

Phoenix Environmental Safety Ltd.

ASBESTOS SURVEY REPORT

(Refurbishment / Demolition Survey)

**Client: Atlas Limited Partnership,
College House, Townsend Street, Dublin 2**

**Location: Former Uniphar Site,
Belgard Road, Tallaght, Dublin 24**

Date: 11th September 2017

Report No. PE 17-642



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Client: Atlas Limited Partnership, College House, Townsend Street, Dublin 2

Location: Former Uniphar Site, Belgard Road, Tallaght, Dublin 24

Asbestos Survey Report Type: Refurbishment / Demolition Survey

Survey Company: Phoenix Environmental Safety Ltd.

Surveyor: Eoghan Hickey, Andrew Hickey and Jane Hickey

Testing Laboratory: G&L Consultancy Ltd.

Date of Survey: 6th September 2017

Date of Survey Report: 11th September 2017

Report issue: Final

Signed: *Jane Hickey*

Date: 11th September 2017

This report cannot be used for contractual or engineering purposes unless this sheet is signed where indicated by Surveyor. The report must also be designated 'final' on the signatory sheet.

Please note that Phoenix Environmental Safety Ltd. cannot be held responsible for the way in which the Client interprets or acts upon the results.

The report must be read in its entirety including any appendices. Phoenix Environmental Safety Ltd. accepts no responsibility for sub-division of this report. All measurements in this report are approximate and therefore should not be used by the asbestos removal contractor for pricing purposes. The asbestos removal contractors should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

The survey information should be used to help in the tendering process for removal of ACMs from the vessel before work starts. The survey report should be supplied by the client to designers and contractors who may be bidding for the work, so that the asbestos risks can be addressed. In this type of survey, where the asbestos is identified so that it can be removed (rather than to manage it), the survey does not normally assess the condition of the asbestos, other than to indicate areas of damage or where additional asbestos debris may be present. However, where the asbestos removal may not take place for some time, the ACMs' condition will need to be assessed and the materials managed

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SUMMARY

Following a request made by Mr. Eamon Hanlon (Marlet Property Group), we have produced this Refurbishment / Demolition Survey report of the Former Uniphar Site, Belgard Road, Tallaght, Dublin 24 with the aim of finding asbestos containing materials (ACMs) within the scope of the asbestos survey.

The scope of the asbestos survey was confined to all accessible areas of the Former Uniphar Site which is due for demolition works in the near future.

Following the asbestos survey of the Former Uniphar Site, the following asbestos containing materials were detected:

Industrial Building

- Asbestos containing floor tile and bitumen adhesive was identified intermittently on the ground, 1st and 2nd floor of the office block area (400 m² approx.)
- Asbestos containing rope was identified on the two boiler units in the 2nd floor plant room
- Compressed asbestos fibre (CAF) gaskets were identified between pipe work flanges in the 2nd floor plant room

Office Building

- Asbestos containing floor tile and bitumen adhesive was identified in the fire escape stairwell and also in the ground floor stationary room (50 m² approx.)
- Compressed asbestos fibre (CAF) gaskets were identified on pipework in the ground floor plant room

Generator Building

- Compressed asbestos fibre (CAF) gaskets were identified on pipework and on the generator pipe work in the generator building

See Appendix C & F for more details

INTRODUCTION

Background

Asbestos has been used extensively in the building industry for over one hundred years and has proved to be an excellent product for a variety of uses, having many qualities such as insulation, fire and chemical resistance to name a few. Its suitability across a wide range of uses and its relatively cheap cost made it very popular, with over 3,000 different asbestos products having been recorded.

The use of asbestos containing materials (ACM's) was most prevalent between the 1950's and 1970's when it provided an economic, easy to use and versatile material. Unfortunately, given the constitution and make up of asbestos it can give rise to microscopic airborne fibres being released into the working environment. The fibres have carcinogenic properties caused by inhalation of the fibres which can get lodged in the lining of the lungs causing disease and death.

Scope & Purpose

Atlas Limited Partnership has commissioned Phoenix Environmental Safety Ltd. to undertake an asbestos survey of the Former Uniphar Site, Belgard Road, Tallaght, Dublin 24. The aim of the survey was to locate and identify the presence of asbestos containing materials (ACM's) or suspected ACM's within the scope of the survey. This report provides a record and assessment of the extent and characteristics of ACM's and is based on information made available on the 6th September 2017.

This particular survey comprised of a Refurbishment / Demolition Survey, carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006, the Health and Safety Executive's (UK) guidance document HSG 264 (Asbestos: The Survey Guide) and HSG 227 (A Comprehensive Guide to managing Asbestos in Premises).

This means that:

- As far as reasonably practicable, locate and describe all ACM's in all reasonably accessible areas within the scope of the survey
- A sampling programme is undertaken to identify possible ACM's and estimates of the volumes and the surface areas of ACM made
- A record of the condition of the ACM's or where additional asbestos debris may be expected to be present is produced

Refurbishment / Demolition Surveys (formerly type 3 surveys)

This type of survey is necessary prior to any refurbishment (including "minor") or demolition work being carried out. These "refurbishment / demolition" surveys will be much more intrusive and destructive compared with management surveys as their intention is to locate all the ACMs so that they can be removed before the refurbishment or demolition takes place. Refurbishment/demolition surveys are required as necessary when the needs or use of the building changes and the fabric of the building will be disturbed or complex fixed plant and equipment are to be dismantled.

The purpose of the report is to:

- Enable the client to take appropriate precautions so that people who work at the Former Uniphar Site during the forthcoming demolition works are not exposed to asbestos-related health risks
- Provide information to assist the client in developing and implementing an action plan before any refurbishment works or demolition is carried out

Presentation of Findings

Data Sheets

A series of data sheets have been prepared to provide assessments and recommendations for each of the locations where samples were taken. These data sheets are presented in Appendix C.

Figures

The schematic diagrams presented in Appendix F at the rear of this document shows the locations of all of the asbestos containing materials detected during the asbestos survey.

Caveats

All reasonable steps have been taken to ensure that the contents and findings of this report are true and accurate. Though as stated below, further undetected ACM's may still be present within the premises. The client should therefore be aware of his responsibilities for identifying, locating, removing and/or managing all ACM's within the premises, and for notifying the appropriate authorities where necessary.

Refurbishment / Demolition Surveys

This type of survey employs the use of destructive sampling techniques of an unfamiliar site. Although every effort is made to locate all asbestos containing materials, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works.

APPENDIX A

ASBESTOS CONTAINING MATERIALS IN BUILDINGS

Sprayed coatings applied in Ireland were typically a mixture of hydrated asbestos cement containing up to 85% asbestos, mainly amosite but crocidolite and mixtures have been used. Primarily used for anti-condensation and acoustic control and fire protection to structural steelwork. It is a friable material but if in a good condition and unlikely to be disturbed presents no immediate danger, however it is likely to release fibres, if disturbed especially during repair and maintenance work. As it ages the binding medium of sprayed asbestos may degrade with the consequent release of more fibres.

Thermal insulation to boilers, vessels, pipe work, valves, pumps etc also known as hand applied lagging. Lagging may have a protective covering of cloth, tape, paper, metal or a surface coating of cement. All types of asbestos may be found in lagging and the content can vary between 15 and 85% asbestos with the protective papers being up to 100% chrysotile. The likelihood of fibre release depends upon its composition, friability and state of repair, but it is particularly susceptible to damage and disturbance through maintenance work or the action of water leaks.

Asbestos insulating boards usually contain between 16 to 40% amosite, although boards may be found to contain other types of asbestos and in other quantities. Insulating boards were developed in the 1950s to provide an economical, lightweight, fire resisting insulating material. As insulation board is semi-compressed it is more likely to release fibres as a result of damage or abrasion. Work on asbestos insulation board can give rise to high levels of asbestos fibre.

Asbestos cement products as in roofing sheets, wall cladding, permanent shuttering, flue, rain water and vent pipes generally contain 10 to 15% of asbestos fibre bounded in Portland cement, some flexible boards contain a small proportion of cellulose. All three types of asbestos have been used in the manufacture of asbestos cement. The asbestos fibres in asbestos cement are usually firmly bound in the cement matrix and will be released only if the material is mechanically damaged or as it deteriorates with age.

Ropes and yarns are usually high in asbestos content, approaching 100% and all three types of asbestos have been used in their manufacture. They were used as in the pipe lagging process and in pipe jointing and also for packing materials as in heat/fire resistant boiler, oven and flue sealing or anywhere thermal or fire protection was required. The risk of fibre release depends upon the structure of the material; bonded gasket material is unlikely to release asbestos but an unbonded woven material may give rise to high fibre release especially if when damaged or frayed.

Cloth thermal insulation and lagging, including fire resistant blankets, mattresses and protective curtains, gloves, aprons, overalls etc. All types of asbestos have been used in the manufacture but since the mid 60's the majority has been chrysotile, the content of which can be up to 100 %.

Millboard, CAF Gaskets and paper products usually have an asbestos content approaching 100% with all three types of asbestos being used in their manufacture. They were used for insulation of electrical equipment and for thermal insulation. Asbestos paper has been used as a laminate for fireproofing to various fibre panels. These materials are on some occasions not well bonded and will release asbestos fibres if subject to abrasion and wear.

Bitumen felts and coatings may contain asbestos either bound in the bitumen matrix or as an asbestos paper liner. These materials are not likely to present a hazard during normal installation or use, but should be removed and disposed of in compliance with any regulation applicable.

Thermoplastic floor tiles can contain up to 25% asbestos usually chrysotile, PVC vinyl floor tiles and unbacked PVC flooring normally 7-10% chrysotile and asbestos paper backed PVC flooring the paper backing may contain up to 100% chrysotile. Fibre release is not normally an issue but may occur when the material is cut or subjected to abrasion.

Textured coatings. Decorative coatings on walls and ceilings usually contain 3-5% chrysotile. Fibre release may occur when subjected to abrasion.

Mastics, sealants, putties and adhesives may contain small amounts of asbestos. The only possible risk is from sanding of hardened material when appropriate precautions should be taken.

Reinforced plastic and resin composites, used for toilet cisterns, seats, banisters, window seals, lab bench tops, brakes and clutches in machines. The plastics usually contain 1-10% chrysotile and were used in for example car batteries to improve the acid resistance. Resins may contain between 20 and 50% amosite, but because of its composition fibre release is likely to be low.

APPENDIX B

RESULTS OF LABORATORY ANALYSIS

APPENDIX C

ASBESTOS DATA SHEETS



Former Uniphar Site, Belgard Road, Tallaght, Dublin 24



Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Industrial Building
Location	Ground, 1 st & 2 nd floors
Extent/ Amount	400 m ² approx.

Survey Date	6.9.2017	Sample No.	BS 152409
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	Floor tile & bitumen adhesive	Normal occupant activity	N/A
Extent of damage	Medium damage	Likelihood of disturbance	N/A
Surface treatment	Composite material	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
	Material assessment score N/A	TOTAL SCORE: N/A	Priority assessment score N/A

CONCLUSIONS AND RECOMMENDATIONS

The floor tile and bitumen adhesive found on the ground, first and second floor in the office area of the Industrial Building contains Chrysotile (white) asbestos fibers. Thermoplastic floor tiles can contain up to 25% asbestos fibres, usually Chrysotile. Bitumen adhesives contain a small quantity of asbestos fibres

The asbestos floor tiles and bitumen adhesive should be removed by an asbestos removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

DETAIL OF THE ASBESTOS CONTAINING FLOOR TILES & BITUMEN ADHESIVE



Floor tiles in the office areas of the industrial unit



Floor tile identified in the office areas of the industrial unit

Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Industrial Building
Location	2 nd floor plant room
Extent/ Amount	Two boiler units

Survey Date	6.9.2017	Sample No.	BS 152412
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	Rope	Normal occupant activity	N/A
Extent of damage	Medium	Likelihood of disturbance	N/A
Surface treatment	None	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
Material assessment score N/A		TOTAL SCORE: N/A	
		Priority assessment score N/A	

CONCLUSIONS AND RECOMMENDATIONS

The rope seals found in the boiler units in the 2nd floor plant room in the Industrial Unit contain Chrysotile (white) asbestos fibres. Asbestos rope seals contain up to 100% asbestos fibres

The asbestos rope seals should be removed by an removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Industrial Building
Location	2 nd floor plant room
Extent/ Amount	One per flange

Survey Date	6.9.2017	Sample No.	BS 152410
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	CAF Gasket	Normal occupant activity	N/A
Extent of damage	Medium	Likelihood of disturbance	N/A
Surface treatment	None	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
Material assessment score N/A		TOTAL SCORE: N/A	
		Priority assessment score N/A	

CONCLUSIONS AND RECOMMENDATIONS

The Compressed Asbestos Fibre (CAF) Gaskets found between the pipe work flanges throughout the industrial unit contain Chrysotile (white) asbestos fibers. CAF gaskets contain almost 100% asbestos fibres, with a small amount of binder

The CAF gaskets should be removed by an asbestos removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Office Building
Location	Stairwell & Stationary Room
Extent/ Amount	50 m ² approx.

Survey Date	6.9.2017	Sample No.	BS 152402
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	Floor tile & bitumen adhesive	Normal occupant activity	N/A
Extent of damage	Medium damage	Likelihood of disturbance	N/A
Surface treatment	Composite material	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
	Material assessment score N/A	TOTAL SCORE: N/A	Priority assessment score N/A

CONCLUSIONS AND RECOMMENDATIONS

The floor tile and bitumen adhesive found in the stairwell and in the Stationary Room in the Office Building contains Chrysotile (white) asbestos fibers. Thermoplastic floor tiles can contain up to 25% asbestos fibres, usually Chrysotile. Bitumen adhesives contain a small quantity of asbestos fibres

The asbestos floor tiles and bitumen adhesive should be removed by an asbestos removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Office Building
Location	Ground floor plant room
Extent/ Amount	One per flange

Survey Date	6.9.2017	Sample No.	BS 152404
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	CAF Gasket	Normal occupant activity	N/A
Extent of damage	Medium	Likelihood of disturbance	N/A
Surface treatment	None	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
	Material assessment score N/A	TOTAL SCORE: N/A	Priority assessment score N/A

CONCLUSIONS AND RECOMMENDATIONS

The Compressed Asbestos Fibre (CAF) Gaskets found between the pipe work flanges in the plant room in the Office Building contain Chrysotile (white) asbestos fibers. CAF gaskets contain almost 100% asbestos fibres, with a small amount of binder

The CAF gaskets should be removed by an asbestos removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

Phoenix Environmental Safety Ltd.

ASBESTOS DATA SHEET



Created By	Jane Hickey
Date	11 th September 2017
Site Details	Former Uniphar Site, Belgard Road, Tallaght, Dublin 24
Client Name	Atlas Limited Partnership
Survey Type	Refurbishment / Demolition
Site Ref	PE 17-642
Building Ref.	Generator Building
Location	Generator & pipework
Extent/ Amount	One per flange

Survey Date	6.9.2017	Sample No.	BS 152414
Survey Company	Phoenix Environmental Safety Ltd.		
Testing Laboratory.	G&L Consultancy Ltd.		

	MATERIAL ASSESSMENT		PRIORITY ASSESSMENT
Product type	CAF Gasket	Normal occupant activity	N/A
Extent of damage	Medium	Likelihood of disturbance	N/A
Surface treatment	None	Human exposure potential	N/A
Asbestos type	Chrysotile	Maintenance activity	N/A
Material assessment score N/A		TOTAL SCORE: N/A	
		Priority assessment score N/A	

CONCLUSIONS AND RECOMMENDATIONS

The Compressed Asbestos Fibre (CAF) Gaskets found between the pipe work flanges and generator flanges in the Generator Building contain Chrysotile (white) asbestos fibers. CAF gaskets contain almost 100% asbestos fibres, with a small amount of binder

The CAF gaskets should be removed by an asbestos removal contractor and disposed of as asbestos waste before the demolition works begin

See Appendix F for more details

All asbestos removal work must be carried out in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010

APPENDIX D

NON ASBESTOS CONTAINING MATERIALS



Metal cladding. No Asbestos Containing Materials (ACM's) detected



Ceiling tiles. No ACM's detected

NON ASBESTOS CONTAINING MATERIALS



Fiberglass pipework insulation. No ACM's detected



Wall panels. No ACM's detected

NON ASBESTOS CONTAINING MATERIALS



Water tank. No ACM's detected



Telecoms fire stopping. No ACM's detected

NON ASBESTOS CONTAINING MATERIALS



Step nosings. No ACM's detected



Warehouse floors. No ACM's detected

APPENDIX E

NON ACCESSIBLE LOCATIONS

- No inspection of live electrical or mechanical plant was carried out
- The security hut was locked and non accessible during the asbestos survey
- The small building / shed between the industrial building and the Belgard House Site was not accessible
- No inspection of any areas requiring specialist access equipment other than telescopic ladder was carried out. The roof access for the industrial building was not safe to use and the roof was not surveyed
- All contractors working on the site should always remain vigilant to the possibility that concealed asbestos containing materials may be present on site. If any suspect asbestos containing materials are uncovered during the course of the work, works must stop in that area and the suspect material should be sampled and analysed immediately for the presence of asbestos

APPENDIX F

FLOOR PLANS & LOCATION OF ASBESTOS CONTAINING MATERIALS

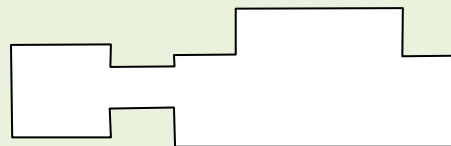
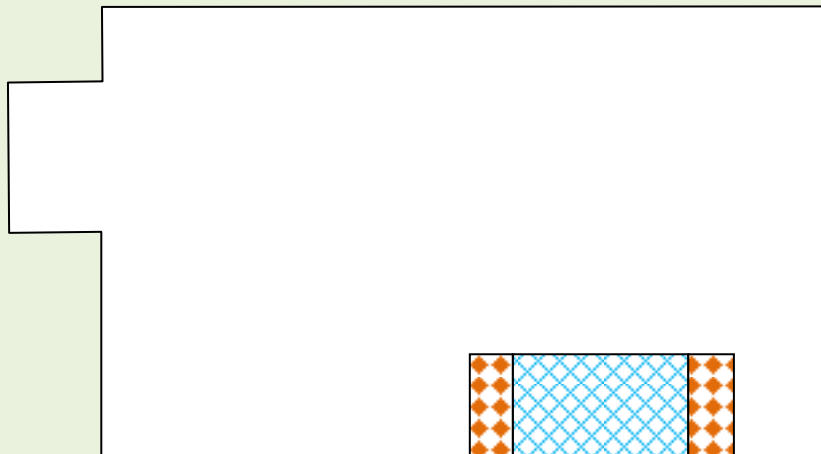


Former Uniphar Site, Belgard Road, Tallaght, Dublin 24

Schematic diagram only
Not to scale
11th September 2017

Former Uniphar Site,
Belgard Road,
Tallaght, Dublin 24

2ND FLOOR PLAN



Areas where asbestos containing floor tile & bitumen adhesive was identified (intermittently)



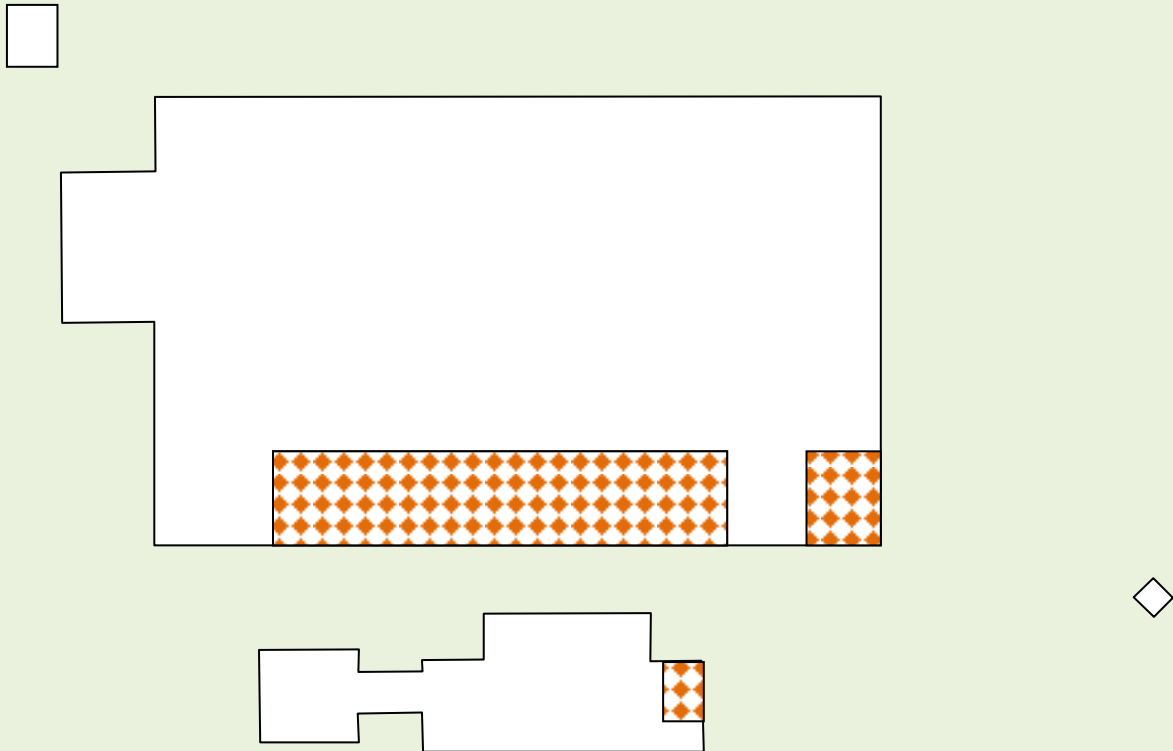
Areas where the presence of asbestos containing rope and CAF Gaskets were identified

Note: CAF gaskets were identified throughout the site

Schematic diagram only
Not to scale
11th September 2017

Former Uniphar Site,
Belgard Road,
Tallaght, Dublin 24

1ST FLOOR PLAN



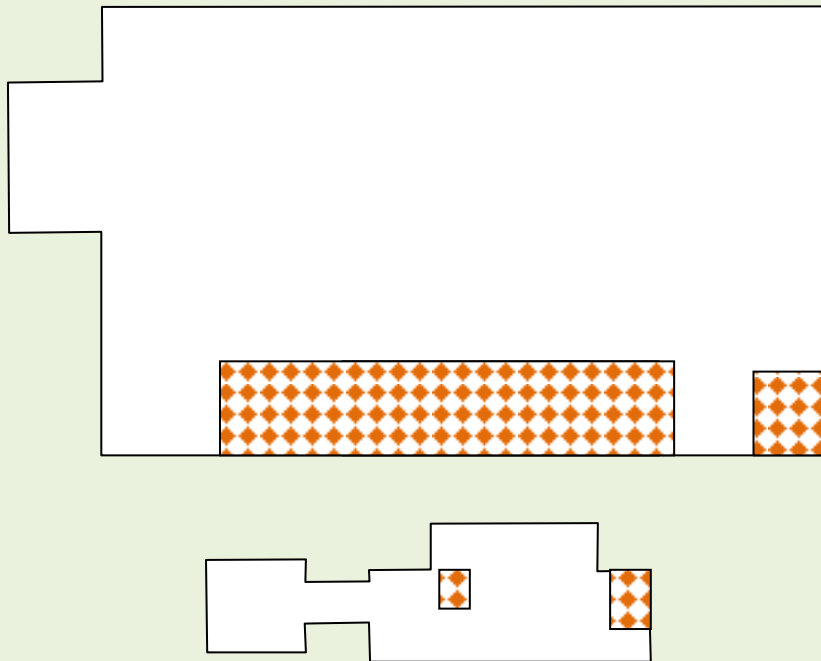
Areas where asbestos containing floor tile & bitumen adhesive was identified (intermittently)

Note: CAF gaskets were identified throughout the site

Schematic diagram only
Not to scale
11th September 2017

Former Uniphar Site,
Belgard Road,
Tallaght, Dublin 24

GROUND FLOOR PLAN



Areas where asbestos containing floor tile & bitumen adhesive was identified (intermittently)



Areas where the presence of CAF Gaskets were identified

Note: CAF gaskets were identified throughout the site