



HBS Property Services in partnership with Middlesbrough Council

Client: Middlesbrough Council
C/o HBS Property Services
1st Floor Rede House
69-71 Corporation Road
TS1 1LY

Date of Survey: 5 to 7 October 2004
Report Reference: NE/5/5/490/AV
Date of Report: 12 May 2005
Purpose of Survey: Compliance Survey

**Report on Survey of Asbestos Materials
at**



**Brambles Primary School
Cargo Fleet Lane
Middlesbrough**

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1.0 INTRODUCTION

- 1.1 APEC Environmental Limited were instructed by [REDACTED] of HBS Property Services for Middlesbrough Council, to undertake a representative survey of asbestos materials present at;

Brambles Primary School
Cargo Fleet Lane
Middlesbrough

- 1.2 Survey requested on this occasion was a **Type 2** survey, as defined in MDHS 100 issued by the Health and Safety Executive. This includes visual inspection of all accessible areas of the property, accompanied by sampling of suspect asbestos materials internally and externally as necessary for subsequent analysis. No destructive access was undertaken.
- 1.3 The objectives of the survey and report are to:
- a) Identify those areas of the above site where asbestos is present;
 - b) Identify the type and extent of asbestos material present;
 - c) Comment on the condition of asbestos materials identified;
 - d) Advise on suitable recommendations for remedial and management measures in line with the requirements of the Control of Asbestos at Work Regulations 2002.
- 1.4 APEC Environmental holds UKAS accreditation to ISO 17025 for **Sampling and Analysis** of suspect asbestos materials. APEC does not hold accreditation for survey works. Copies of in house methods employed during bulk sampling and analysis are available upon request, along with UKAS accreditation schedules.
- 1.5 Survey was undertaken with reference to guidance contained in MDHS 100, published by the Health and Safety Executive, and to the DETR publication 'Asbestos and Man Made Fibre in Buildings'.

2.0 SITE SURVEY AND RESULTS

2.1 Survey Protocols

Initial survey is undertaken by means of a methodical visual inspection of all of the areas to be surveyed. This inspection is used to identify any areas that may require specific access arrangements (ladders, locked doors etc.), as well as providing the locations of suspect asbestos materials to be sampled. Site plans provided by HBS are checked at this stage to confirm their accuracy. If no site plans have been provided, sketch plans are prepared at this stage.

For the purposes of this survey, the results of this inspection and all samples taken are recorded onto a 'PDA' hand-held computer, pre-loaded by HBS Property Services with an asbestos register 'survey' generated by a Technology Forge database. This database contains information about the site, input by HBS (rooms and room numbers etc.), with all observations and sample information being recorded into the appropriate fields by our surveyor.

For a **Type 2** survey, samples of suspect asbestos-containing materials are taken in line with the protocols laid out in 2.2, below. Wherever a sample of suspect material is taken, the nature, location, extent and condition of the material sampled is recorded into the appropriate fields of the Technology Forge database, and the site plan marked to indicate the sample location. Representative photographs of the sample location are also taken at this stage.

If a **Type 3** survey is requested, in addition to the protocols adopted above, intrusive access is undertaken within ceiling, wall, door and floor void areas. No intrusive access is undertaken at this stage beyond existing suspect asbestos containing materials unless suitable access arrangements have been made or requested by the client. In addition, no access is carried out beyond existing brick, concrete or steel construction materials, unless specifically requested by the client.

On completion of the survey, information from the PDA is subsequently downloaded onto the HBS computer mainframe and a database report produced, which forms the basis of this written report.

2.2 Representative Bulk Sampling

Bulk samples are taken of all materials, which following visual inspection and initial examination by the surveyor, might conceivably contain asbestos. Particular attention is paid to panelling on doors, walls and ceilings, and to pipework, vessel and structural beam insulation. Samples are also taken of other representative materials throughout the site which are not considered to contain asbestos, but for which it is considered necessary to confirm them as being 'asbestos free'.

Where an homogenous asbestos containing material appears widespread throughout a property, samples may only be taken in a few representative locations, with the remaining materials indicated as '**strongly presumed**' to contain asbestos as indicated in MDHS 100. This strategy is adopted to minimise the disturbance to asbestos containing materials.

All samples are taken in accordance with documented in-house methods, based on MDHS 100, and are 'double bagged' in labelled, self-seal sample bags for transfer to the laboratory.

2.3 Analytical Techniques

Bulk samples are analysed for asbestos content by polarised light microscopy, using the dispersion staining technique as recommended in MDHS 77: Asbestos in Bulk Materials. APEC Environmental takes part in the 'AIMS', externally administered quality control scheme for identification of asbestos in bulk samples, and maintains a 'Satisfactory' classification.

2.4 Results

Observations made during survey are presented in section 3 and 4 of this report, along with an asbestos register and more detailed recommendations.

Confirmation of Analysis of Bulk Samples for the bulk samples taken is presented in the Appendix section to this report, along with site plan indicating sample locations and photographs.

2.5 References

The following Health and Safety Executive and other publications have been referenced in carrying out this survey and compiling the recommendations within the report.

- Health and Safety at Work etc. Act 1974
- Control of Asbestos at Work Regulations 2002
- ACoP L28, Work with asbestos insulation, asbestos coating and asbestos insulating board
- ACoP L27, Work with asbestos that does not normally require a licence
- ACoP L127, The management of asbestos in non-domestic premises
- MDHS 100, Surveying, sampling and assessment of asbestos-containing materials
- MDHS 77, Asbestos in bulk materials
- HSG 227, A comprehensive guide to managing asbestos in premises
- DETR, Asbestos and man made fibre in buildings

2.6 Definitions and Glossary of Terms

In compiling this report a number of abbreviations and technical terms have been used. The following is a glossary of the most commonly used of these terms:

AIB – Asbestos insulating board

ACM(s) – asbestos containing material(s)

Encapsulation – sealing the surface of the ACM

Encapsulant – proprietary, paintable sealant

Protection – physical protection to exposed materials (metal cladding or similar)

Safe working procedure – written method specifying the controls to be applied during works on or near ACM's

Licensed asbestos removal contractor – contractor approved by the HSE to remove ACM's

Homogenous – materials of an even and consistent composition

Suitable controlled conditions – works carried out under a safe working procedure or within an appropriate working enclosure

Method statement – written method submitted to the HSE by a contractor prior to start of works

Supalux – trade name for insulation board containing vermiculite and organic fibre

Artex – trade name for textured decorative coating

Mineralite – trade name for ceiling tiles containing man made mineral fibre

Diatomaceous earth – older form of insulation containing asbestos organic fibre, straw and fine soil

Galbestos – galvanised profiled metal construction sheets with a bitumen coating containing asbestos

Verge edging/undercloak – edge support strip for roof tiles at a gable end

Thermoset plastic – hard set, high-density composite plastic

Fibreboard – low-density board, usually comprised of organic fibre

MMMF – man made mineral fibre

3.0 GENERAL SITE OVERVIEW

3.1 Property Description

The property comprises of a traditional brick built primary school located to the south east of Middlesbrough. Primary construction of the building is brick, with pitched, tiled roof throughout.

The main building contains teaching areas, dining and sports halls, offices, plant room, WC's.

3.2 Building Structure

i) Externally

Walls – brick

Roof – pitched, tiled roof structures at different levels over teaching areas and dining/recreation halls.

Fascias – combinations of timber, PVCu and coated metal fascias.

Rainwater goods – PVCu and metal cast running externally

Windows – combination of PVC and timber frames.

Doors – wood and PVCu

Canopies – timber and concrete canopy panels above external doorways

Soffits – no external soffits to eaves noted

Verge edging – N/A

Outbuildings – N/A

Flues – flue from the main boilers comprises of double skinned steel.

Other – N/A

ii) Internally

Walls – block and brick, skimmed with plaster, some plasterboard stud and demountable partitions
Ceilings – predominantly plaster ceilings, with some suspended ceilings with mineralite, lay in grid ceiling tiles.

Ceiling voids – plaster ceilings above mineralite tiles

Loft spaces – open, interconnected loft spaces with lay-in, glass fibre loft insulation. Pipework services running within lofts (refer to pipework observations). Residual, redundant visqueen polythene sheeting to underside of roof structure and some loft floor areas. This is believed to be present as a result of previous asbestos removal works. Redundant asbestos removal equipment also noted in loft areas (vacuum hoses and extractor ducting)

Floors – Concrete floors throughout most areas with various vinyl floor tiles, carpets, vinyl and ceramic tile finishes. Older vinyl floor tiles contain chrysotile (white asbestos)

Floor ducts – floor ducts mostly concealed beneath carpets. Limited inspection within one section of floor duct (subsequent to main survey), confirms pipework within floor ducts to be insulated with sectional asbestos insulation. Presumed to be present throughout.

Windows – PVCu and timber frames.

Windowsills – wood and PVCu

Riser panels – plasterboard and wood

3.3 **Mechanical Services**

Boiler/Heating – Gas fed boilers within the ground floor boiler room feeding to conventional radiators and mechanical heaters in the main school areas. Boilers are lagged with glass fibre insulation materials. No access could be made to gaskets internally to the boilers or associated plant, although it is presumed that these gaskets will contain asbestos.

Pipework - pipework within the boiler room is all lagged with sectional MMMF materials. Pipework within the loft spaces is insulated with sectional glass fibre and MMMF insulation, although it is apparent that previous asbestos insulation materials have been removed. Localised asbestos insulation debris is present to floor and wall surfaces within the roof voids. Analysis of samples from this debris confirms the presence of amosite and chrysotile (brown and white asbestos). Pipework within school areas is predominantly uninsulated.

WC facilities – various plastic, ceramic and hard rubber types. Some thermoplastic toilet cisterns present, containing amosite (brown asbestos)

Bath panel – N/A

Flues – Stainless, double skinned flues form boilers

Sink units – stainless steel sink units with bitumen pads to the underside. Sink pad in the staff room contains chrysotile (white asbestos)

Fridges – domestic types only

Kitchen equipment – no visible suspect asbestos containing materials

Gaskets – Boiler gasket in boiler room containing chrysotile (white asbestos). No access to sample compression gaskets to pipework.

Water tanks – Metal tanks in roof spaces.

Friction linings – N/A

Ventilation ducts – N/A

Other – N/A

3.4 **Electrical services (refer to section 4.2.2)**

Fuse and switch boxes – Conventional types with no internal access

Light units – Fluorescent and conventional pendant fittings

Electrical equipment – no access

4.0 SURVEY RESULTS

4.1 Asbestos Register

See Appendices 7.2 and 7.3

4.2 Areas Not Accessed

4.2.1 It is considered that all areas have been adequately accessed, with exception to the following;

Location/Item	Reason for non-access
i) Roof areas	Limited access to external roof areas
ii) Floor ducts	Access limited to one location, all other assumed similar.

All other areas are considered to have been satisfactorily accessed on this occasion

No internal access was made to partition walls, internal to doors, concealed bulkheads or risers unless a type 3 survey was instructed. For safety reasons, access above suspended ceilings and to high level is restricted to those areas that can be reasonably accessed from stepladders available on site, or those carried by our surveyors. Access will only be made to high level, roof loft areas and ducts provided that suitable access and walkways are available or two surveyors are present.

Where a room, area or item of equipment is identified as not accessed, it should be presumed that ACM's might be present unless observations made elsewhere in this report indicate otherwise.

4.2.2 Electrical Services

Wall mounted fuse boxes and various other electrical items of equipment are present within the building. It was assumed that all such equipment was live at the time of survey and therefore only visual inspection was made of these items, unless it could be verified that the equipment was disconnected.

It should be noted that it is not uncommon to find asbestos materials within electrical equipment. Such items include arc shield panels and gasket seals to electrical equipment doors etc as well as woven asbestos arc shields below individual fuses in fuse boxes.

4.3 RECOMMENDATIONS

Recommendations made within this report and in the register are based primarily on the condition, type, location and extent of the material, as well as the considered observations of the surveyor carrying out the survey. All recommendations should be regarded as a minimum precaution, and additional remedial measures or complete asbestos removal should also be considered.

- Corridor areas 02, 03, 09, 17, 24, 27, 37, 42, 58 and rooms 56, 55, 22, 23 – Asbestos insulation to pipework in floor ducts containing amosite and chrysotile (brown and white asbestos) – this pipework insulation has only been inspected in one location (room 56) during remedial works after completion of original survey. Pipework in this duct was insulated with sectional asbestos containing amosite and chrysotile, and was in poor condition prior to remedial works. It is presumed that similar asbestos based insulation will be present to pipework in remaining areas of ducts.

No uncontrolled access should be made to any of these floor ducts. If it is necessary to gain access for repairs, then controlled asbestos removal should be undertaken by a licensed asbestos removal contractor.

- Roof voids above teaching areas and main halls (all voids) – asbestos insulation residues to floors of loft, roof supports and partition walls containing amosite and chrysotile (brown and white asbestos) – small quantities of residual asbestos insulation debris are present to floor areas and dividing walls within the roof void, presumably resulting from previous asbestos removal works within the loft areas. In addition, visqueen polythene sheets are present to the loft floor and to the underside of the roof, along with various vacuum cleaner and extract hoses. These are likely to be present as residues from the enclosure formed in the asbestos removal and must be considered to be asbestos contaminated.

As a minimum precaution, we would recommend that access to these roof voids should be restricted to suitably trained and equipped personnel for inspection purposes only, until appropriate remedial works are undertaken. pipework and surfaces within this area. We would recommend that as a minimum precaution, entry to this area should be limited to access for inspection purposes only. If any works are planned within the void, or if any damage occurs to roof or ceilings, then complete localised or full decontamination of the voids should be undertaken prior to undertaking works.

- Room 04, Boiler room – gaskets to boilers and pipework containing chrysotile (white asbestos, presumed) – No immediate remedial measures are considered necessary, although consideration should be given to the safe removal and disposal of these gasket materials if they are to be disturbed by any future maintenance works.
- Rooms 28 – sink insulation pad beneath stainless steel sink unit containing chrysotile (white asbestos) – this pad is in good condition, and by nature are well sealed. No immediate remedial measures are considered necessary, although consideration should be given to the safe removal and disposal of this material if it is to be disturbed.

Additional Recommendations

As noted, other asbestos materials may be present that could not be accessed within the remit of this survey. Care should be taken during any works in areas identified as not accessible, with any additional suspect materials identified for subsequent analysis.

Additional (Type 3) survey should be considered prior to any major refurbishment works.

We would recommend that all asbestos removal or remedial works and disposal of asbestos materials indicated, should be undertaken only by a licensed asbestos removal contractor, working in accordance with the requirements of the Control of Asbestos at Work Regulations, 2002.

5.0 RISK ASSESSMENTS AND PRIORITISATION SYSTEM

5.1 Material Risk Assessment

The risk assessments for asbestos materials in this survey are input onto the Technology Forge database and are duplicated in the asbestos register.

The material risk is based on that established in MDHS 100, and is based on allocation of points, relating to the condition, surface treatment, material type, and asbestos content of the material, using an algorithm pro-forma. This risk assessment relates to the **material** only, and an additional **priority assessment** (see below), should be allocated to accommodate the likely use of the area and the potential for disturbance to the material. The material risk assessment point scores are based on the following examples;

Sample variable	Score	Examples
Product Type	1	Asbestos-reinforced composites (plastics, resins, mastics, roof felts, floor tiles, paints, asbestos cement)
	2	AIB, mill boards, other low density insulation boards, textiles, gaskets, ropes, woven textile, paper, felt
	3	Thermal insulation (pipe and boiler lagging), sprayed asbestos, loose 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 damaged areas revealing loose fibres
Surface Treatment	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris
	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles
	1	<i>Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated), asbestos cement sheets</i>
	2	Unsealed AIB, or encapsulated lagging and sprays
Asbestos Type	3	Unsealed lagging or spray asbestos
	1	Chrysotile
	2	Amphibole asbestos types excluding Crocidolite
	3	Crocidolite
Maximum Total	12	

5.2 Management Assessment

In addition to the material risk assessment, in order to adequately manage the risks to personnel from ACM's, the HSE require that a management assessment is prepared, taking into account the location of the ACM, the use of the area, frequency of maintenance and work activities.

In order to fulfil this requirement, the Technology Forge database used by Middlesbrough Council has been designed to incorporate a Management Assessment algorithm. This algorithm is based on the following variables; (information provided by HBS property services)

Assessment Parameter	Score	Variables
Location	0	N/A
	1	External
	2	Internal
	3	Internal with air movement
Disturbance associated with main activity	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 level of disturbance (e.g. fire door with AIB sheet in constant use)
Accessibility	0	Usually inaccessible or unlikely to be disturbed
	1	Occasionally likely to be disturbed
	2	Easily disturbed
	3	Routinely disturbed
Disturbance associated with maintenance activity	0	Minor disturbance (e.g. possibility of contact when gaining access)
	1	Low disturbance (e.g. changing light bulbs in AIB ceiling)
	2	Medium Disturbance (e.g. lifting one or two AIB ceiling tiles to access a valve)
	3	High levels of disturbance (e.g. removing a number of AIB ceiling tiles to replace a valve or for cabling)
Maximum Total	12	

The HSE identify that the client should normally be responsible for compiling this management assessment. However, for the purpose of this contract APEC environmental are working in conjunction with Middlesbrough Council and their site representatives to compile and input this data.

We would note that the data used in the management assessment will be a continually evolving and changing, and the data input by APEC represents our best estimate of the conditions at the time of survey only. We would consider that it is the responsibility of the client to ensure that this information is revised to suit changes in working or maintenance activities or the use/occupancy of the area.

Middlesbrough Council has identified a total risk assessment produced by combining the material assessment and management assessment total values, according to the following ratings;

Total Scores	Category	Priority Rating
17 to 24	A	High
9 to 16	B	Medium
5 to 8	C	Low
1 to 4	D	Very Low
0	E	No Asbestos Identified

5.3 Type 3 (Demolition) Surveys

Where a type 3 survey has been carried out prior to demolition of an unoccupied property, all asbestos materials identified should be removed prior to or as part of the demolition process. In such instance, recommendations may be made for the purposes of operatives entering the property and are indicated in the asbestos register of this report, although no risk assessment is undertaken unless specifically requested by the client.

6.0 Statement of Conformity**6.1 Compliance**

The content of this report and the recommendations made herein have been checked by the undersigned authorised person, and are considered to be in line with current APEC Environmental company policy and guidance issued by the Health and Safety Executive.

All results and observations made are considered to be correct at the time of survey. APEC Environmental Ltd cannot accept any responsibility for subsequent deterioration of asbestos containing materials, or failure on behalf of the client to act on recommendations made in this report.

Signed Name (print)

Position Date

This survey was carried out by the undersigned lead surveyor, and is considered to be an accurate representation of the condition of accessible ACM's encountered at the time the survey was carried out.

Signed Name (print)

Position Date

6.2 Confidentiality

The content of this report is deemed to be in confidence between APEC Environmental Ltd and the instructing client. APEC will not release additional copies of this report to other parties without written permission from the client or his representative.

7.0 Appendix

- 7.1 Confirmation of Analysis
- 7.2 Asbestos Register
- 7.3 Technical Reports
- 7.4 Site plans (Asbestos marked in red)

21 October 2004

Middlesbrough Borough Council
P.O. Box 134
Civic Centre
Middlesbrough
TS1 2YB

FOR THE ATTENTION OF: [REDACTED]

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1402/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC: [REDACTED]

ON: 7 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY: [REDACTED]

ON: 12 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/7/AV1	Office 59 Ceiling tiles	No Asbestos Detected
4/10/B/7/AV2	WC 60 Vinyl flooring	No Asbestos Detected
4/10/B/7/AV3	WC 60 Toilet cistern	No Asbestos Detected
4/10/B/7/AV4	Corridor 27 Vent cover in ceiling	No Asbestos Detected
4/10/B/7/AV5	Corridor 32 Vinyl floor tiles	No Asbestos Detected
Major Constituent	- estimated as greater than 10% of total fibre (by volume)	
Minor Constituent	- estimated as 1% -10% of total fibre (by volume)	
Trace	- estimated as less than 1% of total fibre (by volume)	

APEC environmental limited

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1402/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC: [REDACTED]

ON: 7 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY: [REDACTED]

ON: 12 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/7/AV6	Classroom 26 Sink insulation pad	No Asbestos Detected
4/10/B/7/AV7	Classroom 25 Sink insulation pad	No Asbestos Detected
4/10/B/7/AV8	Classroom 23 Sink insulation pad	No Asbestos Detected
4/10/B/7/AV9	Classroom 10 Sink insulation pad	No Asbestos Detected
4/10/B/7/AV10	WC 13 Vinyl floor covering	No Asbestos Detected
4/10/B/7/AV11	Loft space (Near nursery) Debris adjacent pipe	Chrysotile Minor Constituent Amosite Trace
4/10/B/7/AV12	Loft space (Near nursery) General debris to floor	No Asbestos Detected
4/10/B/7/AV13	Loft space (Near nursery) Insulation to small diameter Pipe	No Asbestos Detected
4/10/B/7/AV15	Loft space (Main hall) Floor debris	Chrysotile Trace

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

APEC environmental limited

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1402/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC: [REDACTED]

ON: 7 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY: [REDACTED]

ON: 12 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/7/AV16	Loft space (Main hall) Floor debris	No Asbestos Detected
4/10/B/7/AV14	Kitchen 74 Sink insulation pad	No Asbestos Detected

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

APEC environmental limited

DOCUMENT NUMBER: AE/4/10/1402/VR

NOTES

If asbestos is present in the material which the sample represents, and if this material is to be removed or otherwise disturbed, then safety precautions must be taken in accordance with the Control of Asbestos at Work Regulations 2002 and amendments in addition to relevant HSE Codes of practice.

Chrysotile – **WHITE** asbestos

Amosite – **BROWN** asbestos

Crocidolite – **BLUE** asbestos

Other less common types of asbestos are fibrous **actinolite, anthophyllite and tremolite**, which for legislative purposes must be treated similar to amosite.

Estimates of concentration are outside the scope of our UKAS Accreditation and are based on visual assessment of the sample by the analyst.

Method of Analysis

The bulk samples were analysed using documented, in house methods based upon MDHS 77: Asbestos in bulk materials, Sampling and identification by polarised light microscopy (PLM). Samples are subjected to initial visual examination to determine the presence of fibre, accompanied by mechanical or chemical evaluation to release fibres from the sample matrix. Fibres are then analysed using polarised light microscopy techniques, including central stop dispersion staining, to confirm asbestos type.

Clients' Samples

Where clients have provided their own samples of bulk materials, the Laboratory is not responsible for such sampling, nor is the laboratory responsible for the consequences of inaccurate results or conclusions based on these samples.

On behalf of APEC Environmental Limited

SIGNED.....

		- Technical Director
		- Quality Manager
		- NE Technical Manager
		- Administration Manager

21 October 2004

Middlesbrough Borough Council
P.O. Box 134
Civic Centre
Middlesbrough
TS1 2YB

FOR THE ATTENTION OF [REDACTED]

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1403/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC: [REDACTED]

ON: 5 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY: [REDACTED]

ON: 11 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/5/MS6	48 Boiler room Insulation to pipe work	No Asbestos Detected
4/10/B/5/MS7	48 Boiler room Gasket	Chrysotile Major Constituent
4/10/B/5/MS8	46 Kitchen Vinyl flooring	No Asbestos Detected
4/10/B/5/MS9	46 Kitchen Sink pad	No Asbestos Detected
4/10/B/5/MS10	45 Store Vinyl flooring	No Asbestos Detected

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

APEC environmental limited

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1403/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC: [REDACTED]

ON: 5 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY: [REDACTED]

ON: 11 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/5/MS11	44 Female WC Vinyl flooring	No Asbestos Detected
4/10/B/5/MS12	41 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS13	40 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS14	39 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS15	38 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS16	36 Classroom Mineralite ceiling tiles	No Asbestos Detected
4/10/B/5/MS17	34 Male WC Artex to ceiling	No Asbestos Detected
4/10/B/5/MS18	34 Male WC Vinyl flooring	No Asbestos Detected
4/10/B/5/MS19	33 Store Vinyl flooring	No Asbestos Detected
Major Constituent	- estimated as greater than 10% of total fibre (by volume)	
Minor Constituent	- estimated as 1% -10% of total fibre (by volume)	
Trace	- estimated as less than 1% of total fibre (by volume)	

APEC environmental limited

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1403/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC [REDACTED]

ON: 5 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY [REDACTED]

ON: 11 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/5/MS20	30 Female WC Vinyl flooring	No Asbestos Detected
4/10/B/5/MS21	28 Staffroom Sink pad	Chrysotile Trace
4/10/B/5/MS22	21 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS23	20 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS24	19 Classroom Sink pad	No Asbestos Detected
4/10/B/5/MS25	15 Female WC Vinyl flooring	No Asbestos Detected
4/10/B/5/MS26	15 Female WC Toilet cistern	No Asbestos Detected
4/10/B/5/MS27	16 Store Vinyl flooring	No Asbestos Detected
4/10/B/5/MS28	07 Classroom Sink pad	No Asbestos Detected

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

APEC environmental limited

CONFIRMATION OF ANALYSIS

DOCUMENT NUMBER: AE/4/10/1403/VR

SITE ADDRESS: Brambles Primary School, Middlesbrough

SITE LOCATION: Full survey

SAMPLES TAKEN BY APEC [REDACTED]

ON: 5 October 2004

DATE CLIENT SAMPLES RECEIVED: N/A

ANALYSED BY [REDACTED]

ON: 11 October 2004

Sample Number	Sample Description and Location	Content
4/10/B/5/MS29	67 Artex to ceiling	No Asbestos Detected
4/10/B/5/MS30	66 Kitchen Sink pad	No Asbestos Detected
4/10/B/5/MS31	66 Kitchen Vinyl flooring	No Asbestos Detected
4/10/B/5/MS32	63 Store Vinyl floor tiles	No Asbestos Detected
4/10/B/5/MS33	64 Store Vinyl floor tiles	No Asbestos Detected

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

APEC environmental limited

DOCUMENT NUMBER: AE/4/10/1403/VR

NOTES

If asbestos is present in the material which the sample represents, and if this material is to be removed or otherwise disturbed, then safety precautions must be taken in accordance with the Control of Asbestos at Work Regulations 2002 and amendments in addition to relevant HSE Codes of practice.

Chrysotile – **WHITE** asbestos

Amosite – **BROWN** asbestos

Crocidolite – **BLUE** asbestos

Other less common types of asbestos are fibrous **actinolite, anthophyllite and tremolite**, which for legislative purposes must be treated similar to amosite.

Estimates of concentration are outside the scope of our UKAS Accreditation and are based on visual assessment of the sample by the analyst.

Method of Analysis

The bulk samples were analysed using documented, in house methods based upon MDHS 77: Asbestos in bulk materials, Sampling and identification by polarised light microscopy (PLM). Samples are subjected to initial visual examination to determine the presence of fibre, accompanied by mechanical or chemical evaluation to release fibres from the sample matrix. Fibres are then analysed using polarised light microscopy techniques, including central stop dispersion staining, to confirm asbestos type.

Clients' Samples

Where clients have provided their own samples of bulk materials, the Laboratory is not responsible for such sampling, nor is the laboratory responsible for the consequences of inaccurate results or conclusions based on these samples.

On behalf of APEC Environmental Limited

SIGNED.....

	- Technical Director
	- Quality Manager
	NE Technical Manager
	Administration Manager