66
"	"Kerinui" "	10 man	10/66
"	"Manukau" "	10 man	10/66
D.S.L.	"Te Awhina" "	10 man	9/67
Beaufort	"Akarana" "	6 man	7/70
"	"Tika" "	6 man	5/71
"	"Tamaki" "	10 man	7/71
"	"Daldy" "	10 man	9/75
"	"Waitemata" "	6 man	2/77

The earlier liferafts were made of proofed cotton material which, after a certain age, was found to be susceptible to fungal attack, whereas the modern rafts are constructed of synthetic materials which do not have this failing. In the U.K. rafts of proofed cotton construction are automatically condemned at twelve years, whereas in this country the Ministry of Transport subjects rafts to severe testing at age twelve years and, if they pass can remain in service, otherwise they are condemned instantly.

Air New Zealand have advised that the first two groups "Elliott" and "R.F.D." are of the older cotton construction and suggested programmed replacement to avoid the financial burden of having to replace a significant number of rafts in any one year. They also advise that rafts which are still in working order can realise \$200-\$300 each if sold for recreational purposes.

The "Kaha" and "Mana" rafts, although not as old as the "Auckland"s raft, were placed first on the replacement

... ..

list because Air New Zealand have expressed concern at their condition for several years now.

The seven rafts affected could be replaced over the next 3-4 years at a total purchase cost of some \$12,000.

C.J. Olliver
23/12/77

