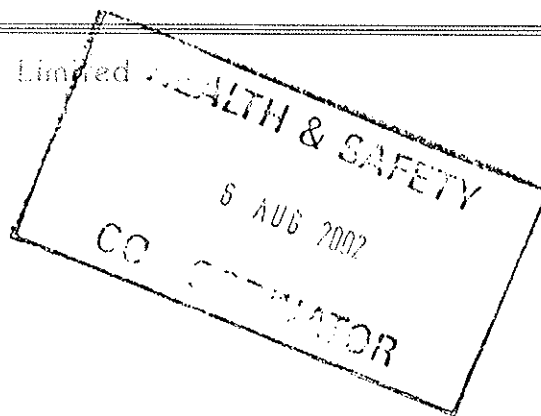


A C S Limited



Project Supervision

Air Monitoring

Surveys

Sample Identification

CONFIDENTIAL REPORT

Client:
Beaumont Hospital,
P.O. Box 1297,
Beaumont Road,
Dublin 9.

Title:
Asbestos Survey of Beaumont Hospital

Attention: Ms. Pauline Fordyce

Page 1 of 19

Report ref. ACS 2-170

Order no: letter

Date recd: 27th March 2002

Report by: P. G. Byrne *Peter G Byrne*

Copies to:

Date : 29th July 2002

CONDITIONS

CLIENT WORK - TERMS AND CONDITIONS OF ACCEPTANCE

1. Reports issued by Asbestos Consultancy Services Limited are copyright and shall not be used, either in whole or in part, for the purposes of advertising, publicity or litigation without the prior written consent of the Directors of Asbestos Consultancy Services Limited.
2. This report shall only be reproduced in full.
3. The client is responsible for delivery to Asbestos Consultancy Services Limited of test item(s) free of any duty, VAT, freight charges etc., unless otherwise agreed in writing by Asbestos Consultancy Services Limited.
4. The client shall be responsible for collecting non-perishable samples received for inspection, testing or laboratory work upon completion of the work. If the client fails to collect such samples within 30 days following completion of the work, Asbestos Consultancy Services Limited shall be entitled without further notice to dispose of the samples.
5. Payment for work carried out shall be in accordance with the terms stated on Asbestos Consultancy Services Limited Invoices.
6. The laws of Ireland shall apply.

Directors: Peter G Byrne - Clair Byrne

Registered Office: "Hampdale", Cedarwood Road, Glasnevin, Dublin 11

Phone: 01 834 0152, Fax: 01-8068475 - Mobile 086 8261784 - Email byrnepg@indigo.ie

Company Registration Number : 327994

Introduction.

Beaumont Hospital was built in the late 1970's but was not opened until several years later. Thus, historically, it will not have sprayed coatings or asbestos laggings. It was built in a similar fashion to Cork University Hospital (C.U.H.), which was known to contain asbestos fibre board ceiling tiles. Consequently, the survey concentrated on the ceiling tiles at Beaumont and locating, identifying and assessing the other less hazardous asbestos containing materials. The survey was carried out on the 17th April with subsequent visits on the 23rd April and 2nd July. Eighteen samples were removed for laboratory identification and their results are included at the back of this report.

Asbestos Sources and their Locations.

Plate 1 shows a general view of the hospital and the locations of the other photographs are notated on the appended site plans.

1. Sprayed Asbestos Coatings.

None were found during the survey.

2. Asbestos Insulations (laggings).

None were found during the survey. Plate 2 shows a calorifier with fibreglass lagging in the H 1 plant room.

3. Asbestos Insulation Board.

This is a soft plaster like board, which can contain up to 40% brown asbestos. It came in the form of eight foot by four sheets, cut to size, four by two or (as with C.U.H.) two by two foot ceiling tiles. It was replaced around 1980 by an asbestos free substitute called "Supalux". As shown in the section under "Ceiling Tiles", all tiles examined were found to be supalux.

4. Asbestos Cement Products.

These contain typically 10 to 15% white asbestos, whose fibres are firmly bound into the cement matrix. Thus, unless cut, drilled, wire brushed or otherwise severely abraded, will not give rise to detectable levels of fibrous dust. Asbestos cement products include corrugated sheets, gutters, down pipes, sewer and flue pipes, roof tiles and flat panels. The latter were used extensively in Beaumont and Plate 3 shows some broken panels. These should be double wrapped in heavy duty polythene, labeled, and stored in a secure area before being disposed of in an approved landfill.

5. Asbestos Rope, Gasket and Paper Products.

Plates 4 and 30 shows asbestos gaskets in the Technical Services Stores and a plant room respectively. Asbestos gaskets are entombed in use, but staff using them should be made aware of the asbestos content and it is recommended that a code of practice be implemented for those handling asbestos gaskets. It is also recommended that if possible, asbestos free substitutes are found. Plates 5 and 6 shows large, blue asbestos gaskets and webbing in an upper flue duct beside the boiler house. These have been present since first installed and should be labeled and inspected annually. It is recommended that the H.S.A. be consulted if this gasket or webbing has to be repaired or replaced. Plate 7 shows asbestos rope seal between the flanges of the metal ducting in the V3 plant room. These sources are entombed and can be safely left in place. The same can be said of the rope seals (if present) in the Northlight windows (Plate 9). Plate 8 shows asbestos rope insulation on the exhaust pipes of the older generator. These can also be left in place but should be labeled and inspected on an annual basis. Their removal would require the services of a specialist contractor. Finally, Plate 10 shows a welder's jacket in the filter's workshop. This was shown to contain white asbestos but under normal use it will not emit hazardous fibres.

6. Asbestos Textured Coatings.

Artex and similar coatings contain a small amount of white asbestos but none were found during the survey.

7. Asbestos Floor Tiles.

Older floor tiles are known to contain white asbestos, as is the more frequently encountered bitumen adhesive. Plate 11 shows a typical floor tile with such an adhesive. These are perfectly safe in use but, on account of the bitumen being present, the tile is classed as an asbestos containing material and must be disposed of as asbestos waste.

8. Asbestos Mill Board Samples.

This is a form of compressed paper, usually found in electrical fuse boards or appliances. None was found during the survey, but no attempt was made to minutely examine live electrical equipment.

9. Other Asbestos Sources.

Plate 31 shows a typical stainless steel sink with a felt patch containing white asbestos. The fibres are firmly bound in the matrix posing minimum risk and they can be left in place without further attention.

10. Non asbestos Sources.

Plate 12 shows a non asbestos seal on the boiler flue duct and Plate 13 shows rubberised paint on the metal roof of the Turf Hopper.

10.1 Ceiling Tiles.

Due to the possibility of the hospital having both asbestos and non asbestos ceiling tiles (which are identical in appearance), an extensive sampling and inspection regime was undertaken, i.e. Sixteen locations were inspected and six samples taken for laboratory identification. The areas inspected were as follows :-

- (a) The walkway duct (Plate 14).
- (b) The corridor outside the autopsy suite (Plate 15).
- (c) The CSSD corridor (Plate 16).
- (d) The CSSD room and kitchenette (Plates 17 and 18).
- (e) The gents and ladies toilets (Plates 19 and 20), and store room in the X-ray area (Plate 21).
- (f) Professor Lee's Office (Plate 22).
- (g) The rear and front of the main kitchen (Plates 23 and 24).
- (h) Staff toilet, Richmond I.C.U., first floor (Plate 25).
- (i) The toilets on the second, third and fourth floors (Plates 26, 27 and 28).
- (j) The fourth floor lobby beside the stairwell (Plate 29).

In all instances the tiles were identified as supalux. It is understood the kitchen is to be refurbished in the near future. This will involve the removal of a large number of tiles To ensure that none of these contain asbestos a significant proportion i.e. 25%, should be checked prior to demolition.

ACS 2-170

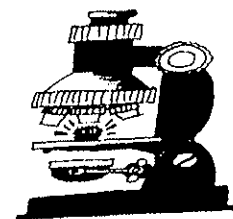
Observations and comments from the Survey on 2nd July.

This was completed in the presence of Mr. Keith Riordan and his assistance is acknowledged. It started at the plant rooms at the top of the building and subsequently moved down through the wards to the basement. Two further samples were removed for laboratory identification and their results are added to the results at the back of this report. The main purpose of this final survey was to show that no other asbestos sources were present in the hospital and some of the areas examined were as follows.

- (a) Plate 32 shows the roof top tank room with fibreglass insulation.
- (b) Plate 36 shows the lift hoist room. It is possible that the lift motors may contain asbestos brakes and clutches but this will only be of concern to the lift company's service engineers.
- (c) Plate 37 shows a typical ceiling void in the second floor Whitworth Ward with fibreglass insulation on the pipe work.

Exclusions

As mentioned earlier, the survey was a visual assessment of the surface fabric of the building and no attempt was made to inspect ceiling voids, underground ducts or to break into walls or partitions or open equipment, plant and machinery. In addition, because of the size and nature of a busy working hospital, only a representative number of the offices, wards and some utility rooms were inspected. "MDIIS 100" states that asbestos sources must be assumed to be present unless proved otherwise. This statement must be viewed against the age and history of the building and the findings of the survey. If at a future date a major renovation is planned, a Type 3 (demolition) survey is recommended, where a more invasive inspection and sampling regime will be undertaken. In the meantime, if a suspect material is uncovered, it should be regarded as potentially hazardous, forwarded to the laboratory and the result added as an addendum to this report.



A C S Limited

Page 18 of 19

ACS 2-170

INTRODUCTION

Eleven samples of building and insulation material (marked as in the table below) were taken during a survey of the premises listed below on 17th April for determination of the presence and type of asbestos. Subsequently, five samples of ceiling tiles were taken during a second visit on 23rd April which concentrated solely on the ceiling tiles in various locations throughout the hospital. Two samples were taken on the final visit on 2nd July.

TESTS

The samples were analysed on 21st and 23rd April according to an in house laboratory procedure based on MDHS/77 "Identification of Asbestos by Optical Microscopy".

RESULTS

Site :- Beaumont Hospital, Beaumont Road, Dublin 9

Sample Identification	Laboratory No.	Result
Ceiling tile in duct walkway	02/218	No asbestos detected
Gasket material in technical Services stores	02/219	White asbestos detected
Bitumen adhesive on floor tile	02/220	White asbestos detected
Blue coloured webbing in flue duct	02/221	Blue asbestos detected
Large gasket in flue duct	02/222	Blue asbestos detected
Rope seal on boiler flue	02/223	No asbestos detected
Fibres from welders jacket in fitters workshop	02/224	White asbestos detected

Note: This report refers exclusively to the samples submitted to the laboratory for analysis.

Plate 1 – General View of Beaumont Hospital



Plate 2 - Calorifier Lagging in H 1 Plant Room.



Plate 3 - Broken Asbestos Cement Cladding.



Plate 4 - Asbestos Gasket Materials in Technical Services Stores.



Plate 5 - Asbestos Webbing and Gasket on Lower Flue Duct.

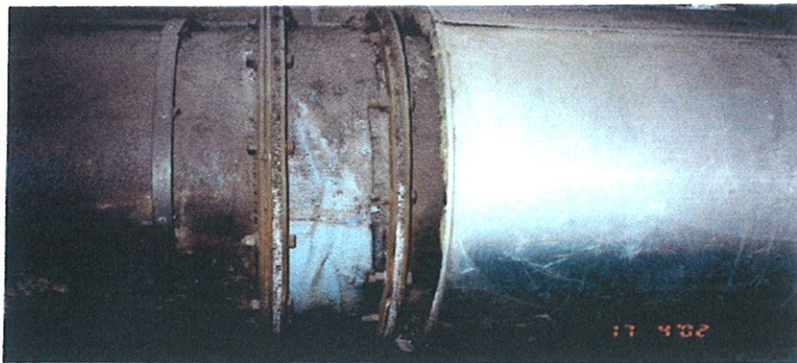


Plate 6 - Webbing and Gasket on Upper Flue Duct.

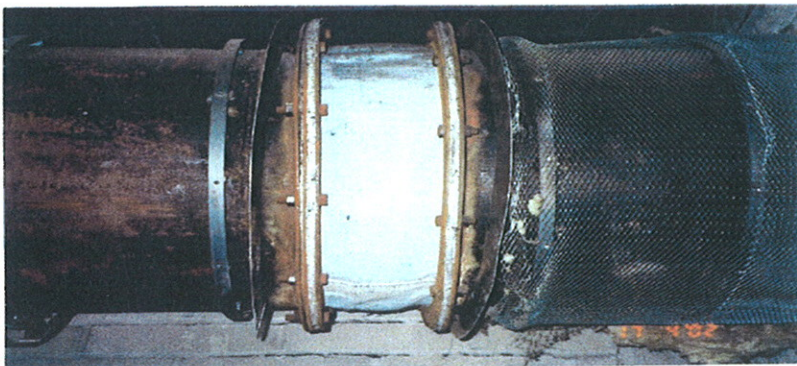
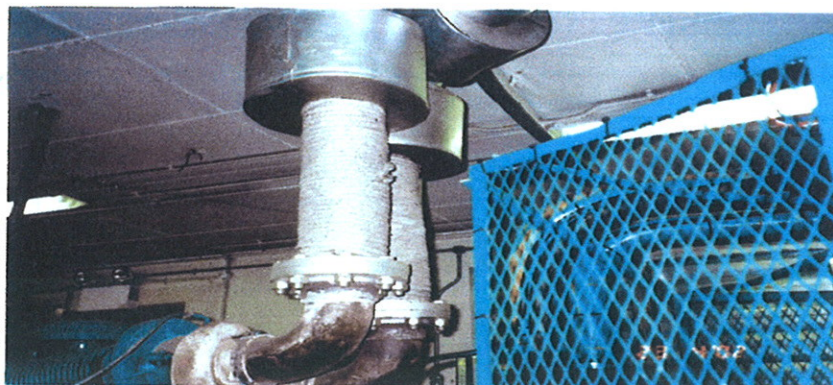


Plate 7- Asbestos Rope Seal on Duct Flange in Plant Room V 3.



- Holmes

Plate 8 - Asbestos Rope Insulation on Older Generator Exhaust.



To: Holmes
contractor
remove

- Holmes

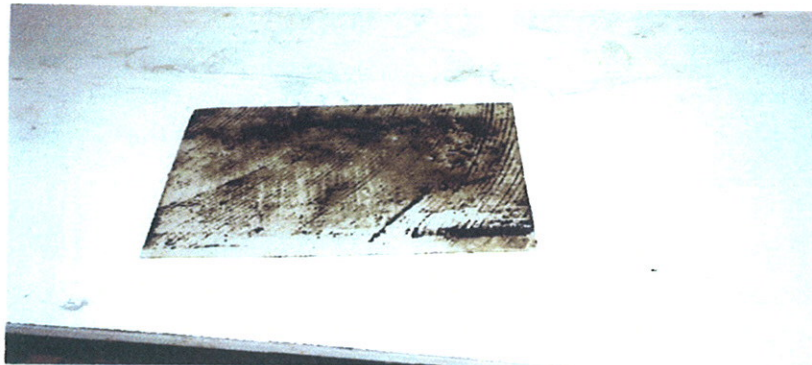
Plate 9 – Possible Northlight Windows at Entrance



Plate 10 - Welders Jacket in Filter's Workshop.



Plate 11 - Floor Tile with Bitumen Adhesive.



not seen
Ten
and

Plate 12 - Rope Seal on Boiler Flue Duct.

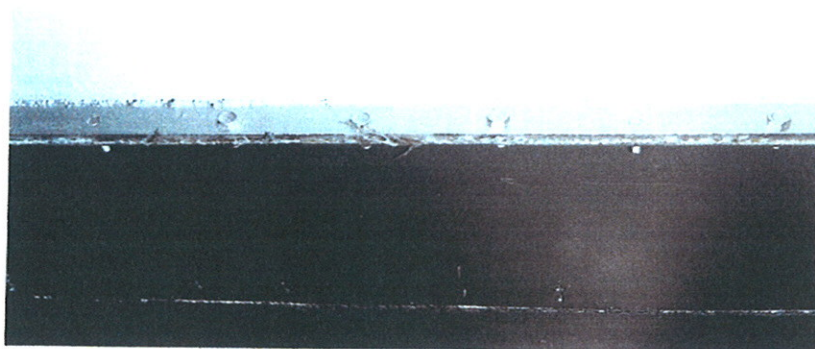


Plate 13 - Rubberised Paint on Metal Roof on Turf Hopper.



Plate 14 - Supalux Tiles in Walkway Duct.



Plate 15 - Ceiling Tiles Outside Autopsy Suite.



Plate 16 - Ceiling Tiles in CSSD Corridor.

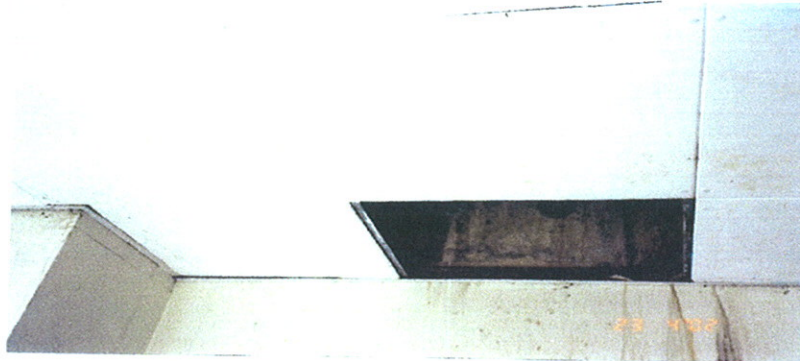


Plate 17 - Ceiling Tile CSSD Room.



Plate 18 - Ceiling Tiles in the CSSD Kitchenette.



Plate 19 - Ceiling Tiles in Gents Toilets, X-Ray Area.



Plate 20 - Ceiling Tiles in Ladies Toilets, X-Ray Corridor.



Plate 21 - Ceiling Tiles in Store Room, X-Ray Area.



Plate 22 - Ceiling Tiles in Professor Lee's Office.



Plate 23 - Ceiling Tiles at Rear of Kitchen.



Plate 24 - Ceiling Tiles in Main Kitchen



Plate 25 - Ceiling Tiles in Staff Toilet, Richmond ICU.



Plate 26 - Ceiling Tiles in Public Toilet, 2nd Floor.



Plate 27 - Ceiling Tiles in Toilet and Bathroom beside 3rd Floor Reception.



Plate 28 - Ceiling Tiles in Public Toilets, 4th Floor.



Plate 29 - Ceiling Tiles in 4th Floor Lobby, beside Stairwell.



Plate 30- Gasket Sheet in Plant Room.

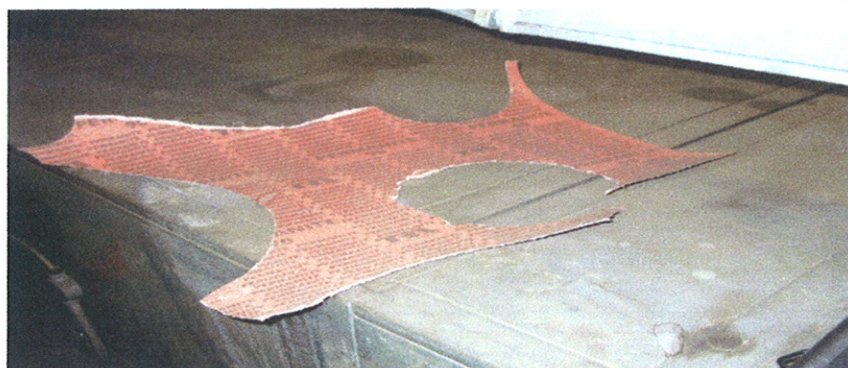


Plate 31- Felt Patch on Stainless Steel Sink.

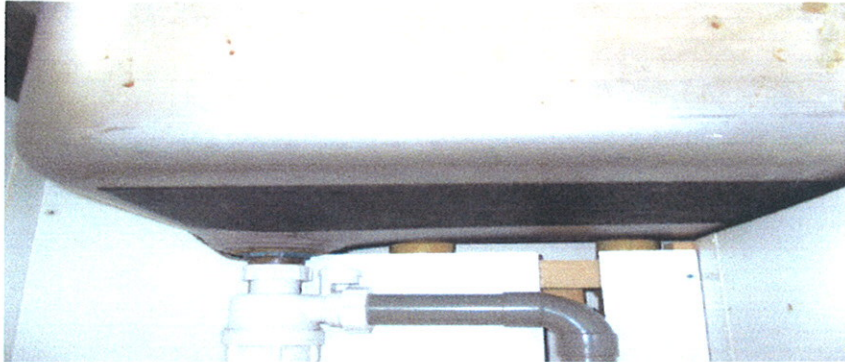


Plate 32- Roof Top Tank Room with Fibreglass Insulation.

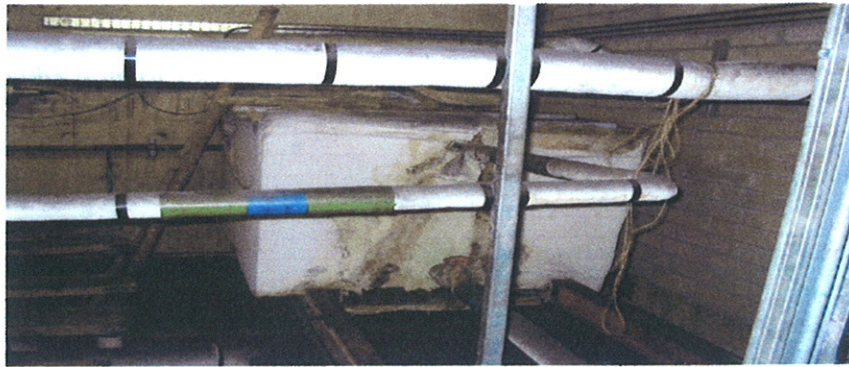


Plate 33- Lift Hoist Room.



Plate 34- Ceiling Void in Whitworth Ward Corridor





A C S Limited

ACS 2-170

Page 18 of 19

INTRODUCTION

Eleven samples of building and insulation material (marked as in the table below) were taken during a survey of the premises listed below on 17th April for determination of the presence and type of asbestos. Subsequently, five samples of ceiling tiles were taken during a second visit on 23rd April which concentrated solely on the ceiling tiles in various locations throughout the hospital. Two samples were taken on the final visit on 2nd July.

TESTS

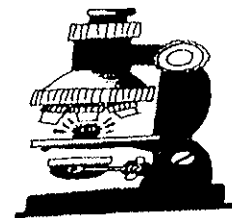
The samples were analysed on 21st and 23rd April according to an in house laboratory procedure based on MDHS/77 "Identification of Asbestos by Optical Microscopy".

RESULTS

Site :- Beaumont Hospital, Beaumont Road, Dublin 9

Sample Identification	Laboratory No.	Result
Ceiling tile in duct walkway	02/218	No asbestos detected
Gasket material in technical Services stores	02/219	White asbestos detected
Bitumen adhesive on floor tile	02/220	White asbestos detected
Blue coloured webbing in flue duct	02/221	Blue asbestos detected
Large gasket in flue duct	02/222	Blue asbestos detected
Rope seal on boiler flue	02/223	No asbestos detected
Fibres from welders jacket in fitters workshop	02/224	White asbestos detected

Note: This report refers exclusively to the samples submitted to the laboratory for analysis.



A C S Limited

ACS 2-170

Page 19 of 19

RESULTS Continued

Site :- Beaumont Hospital, Beaumont Road, Dublin 9.

Sample Identification	Laboratory No.	Result
Rope seal on duct flange in V 3 plant room	02/225	White asbestos detected
Calorifier lagging in H 1 plant room	02/226	No asbestos detected
External wall cladding	02/227	White asbestos detected
Rope insulation on older generator exhaust	02/227A	White asbestos detected
Ceiling tile - outside autopsy room	02/252	No asbestos detected
Ceiling tile - CSSD kitchen	02/253	No asbestos detected
Ceiling tile - Professor Lee's office	02/254	No asbestos detected
Ceiling tile - main kitchen	02/255	No asbestos detected
Ceiling tile - lobby besides 4 th floor stairs	02/256	No asbestos detected
Felt patch on steel sink	02/416	White asbestos detected
Gasket sheet in plant room	02/417	White asbestos detected

Note: This report refers exclusively to the samples submitted to the laboratory for analysis.