Date: July 2005
Report Ref: R9925.116.5.07.001_FH

Head Office

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Paycocke Road
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MANESTREAM LTD

Pectel (Wales) Ltd

18 Llys Nazareth,
Llwewllyn Street,
Pentre
CF41 7BS

TYPE II ASBESTOS SURVEY

UKAS INSPECTION
0282

Report Written By - ..... Date 18/8/05

Signed - .....

Report Reviewed By - D.K Maassen Date 18.08.05

Signed - .....

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CONTENTS

1. INTRODUCTION

1.1. Following discussions with Mr Les Adams of Pectel (Wales) Ltd, Unit 6, Stadium Close, Cardiff, CF11 8TS, Manestream Ltd, Unit 7 Olympic Business Centre, Paycocke Road, Basildon, Essex, SS14 3EX were requested to undertake a Type II inspection of asbestos containing materials in:

18 Llys Nazareth,
Llwewllyn Street,
Pentre
CF41 7BS

1.2. General Building/Site Description: A one bedroom ground floor flat built in 1991.

1.3. The main aims and objectives were:

a) To identify those areas of the above site where asbestos is present.
b) To identify the type and extent of asbestos material present.
c) To assess the state of repair and general condition of asbestos containing materials and provide a risk assessment for each item.

1.4. The purpose of this survey was to identify and register the location of all asbestos containing materials within site, in line with current legislation. Appendix 3 contains a copy of the original Clients instructions. Original site plans were not made available by the Client to Manestream Ltd.

1.5. Accreditation Details – see APPENDIX 4.

1.6. This survey was carried out by Chris Bolton on 8th July 2005 in accordance with Guidance Note **MDHS 100** *Surveying, sampling and assessment of asbestos-containing materials*

1.7. This report documents the samples taken and analysis thereof.

1.8. Please note: All measurements of asbestos-containing materials within this report are estimates only and are not suitable for valuation for removal purposes etc.
All estimates should be confirmed by a Licensed Asbestos Removal Contractor during any tender exercise

2. SITE SURVEY INFORMATION

2.1. Representative Bulk Sampling

The survey was carried in accordance with Guidance Note **MDHS 100** ***Surveying, sampling and assessment of asbestos-containing materials***

Bulk samples were taken throughout the specified areas of accessible structural components, which might conceivably contain asbestos. Particular attention was paid to panelling on doors, walls and ceilings and to pipework, vessel and structural beam insulation. Sampling points were made good by the application of reinforced adhesive tape or 'Polyfilla'.

While it was not possible to carry out exhaustive sampling of each and every structural element present on site in order to produce a definitive survey or asbestos materials, it is considered that a representative selection of samples was obtained.

Although it is possible to identify 'asbestos free' areas in respect of accessible structural components, it should be noted that in some cases asbestos materials may be totally enclosed within a structure and will only be revealed when structural alterations take place. All reasonable efforts were made to detect concealed asbestos, for example in the voids above suspended ceilings etc. However, given the way that asbestos is used in composite structures and in inaccessible locations, it cannot therefore be guaranteed that all asbestos materials have been located. If it is suspected that such materials are present but their presence could not be confirmed at the time of survey due to their inaccessibility, this is indicated in the report section relating to the particular area in question.

Prior to the use of plastic rawl plugs, asbestos materials were commonly used in this application. It is extremely difficult to identify such materials due to decorative claddings, paint coatings etc in most properties.

Artex and Bitumen products may contain a low proportion of asbestos, commonly Chrysotile, which is so finely divided so as not to be detected by the dispersion staining method in accordance with MDHS 77: Asbestos in Bulk materials, Sampling and identification by polarised light microscopy (PLM). In this instance Manestream Ltd recommend that a proportion of these samples be analysed using Scanning Electron Microscopy in order to determine any asbestos content.

Electrical fuse boxes sometimes contain asbestos. For reasons of safety such fuse boxes are not normally inspected.

Fire doors frequently contain an inner layer of asbestos materials for fire retardant purposes. The presence of such an inner layer is difficult to determine without causing significant damage to the doors. Sampling is therefore not undertaken unless specifically requested. If it remains undisturbed the asbestos contained within these doors does not present a risk to health, but caution is advised during maintenance work, i.e. renewing locks etc.

Kitchen appliances such as deep fat fryers can possibly contain asbestos. In most instances these are in use and the products form an integral part of such appliances and have not been sampled. The same is true of heavy-duty machinery located within factories.
Plant equipment (Electrical Heaters, Boilers, Air Handling Units etc) often contains asbestos materials. Inspections are only made where safe and practical to do so.

Occasionally, samples were not taken for the following reasons:

- lack of safe access;
- to have done so would have caused irreparable damage to the material, or to the item of which it forms an integral part;
- material of identical appearance had already been sampled.

If a sample is not taken for any reason, there must also be a presumption made whether the material is asbestos or non-asbestos. Unless the surveyor has strong evidence to support a reasoned argument for presuming the material does not contain asbestos (e.g. plaster, plasterboard, wood etc) then it must be presumed to contain asbestos. This will be recorded in Table 1 as 'Presumed' or 'Strongly Presumed' as defined below:

A material is defined as **strongly presumed** to contain asbestos if fibres are visible and have the appearance of asbestos; or if similar construction exists and laboratory analysis of one of the materials has confirmed the presence of asbestos.
A material is defined as **presumed** to contain asbestos if no fibres are visible but asbestos is known to have been commonly used in the manufactured product at the time of installation (e.g. floor tiles, ceiling tiles, insulating boards etc).

In addition where any no accesses are encountered during a survey this is recorded in the in Limitations of Survey (Section 2.5) and must be **presumed** to contain asbestos.

Although it is possible to identify 'asbestos free' areas in respect of accessible structural components, it should be noted that in some cases presumed asbestos materials may be totally enclosed within a structure and will only be revealed when structural alterations take place.

2.2. Buildings/Areas Included in the Survey

All areas of the flat were included in the survey.

2.3. Buildings/Areas Not Included in the Survey

No other areas were surveyed at the request of the client.

2.4. Analytical Techniques

Bulk samples were analysed for asbestos content by polarised light microscopy using the dispersion staining technique as recommended in **MDHS 77**: *Asbestos in bulk material*

2.5. Limitations of the Survey

Whilst carrying out the survey, the surveyors were unable to access the following buildings/rooms/areas:

Building	Room/Area	Reason for No Access	Comments (If any)
All Areas were accessible during this survey.			

In addition the following deviations from the original method were made:

- No deviations from the original method were made.

2.6. Results

During this survey a total of 3 samples were taken.

Certificates of Analysis for bulk samples are presented in Appendix 1.
Plans indicating the locations of all samples taken are presented in Appendix 2.

3. SUMMARY

3.1. General

No asbestos containing materials were found whilst carrying out this survey.

3.2. Type and Extents of Asbestos

See Table 1

3.3. Non Asbestos Samples

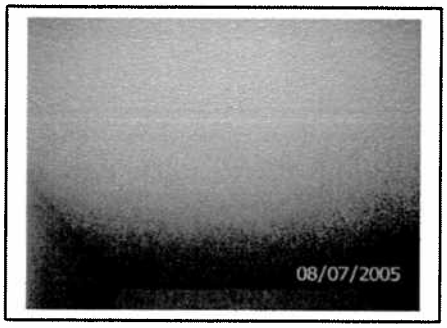
See Table 2

TABLE 1 - ASBESTOS REGISTER

									For CLIENT USE			
SAMPLE NO	LOCATION	DESCRIPTION	TYPE OF ASBESTOS	GUIDE EXTENT	Material Risk Category	Total Score (MRA + Priority Risk Assessment)	Category	RECOMMENDED ACTION	Date Actioned	Authorised By	Work Undertaken By	Completed On / Re-inspection Due (If applicable)
No asbestos containing materials were found whilst carrying out this survey.												

Note: If rooms are not mentioned in this table, and are not included in the areas of no-access, then no suspect materials were found within them.

TABLE 2 - NON ASBESTOS SAMPLE PHOTOGRAPHS



Sample No. 50708CB030
Location G001
Description Textured Coating To Ceiling

No Photo File Available

Sample No. AS50708CB030
Location G002
Description Textured Coating To Ceiling

No Photo File Available

Sample No. AS50708CB030
Location G003
Description Textured Coating To Ceiling

No Photo File Available

Sample No. AS50708CB030
Location G004
Description Textured Coating To Ceiling

No Photo File Available

Sample No. AS50708CB030
Location G005
Description Textured Coating To Ceiling

No Photo File Available

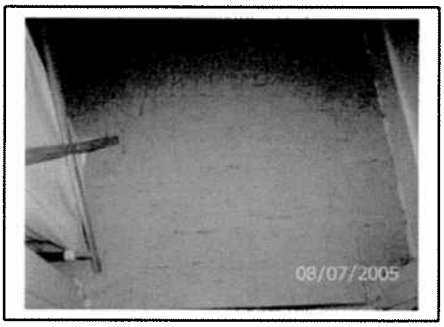
Sample No. AS50708CB030
Location G006
Description Textured Coating To Ceiling

No Photo File Available

Sample No. AS50708CB030
Location G007
Description Textured Coating To Ceiling

Sample No. 50708CB031
Location G002
Description Beige Floor Tile & Bitumen Adhesive

Sample No. 50708CB032
Location G005
Description Sink Pad



Sample No. AS50708CB031
Location G006
Description Beige Floor Tile & Bitumen Adhesive

4. RISK ASSESSMENT AND PRIORITISATION SYSTEM

4.1. General

The risk assessments for asbestos materials in this survey are worked out in accordance with MDHS100 and HSG227.
The material risk assessment algorithm is an assessment of the condition of the ACM. The algorithm used considers four parameters: product type; extent of damage; surface treatment and asbestos type. Each of the parameters is scored and added to give a total score between 2 and 12:

- Materials with scores of **10** or more should be regarded as **High Risk** with a significant potential to release fibres if disturbed
- Those with a score between **7 and 9** are regarded as **Medium Risk**
- Materials with a score between **5 and 6** are **Low Risk**
- Scores of **4 or less** are **Very Low Risk**

The priority risk assessment looks at the likelihood of someone disturbing the ACM. The factors taken into account are listed below:

- Maintenance activity – Type of maintenance and frequency of maintenance
- Occupant activity – Main activity and Secondary activities
- Likelihood of disturbance – Location, accessibility and extent/amount
- Human exposure potential – Number of occupants, frequency of use of the area and average time area is in use.

The scores allocated to the material and priority algorithms are shown in the tables below:

Material Assessment Algorithm

Sample Variable	Score	Examples of scores
Product Type (or debris from product)	1	Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes) Asbestos cement
	2	Asbestos insulating board, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt
	3	Thermal insulation (e.g. pipe and boiler lagging), sprayed coating, loose asbestos, asbestos mattresses and packing
Extent of damage/deterioration	0	Good condition: no visible damage
	1	Low damage: a few scratches or surface marks; broken edges on boards, tiles etc
	2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris
Surface Treatment	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles
	1	Enclosed sprays and lagging, asbestos insulating board (with exposed face painted or encapsulated), asbestos cement sheets etc
	2	Unsealed asbestos insulating board, or encapsulated lagging and sprays
	3	Unsealed laggings and sprays
Asbestos Type	1	Chrysotile
	2	Amphibole asbestos excluding Crocidolite
	3	Crocidolite
Total Score		

Priority Assessment Algorithm

Assessment Factor	Score	Examples of score variables
Normal occupant activity		
Main type of activity in area	0	Rare disturbance activity (e.g. little used store room)
	1	Low disturbance activities (e.g. office type activity)
	2	Periodic disturbance (e.g. industrial or vehicular activity which may contact ACMs)
	3	High levels of disturbance (e.g. fire door with asbestos insulating board sheet in constant use)
Secondary activities area	As above	As above
Likelihood of disturbance		
Location	0	Outdoors
	1	Large rooms or well ventilated areas
	2	Rooms up to $100m^2$
	3	Confined spaces
Accessibility	0	Usually inaccessible or unlikely to be disturbed
	1	Occasionally likely to be disturbed
	2	Easily disturbed
	3	Routinely disturbed
Extent/Amount	0	Small amounts or items (e.g. strings, gaskets etc)
	1	$\leq 10m^2$ or $\leq 10m$ pipe run
	2	$>10m^2$ to $\leq 50m^2$ or >10m to $\leq$50m pipe run
	3	$>50m^2$ or >50m pipe run
Human exposure potential		
Number of occupants	0	None
	1	1 to 3
	2	4 to 10
	3	>10
Frequency of use of area	0	Infrequent
	1	Monthly
	2	Weekly
	3	Daily
Average time area is in use	0	<1 hour
	1	>1 to <3 hours
	2	>3 to <6 hours
	3	>6 hours
Maintenance activity		
Type of maintenance activity	0	Minor disturbance (e.g. possibility of contact when gaining access)
	1	Low disturbance (e.g. changing light bulbs in asbestos insulating board ceiling)
	2	Medium disturbance (e.g. lifting one or two asbestos insulating board ceiling tiles to access a valve)
	3	High levels of disturbance (e.g. removing a number of ceiling tiles)
		ACM unlikely to be disturbed by maintenance activity
Frequency of maintenance activity	0	≤1 per year
	1	>1 per year
	2	>1 per month
	3	
Total Score		

The risk assessment then combines the Material Assessment and Priority Assessment. This then forms the basis of the asbestos management plan and allows the selection of appropriate management options.

In areas where extensive building refurbishment or demolition is proposed which could lead to disturbance of asbestos materials, then remedial treatment as indicated in Categories 2/3 is unsuitable and all asbestos should be removed prior to commencement of such works.

4.2. Category 1 High Priority (>18 Points)

Category 1 indicates materials, which contain asbestos and are in a condition and/or location, which require urgent attention. High (>18 Points) materials are not suitable for remedial measures and should be removed as soon as possible.

4.3. Category 2 Medium Priority (13 – 18 Points)

Category 2 indicates that the material contains asbestos and is in a condition and/or location, which require some action. This action would include encapsulating the material either by applying a sealant coat to the surface of boards or enclosing within impervious panelling. Warning labels should be fixed to the encapsulating material in order to alert site occupants to the presence of asbestos and thus to avoid the risk of accidental damage. These materials should be removed as part of a phased removal programme.

4.4. Category 3 Moderate/Low (<13 Points)

Category 3 indicates that the material contains asbestos but is in a condition and/or location which does not give rise to a significant health risk PROVIDED IT REMAINS UNDISTURBED either by routine maintenance or by personnel carrying out routine daily work activities which could cause impact or abrasion of the material. Category 3 Moderate/Low is valid as a priority rating only if this proviso is maintained. Clients are advised to be alert to any changes in work activities in areas where Category 3 risk material is located.

4.5. Key to Management Options

Label, Maintain and Update Register

A means of identifying ACM's to those who may be affected could be the placing of labels on the ACM. There are disadvantages, however, that include the possibility of labels falling off, being painted over or becoming dirty.

The ACM's that are in good condition and are unlikely to be disturbed may be left in place with a programme of monitoring carried out by a competent person. This involves an inspection that is recorded of each asbestos containing material to a pre -determined schedule typically annually. The monitoring would include a visual inspection that would assess the ACM for scratches, signs of disturbance, broken edges, cracked or peeling paint or debris. The asbestos register should be updated accordingly. If the ACM does show visible signs of damage / deterioration then this may promote it into a Category 2 or Category 1 material.

Remove

Category 1 indicates ACM's that should be removed under the Control of Asbestos at Work Regulations 2002 and by an approved licensed asbestos removal contractor or isolated (e.g. locked and labelled door etc) and a Permit to Work system put in operation. Following asbestos removal an accredited independent consultant should undertake a four-stage clearance test (certificate of re-occupation).

Encapsulation

The encapsulation of the Asbestos Containing Materials (ACM's) could be carried out by the following options:

1. Applying a bridging encapsulant that forms a durable layer adhering to the surface.
2. Applying a penetrating encapsulant that penetrates within the ACM before it hardens and thus locking the material together, to provide additional strength.

The materials for consideration for bridging encapsulants are high build elastomers, cementitious coatings and Polyvinyl Acetate (PVA). The type of encapsulant will be dependant on a number of circumstances.

Items for consideration are:

1. Whether the material can take the additional weight of the encapsulant without delamination.
2. Whether additional fire resisting properties are required.
3. Whether future cracking will present a problem (typical of some cementitious coatings)

Repair

The repair of ACM's should be carried out after considering the following options:

1. Small areas of damaged pipe or boiler lagging should be filled with plaster and wrapped with cotton cloth (calico).
2. Small areas of damaged sprayed asbestos should be treated with encapsulant and an open mesh scrim of glass fibre or calico reinforcement applied.
3. Damaged asbestos panelling should be sprayed with PVA or elastomeric paint
4. Asbestos cement should be sealed using an alkali resistant and water permeable sealant.

Enclosure

The enclosure of ACM's should be carried out after considering the following options:

1. Whether the material may be affected by water.
2. Whether the material used for enclosure may affect the fire resistance of the ACM.
3. Whether future maintenance is necessary.

Various solutions include the following:

1. The placing of a bollard or similar object adjacent to a wall panel to prevent damage by vehicles.
2. The installation of a barrier such as plywood that would prevent the release of airborne fibres from the material. This would involve sealing the edges.
3. The sealing and locking of a door to prevent access into a room.

The above options involve the installation of suitable warning signs/ labels and the monitoring of the enclosure.

5. DISCUSSION / RECOMMENDATIONS

No asbestos containing materials were found whilst carrying out this survey. Therefore, no discussions/recommendations are required.

APPENDIX 1

CERTIFICATE OF ANALYSIS

Manestream Ltd Figure 25a

29 July 2005

Pectel (Wales) Ltd
Unit 6
Stadium Close
Cardiff

CF11 8TS

FOR THE ATTENTION OF: Mr Les Adams

MANESTREAM LTD
Health & Safety Consultancy
Project Management
Asbestos Consultancy
Ventilation Hygiene
Specialist Engineering Services

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UKAS TESTING
2329

CERTIFICATE OF ANALYSIS

CERTIFICATE NUMBER: C9925.116.5.07.001_FH

SITE: 18 Llys Nazareth, Llwewllyn Street, Pentre, CF41 7BS

LOCATION: All Areas

SAMPLES TAKEN BY MANESTREAM Chris Bolton **ON:** 8th July 2005

ANALYSED BY: John Barnett

Sample Number	Sample Description	Content
50708CB030	G001, Textured Coating To Ceiling	No Asbestos Detected
50708CB031	G002, Beige Floor Tile & Bitumen Adhesive	No Asbestos Detected
50708CB032	G005, Sink Pad	No Asbestos Detected

Regional Office

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Clients' Samples

Where clients have provided their own samples of bulk materials, the Laboratory is not responsible for such sampling. Such sampling is outside the scope of UKAS accreditation for bulk sampling. Nor is the laboratory responsible for the consequences of inaccurate results or conclusions based on these samples. All opinions stated herein are outside the scope of Manestream / UKAS accreditation.

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AT4360

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MANESTREAM LTD

CERTIFICATE NUMBER: C9925.116.5.07.001_FH

NOTES

If asbestos is present in the material which the sample represents, and if this material is to be stripped or removed or otherwise disturbed, then safety precautions must be taken in accordance with the Control of Asbestos at Work Regulations 1987 (As Amended) and associated Codes of Practice.

Chrysotile	-	White asbestos
Amosite	-	Brown asbestos
Crocidolite	-	Blue asbestos

Method of Analysis

The bulk samples were analysed by the dispersion staining method in accordance with MDHS 77: Asbestos in Bulk materials, Sampling and identification by polarised light microscopy (PLM).

Estimates of Concentration

Opinions expressed in estimates of concentration of asbestos components are outside the scope of UKAS accreditation:

Maj Con = Major Constituent	-	estimated as greater than 10% of total fibre (by volume)
Min Con = Minor Constituent	-	estimated as 1% - 10% of total fibre (by volume)
Trace	-	estimated as less than 1% of total fibre (by volume)

Please Note: Artex and Bitumen products may contain a low proportion of asbestos, commonly Chrysotile, which is so finely divided so as not to be detected by dispersion staining method in accordance with MDHS 77: Asbestos in Bulk materials, Sampling and identification by polarised light microscopy (PLM).

ANALYST NAME: ..... SIGNED: .....

COUNTER SIGNED: ..... or .....

J Nicholls
Contracts Director

P Limber
Technical Manager

On behalf of Manestream

Clients' Samples

Where clients have provided their own samples of bulk materials, the Laboratory is not responsible for such sampling, which is outside the scope of UKAS accreditation for bulk sampling, nor is the responsible for the consequences of inaccurate results or conclusions based on these samples. All opinions stated herein are outside the scope of Manestream / UKAS accreditation.

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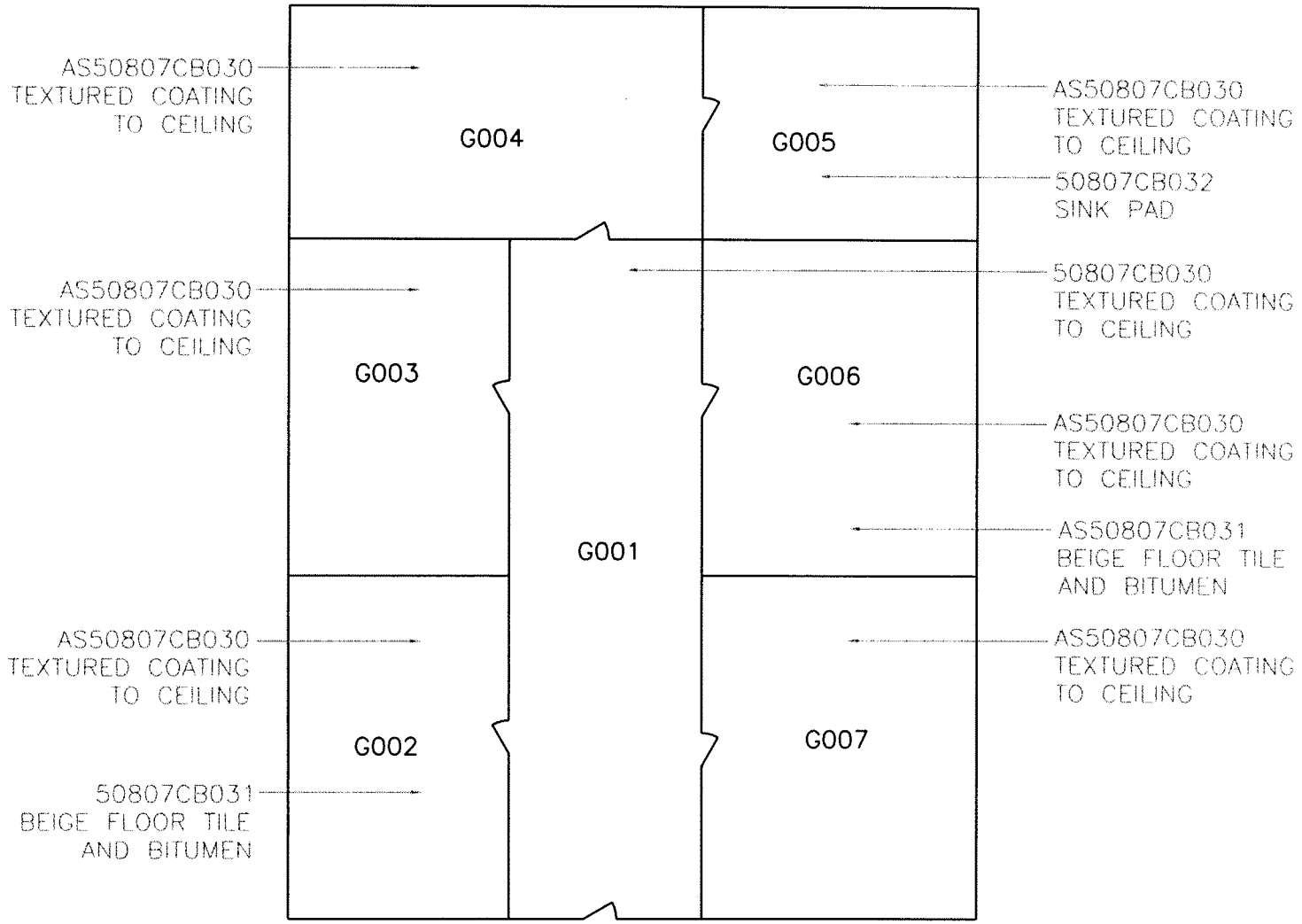
APPENDIX 2

SITE PLANS AND KEY

GROUND FLOOR



ISSUE 1 MAY/05 ID No.00

MANESTREAM LTD

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Project Management
Asbestos Consultancy

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Specialist Engineering
Ventilation Hygiene

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Type of Survey

This is a type 2 Survey (Standard Sampling, Identification and Assesment Survey).

For major refurbishments / Pre demolition a type 3 survey must be undertaken.

See Report for Details

DRAWING KEY

ASBESTOS PRESENT	
PRESUMED TO CONTAIN ASBESTOS	
NO ASBESTOS DETECTED	
OUTSIDE SCOPE OF SURVEY	
NO SUSPECT MATERIALS FOUND	NSMF

Rev	Date	Report by	DWN	CHK

Project Name and Address

FLAT 18
LLYS NAZARETH
PENTRE
CF14 7BS

Client Name

Pectel (Wales) Ltd

Report Ref.

R9925.116_5.07.001_FH

Checked by / Date	Drawn by / Date
.....	DR 13/07/05
Scale	**Sheet**
NTS	1/1

APPENDIX 3

COPY OF CLIENT INSTRUCTIONS

APPENDIX 4

ACCREDITATION INFORMATION

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE

TESTING LABORATORY
No. 2329

Manestream Ltd
Unit 7
Olympic Business Centre
Paycocke Road
Basildon
Essex
SS14 3EX

is accredited to BS/EN/ISO/IEC 17025 *General Requirements for the competence of testing and calibration laboratories* to undertake tests as detailed in the schedule bearing the above accreditation number.

From time to time the schedule to this certificate may be revised and reissued by the United Kingdom Accreditation Service.

This Accreditation shall remain in force until the expiry date printed below, subject to continuing conformity with United Kingdom Accreditation Service requirements.

Initial Accreditation 26 September 2001

Accreditation Manager, United Kingdom Accreditation Service

This certificate issued on 15 April 2004 **Expiry date 30 September 2005**

The Department of Trade and Industry (DTI) has entered into a memorandum of understanding with the United Kingdom Accreditation Service (UKAS) through which UKAS is recognised as the national body responsible for assessing and accrediting the competence of organisations in the fields of calibration, testing, inspection and certification of systems, products and personnel.

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE

INSPECTION BODY
No. 282

Manestream Limited
Unit 7
Olympic Business Centre
Paycocke Road
Basildon
Essex
SS14 3EX

is accredited to ISO/IEC 17020 *General Criteria for the operation of various types of bodies performing inspection*
to undertake inspections as a type C body as detailed in the schedule bearing the above accreditation number.
From time to time the schedule to this certificate may be revised and reissued by the
United Kingdom Accreditation Service.

This Accreditation shall remain in force until the expiry date printed below, subject to continuing conformity with United Kingdom Accreditation Service requirements

Initial Accreditation 29 September 2003

Accreditation Manager, United Kingdom Accreditation Service

This certificate issued on 15 April 2004 Expiry date 31 August 2007

The Department of Trade and Industry (DTI) has entered into a memorandum of understanding with the United Kingdom Accreditation Service (UKAS) through which UKAS is recognised as the national body responsible for assessing and accrediting the competence of organisations in the fields of calibration, testing, inspection and certification of systems, products and personnel.