Names and Addresses

Client Name:
Dublin Central GP Ltd

Contact:
Phone:

Site Full Name:
No. 24/25 Moore Street
& 14 Moore Lane
Dublin 1

Instructing Party:
Certo Management Services

Contact: **Peter McIlhagger**
Phone:

Report Author:
About Safety Limited
24 Oceancrest
Arklow
Co. Wicklow

Contact: **John Kelleher**
Phone: **086 2208488**

Asbestos Surveyor: John Kelleher

British Occupational Hygiene Society (BOHS) Asbestos Proficiency Certification

S301:	Asbestos and other Fibres
P401:	Identification of Asbestos in Bulk Samples (PLM)
P402:	Building Surveys and Bulk Sampling for Asbestos
P403:	Asbestos Fibre Counting
P404:	Air Sampling and Clearance Testing of Asbestos
P405:	Management of Asbestos in Buildings (Safe Removal & Disposal)

iosh Chartered Safety and Health Practitioner

Introduction

About Safety Ltd. was instructed to carry out a Refurbishment and Demolition Asbestos Survey of the above property. The survey and sampling was carried out taking cognizance of the requirements of the Health and Safety Executive (UK) document, *HSG 264*, *Asbestos: The Survey Guide.*

Objectives

The objectives of this survey were to:

To carry out a survey to ascertain the presence of asbestos based materials.
To carry out a survey to locate and describe, as far as reasonably practicable, all asbestos containing materials prior to refurbishment/demolition.
To gain access to all areas, as necessary, to determine the extent of any asbestos that may be present.
To sample and estimate the extent and volume of any asbestos materials that may be present.
To generate asbestos material assessments where the period between the survey and event is significant i.e. more that 3 months.
To produce a report identifying areas containing asbestos to be used as a basis for tendering their removal.
To instigate asbestos removal works prior to refurbishment/demolition.

NB: The extent of asbestos containing materials if identified in this report are only approximate and should not be relied upon as a basis for tendering removal works. Contractors tendering works are expected to satisfy themselves by site visit and measurement the exact nature and extent of any works which is proposed.

Scope of Works & Site Description

General Information	*Scope of Works:*	**Proposed demolition**
	Structural Details:	**3 storey building of solid concrete construction with pitched roof.**
	Date of Construction:	**Circa 1980's.**
External Aspects:	*Roofs:*	**Man made mineral fibre slates to roof.**
Internal Aspects:	*Walls*	**Concrete block**
	Ceilings	**Plasterboard**
	Floors	**Concrete with ceramic tiles and carpet generally.**
Services:	*Heating Systems:*	
Reservations:	*Access restrictions:*	**The main roof was not accessed. Miscellaneous store rooms were not accessible.**

Survey Limitations

All areas accessed for proposed refurbishment works were subjected to a survey taking cognisance of the requirements of HSG 264, Asbestos: The Survey Guide. The investigation consisted of an inspection of each room and area to be impacted by the works.
No report has been made on any concealed spaces, which may exist within the fabric of the building where the extent and presence of these is not evident due to inaccessibility, lack of building drawings or insufficient knowledge of the structure of the building at the time of the survey.

Inaccessible Areas: Electrical equipment such as, boiler units, water heaters, storage heaters, fuse or switch boards. Within floor or wall structures, behind wall or ceiling cladding or within blocked up chimneys. Within internal areas of fire doors unless asbestos observed from keyhole or other damaged areas. Care should always be exercised when working on any electrical equipment in particular the older styles as asbestos-containing materials may be present.

Asbestos Refurbishment & Demolition Survey: Definition

A refurbishment and demolition survey is needed before any refurbishment or demolition works is carried out. This type of survey is used to locate and describe, as far as reasonably practicable, all ACM's in the area where the refurbishment works will take place or in the whole building if demolition is planned. The survey will be fully intrusive and involve destructive inspection, as necessary, to gain access to all areas, including those that may be difficult to reach. A refurbishment and demolition survey may also be required in other circumstances, e.g. when more intrusive and maintenance and repair work will be carried out or for plant removal and dismantling.
Where the refurbishment or demolition works may not take place for a significant period after the survey (e.g. three months), then the information required for a management survey should be obtained.

Asbestos Contaminated Soils (ACS)

The first point of contact with soil or ground contaminated with asbestos will be during site investigations and exploratory ground works. This may be defined as asbestos operative related work and applies where there is a potential for sporadic or low intensity exposure. People directly involved in these preliminary works, geotechnical engineers and ground workers, should receive formal training enabling them to work safely where asbestos could be present in the ground as a consequence of legacy use issues with the land. In principle, the general tiered approach to the assessment and management of potential risks posed by ACS is the same as that for any other contaminant. However, the unique nature of asbestos means that different methods of analysis, exposure estimation and risk estimation are required. Importantly, soil and air analysis methods need to be more detailed than those currently and commonly used to demonstrate compliance with the Asbestos Regulations.

Material Assessment

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Material Assessment Algorithm

In the material assessment process, the main factors influencing fibre release are given a score which can then be added together to obtain a material assessment rating. The four main parameters which determine the amount of fibre released from an ACM when subject to disturbance are:

- **Product Type**
- **Extent of damage or deterioration**
- **Surface Treatment; and**
- **Asbestos type**

Each parameter is scored between 1 and 3. A score of 1 equivalent to a low potential for fibre release, 2 = medium and 3 = high. Two parameters can also be given a nil score (equivalent to a very low potential for fibre release). The value assigned to each of the four parameters is added together to give a total score of between 2 and 12. Presumed or strongly presumed ACM's are scored as Crocidolite (i.e. score = 3) unless there is strong evidence to show otherwise.

Materials with assessment scores of 10 or more are rated as having a high potential to release fibres, if disturbed. Scores of between 7 and 9 are regarded as having a medium potential, and between 5 and 6 a low potential. Scores of 4 or less have a very low potential to release fibres.

Analytical Techniques

Asbestos Bulk Sample Analysis is conducted by using Polarised Light and Dispersion Staining Techniques. Dispersion Staining is used to describe the colour effects produced when a transparent colourless particle or fibre is immersed in a liquid having a refractive index near to that of the particle or fibre, and is viewed under a microscope using transmitted white light (based on HSE Publication, HSG 248).

Samples were returned to About Safety Ltd. Laboratory for Analysis. Photographs were taken at all of the sample locations (unless otherwise stated).
Materials of a similar type were only occasionally sampled and it was assumed that other materials visually inspected to where the sample was taken, were of a similar composition.
Each area was viewed for suspect materials thought or known to contain asbestos and samples taken where it was considered necessary.

General Caveat

This report is based on a Refurbishment & Demolition survey of an occupied building.

During the course of the survey all reasonable efforts were made to identify the physical presence of materials containing asbestos. It is known that asbestos materials are frequently concealed within the fabric of buildings or within sealed building voids so that it is not possible to regard the findings of any survey as being definite. It must remain a possibility that asbestos containing materials may be found during demolition activities. For reasons set out in this report, the results cannot give an assurance that all asbestos materials have been found and must not be thought to do so.

It should be noted that the term "No visible asbestos containing materials identified" was used in retail and other parts of properties which were occupied or partially occupied during the inspection. It must remain a possibility that asbestos containing materials may be entombed under existing floors, above ceilings or behind walls, fixtures and fittings. Therefore, any future works in these areas should be preceded by an invasive investigation.

This report has been written with reference to the various Guidance Notes etc, issued, and current at the date of this report and describes circumstances at the site on the date the survey took place.

Specific Notes

Legislation and Codes of Practice

The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 to 2010, apply to work where there is or may be asbestos fibres present. These regulations apply in particular to any person or employer working with or removing asbestos.

In addition, Safety, Health and Welfare at Work (Construction) Regulations 2013 (SI 291 of 2013) also apply to any building, installation, repair, demolition and asbestos removal work.

Information about working with material containing asbestos cement is containing in Health and Safety Authority's document "Asbestos-containing materials (ACM's) in Workplaces – Practical Guidelines on ACM Management and Abatement".

Provision of information

It is recommended that this report is brought to the attention of any person likely to be involved in refurbishment/demolition works.
Once asbestos materials have been identified it is essential that appropriate remedial measures be introduced prior to any structural alterations, refurbishment or demolition works commencing. All the asbestos removal works should be carried out by a competent asbestos removal contractor in accordance with Asbestos at Work Regulations 2006 to 2010. Statutory notification requirements of 14 days are required under the provisions of the Asbestos Regulations for certain works involving asbestos. The contractor appointed for removal works is responsible for deciding if a 14 day notification is required and for drawing up a plan of work for any removal works.

Competent Person

Person provided with adequate information, instruction and training for the task being undertaken and capable of demonstrating adequate and up-to-date understanding of the work being undertaken, the required control measures, the applicable legislation, and having sufficient practicable experience to apply these effectively. There are two categories of competent person, 1) competent asbestos operative and 2) specialist asbestos operative.

Appendix A – Asbestos Bulk Identification Report

ASBESTOS BULK IDENTIFICATION REPORT

Report on:
Identification of asbestos content of suspected asbestos containing materials (ACM's) sampled from the following location/site:

No. 24-25 Moore Street
Dublin 1

TEST RESULT

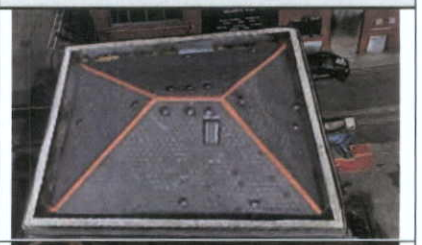
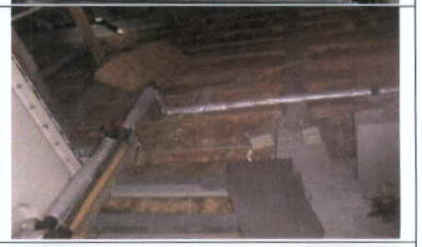
SAMPLE NO	LAB. REF.	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS TYPE IDENTIFIEID
S01	2029501	Attic	Slate on floor	NADIS
S02	2029502	Roof	Slate at Velux window	NADIS

Glossary

*NADIS = No Asbestos Detected in Sample Chrysotile (white asbestos) Amosite (brown asbestos) Crocidolite (blue asbestos)
VFT = Vinyl Floor Tile

Analyst: John Kelleher

Appendix B – Schedule of Survey Sheets

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
1	No. 24/25 Moore Street	Roof	2029501	Slates on main roof		NAD							
2	No. 24/25 Moore Street	Attic floor	202950	Slates on attic floor		NAD							
3	No. 24/25 Moore Street	Attic		MMMF insulation between joists		No visible asbestos containing materials identified.							
4	No. 24/25 Moore Street	Attic		Roof slate under Velux window		NAD							

Key
NAD = No asbestos detected
AIB = Asbestos insulation board
AC = Asbestos cement
VFT = vinyl floor tile
NQ = Not Quantified/Quantifiable
SM = Square Meters
LM = Linear Meters

Confirmed Asbestos
Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
5 - 6	Low
7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
5	No. 24/25 Moore Street	Ground floor Store room				No visible asbestos containing materials identified.							
6	No. 24/25 Moore Street	Ground floor Store room WC				No visible asbestos containing materials identified.							
7	No. 24/25 Moore Street	Ground floor Garage				No visible asbestos containing materials identified.							
8	No. 24/25 Moore Street	Ground floor Lobby		Ceramic tiles to floors		No visible asbestos containing materials identified.							

Key	Confirmed Asbestos
NAD = No asbestos detected AIB = Asbestos insulation board AC = Asbestos cement VFT = vinyl floor tile NQ = Not Quantified/Quantifiable SM = Square Meters LM = Linear Meters	Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
5 - 6	Low
7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
9	No. 24/25 Moore Street	Ground floor Hallway				No visible asbestos containing materials identified.							
10	No. 24/25 Moore Street	1st floor Canteen				No visible asbestos containing materials identified.							
11	No. 24/25 Moore Street	1st floor Canteen Kitchen				No visible asbestos containing materials identified.							
12	No. 24/25 Moore Street	1st floor Office				No visible asbestos containing materials identified.							

Key
NAD = No asbestos detected
AIB = Asbestos insulation board
AC = Asbestos cement
VFT = vinyl floor tile
NQ = Not Quantified/Quantifiable
SM = Square Meters
LM = Linear Meters

Confirmed Asbestos
Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
5 - 6	Low
7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
13	No. 24/25 Moore Street	1st floor Store rooms				No visible asbestos containing materials identified.							
14	No. 24/25 Moore Street	1st floor Ladies WC				No visible asbestos containing materials identified.							
15	No. 24/25 Moore Street	2nd floor Inspectors office				No visible asbestos containing materials identified.							
16	No. 24/25 Moore Street	2nd floor WC				No visible asbestos containing materials identified.							

Key
NAD = No asbestos detected
AIB = Asbestos insulation board
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VFT = vinyl floor tile
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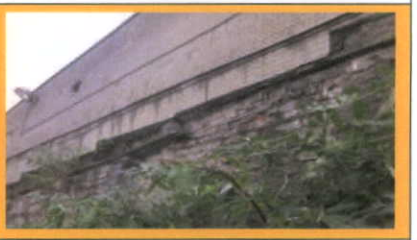
LM = Linear Meters

Confirmed Asbestos
Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
5 - 6	Low
7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
17	No. 24/25 Moore Street	2nd floor Showers				No visible asbestos containing materials identified.							
18	No. 24/25 Moore Street	2nd floor Locker room				No visible asbestos containing materials identified.							
19	14 Moore Lane Yard	Party wall		AC corrugated sheeting debris sections over old wall	Small amounts	Crocidolite and/or chrysotile	1	2	1	1	5	Removal and disposal as asbestos waste by a competent contractor prior to work likely to cause disturbance.	
20	14 Moore Lane Yard	Yard		Under carpark hardstand		AC sheeting and/or debris presumed under the hardstand.						Investigation by a competent contractor prior to work likely to cause disturbance.	

Key
NAD = No asbestos detected
AIB = Asbestos insulation board
AC = Asbestos cement
VFT = vinyl floor tile
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SM = Square Meters
LM = Linear Meters

Confirmed Asbestos
Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
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7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

ABOUT SAFETY LTD.

ASBESTOS | LEAD BASED PAINT | MOULD | SILICA DUST | HAZMAT
SURVEYING & TESTING
RISK MANAGEMENT | PROJECT MANAGEMENT

Refurbishment & Demolition Asbestos Survey

Location: *17 Henry Place*
Dublin 1

Client: *Dublin Central GP Ltd*

Instructing Party: *Certo Management Services*

Survey Date: *October, 2020*

Prepared by: *John Kelleher, About Safety Ltd*

About Safety Limited, 24 Ocean Crest, Arklow, Co. Wicklow Tel: 0402 91186 | E-mail: asbestos@aboutsafety.ie
About Safety Ltd. Registered in Ireland: No. 422820

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Executive Summary

A Refurbishment and Demolition Asbestos Survey was carried out of the above property. Below is a summary of the survey.

Ref:	Confirmed Asbestos [Requires removal and disposal as asbestos waste by a competent asbestos contractor prior to demolition.]
	No asbestos containing materials found.

Names and Addresses

Client Name:
Dublin Central GP Ltd

Contact:
Phone:

Instructing Party:
Certo Management Services

Contact: **Peter McIlhagger**
Phone:

Site Full Name:
No. 17 Henry Place
Dublin 1

Report Author:
About Safety Limited
24 Oceancrest
Arklow
Co. Wicklow

Contact: **John Kelleher**
Phone: **086 2208488**

Asbestos Surveyor: John Kelleher

British Occupational Hygiene Society (BOHS) Asbestos Proficiency Certification

S301:	Asbestos and other Fibres
P401:	Identification of Asbestos in Bulk Samples (PLM)
P402:	Building Surveys and Bulk Sampling for Asbestos
P403:	Asbestos Fibre Counting
P404:	Air Sampling and Clearance Testing of Asbestos
P405:	Management of Asbestos in Buildings (Safe Removal & Disposal)

iosh Chartered Safety and Health Practitioner

Introduction

About Safety Ltd. was instructed to carry out a Refurbishment and Demolition Asbestos Survey of the above property. The survey and sampling was carried out taking cognizance of the requirements of the Health and Safety Executive (UK) document, *HSG 264, Asbestos: The Survey Guide.*

Objectives

The objectives of this survey were to:

To carry out a survey to ascertain the presence of asbestos based materials.
To carry out a survey to locate and describe, as far as reasonably practicable, all asbestos containing materials prior to refurbishment/demolition.
To gain access to all areas, as necessary, to determine the extent of any asbestos that may be present.
To sample and estimate the extent and volume of any asbestos materials that may be present.
To generate asbestos material assessments where the period between the survey and event is significant i.e. more that 3 months.
To produce a report identifying areas containing asbestos to be used as a basis for tendering their removal.
To instigate asbestos removal works prior to refurbishment/demolition.

NB: The extent of asbestos containing materials if identified in this report are only approximate and should not be relied upon as a basis for tendering removal works. Contractors tendering works are expected to satisfy themselves by site visit and measurement the exact nature and extent of any works which is proposed.

Scope of Works & Site Description

General Information	*Scope of Works:*	**Proposed demolition**
	Structural Details:	**Single storey building with flat roof**
	Date of Construction:	
External Aspects:	*Roofs:*	**Galvanised sheeting**
Internal Aspects:	*Walls*	**Brick walls**
	Ceilings	**n/a**
	Floors	**Concrete floors**
Services:	*Heating Systems:*	**n/a**
Reservations:	*Access restrictions:*	**n/a**

Survey Limitations

All areas accessed for proposed refurbishment works were subjected to a survey taking cognisance of the requirements of HSG 264, Asbestos: The Survey Guide. The investigation consisted of an inspection of each room and area to be impacted by the works.
No report has been made on any concealed spaces, which may exist within the fabric of the building where the extent and presence of these is not evident due to inaccessibility, lack of building drawings or insufficient knowledge of the structure of the building at the time of the survey.

Inaccessible Areas: Electrical equipment such as, boiler units, water heaters, storage heaters, fuse or switch boards. Within floor or wall structures, behind wall or ceiling cladding or within blocked up chimneys. Within internal areas of fire doors unless asbestos observed from keyhole or other damaged areas. Care should always be exercised when working on any electrical equipment in particular the older styles as asbestos-containing materials may be present.

Asbestos Refurbishment & Demolition Survey: Definition

A refurbishment and demolition survey is needed before any refurbishment or demolition works is carried out. This type of survey is used to locate and describe, as far as reasonably practicable, all ACM's in the area where the refurbishment works will take place or in the whole building if demolition is planned. The survey will be fully intrusive and involve destructive inspection, as necessary, to gain access to all areas, including those that may be difficult to reach. A refurbishment and demolition survey may also be required in other circumstances, e.g. when more intrusive and maintenance and repair work will be carried out or for plant removal and dismantling.
Where the refurbishment or demolition works may not take place for a significant period after the survey (e.g. three months), then the information required for a management survey should be obtained.

Asbestos Contaminated Soils (ACS)

The first point of contact with soil or ground contaminated with asbestos will be during site

investigations and exploratory ground works. This may be defined as asbestos operative related work and applies where there is a potential for sporadic or low intensity exposure. People directly involved in these preliminary works, geotechnical engineers and ground workers, should receive formal training enabling them to work safely where asbestos could be present in the ground as a consequence of legacy use issues with the land. In principle, the general tiered approach to the assessment and management of potential risks posed by ACS is the same as that for any other contaminant. However, the unique nature of asbestos means that different methods of analysis, exposure estimation and risk estimation are required. Importantly, soil and air analysis methods need to be more detailed than those currently and commonly used to demonstrate compliance with the Asbestos Regulations.

Material Assessment

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

Material Assessment Algorithm

In the material assessment process, the main factors influencing fibre release are given a score which can then be added together to obtain a material assessment rating. The four main parameters which determine the amount of fibre released from an ACM when subject to disturbance are:

- Product Type
- Extent of damage or deterioration
- Surface Treatment; and
- Asbestos type

Each parameter is scored between 1 and 3. A score of 1 equivalent to a low potential for fibre release, 2 = medium and 3 = high. Two parameters can also be given a nil score (equivalent to a very low potential for fibre release). The value assigned to each of the four parameters is added together to give a total score of between 2 and 12. Presumed or strongly presumed ACM's are scored as Crocidolite (i.e. score = 3) unless there is strong evidence to show otherwise.

Materials with assessment scores of 10 or more are rated as having a high potential to release fibres, if disturbed. Scores of between 7 and 9 are regarded as having a medium potential, and between 5 and 6 a low potential. Scores of 4 or less have a very low potential to release fibres.

Analytical Techniques

Asbestos Bulk Sample Analysis is conducted by using Polarised Light and Dispersion Staining Techniques. Dispersion Staining is used to describe the colour effects produced when a transparent colourless particle or fibre is immersed in a liquid having a refractive index near to that of the particle or fibre, and is viewed under a microscope using transmitted white light (based on HSE Publication, HSG 248).

Samples were returned to About Safety Ltd. Laboratory for Analysis. Photographs were taken at all of the sample locations (unless otherwise stated).
Materials of a similar type were only occasionally sampled and it was assumed that other materials visually inspected to where the sample was taken, were of a similar composition.
Each area was viewed for suspect materials thought or known to contain asbestos and samples taken where it was considered necessary.

General Caveat

This report is based on a Refurbishment & Demolition survey of an un-occupied building.

During the course of the survey all reasonable efforts were made to identify the physical presence of materials containing asbestos. It is known that asbestos materials are frequently concealed within the fabric of buildings or within sealed building voids so that it is not possible to regard the findings of any survey as being definite. It must remain a possibility that asbestos containing materials may be found during demolition activities. For reasons set out in this report, the results cannot give an assurance that all asbestos materials have been found and must not be thought to do so.

It should be noted that the term "No visible asbestos containing materials identified" was used in retail and other parts of properties which were occupied or partially occupied during the inspection. It must remain a possibility that asbestos containing materials may be entombed under existing floors, above ceilings or behind walls, fixtures and fittings. Therefore, any future works in these areas should be preceded by an invasive investigation.

This report has been written with reference to the various Guidance Notes etc, issued, and current at the date of this report and describes circumstances at the site on the date the survey took place.

Specific Notes

Legislation and Codes of Practice

The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 to 2010, apply to work where there is or may be asbestos fibres present. These regulations apply in particular to any person or employer working with or removing asbestos.

In addition, Safety, Health and Welfare at Work (Construction) Regulations 2013 (SI 291 of 2013) also apply to any building, installation, repair, demolition and asbestos removal work.

Information about working with material containing asbestos cement is containing in Health and Safety Authority's document "Asbestos-containing materials (ACM's) in Workplaces – Practical Guidelines on ACM Management and Abatement".

Provision of information

It is recommended that this report is brought to the attention of any person likely to be involved in refurbishment/demolition works.
Once asbestos materials have been identified it is essential that appropriate remedial measures be introduced prior to any structural alterations, refurbishment or demolition works commencing. All the asbestos removal works should be carried out by a competent asbestos removal contractor in accordance with Asbestos at Work Regulations 2006 to 2010. Statutory notification requirements of 14 days are required under the provisions of the Asbestos Regulations for certain works involving asbestos. The contractor appointed for removal works is responsible for deciding if a 14 day notification is required and for drawing up a plan of work for any removal works.

Competent Person

Person provided with adequate information, instruction and training for the task being undertaken and capable of demonstrating adequate and up-to-date understanding of the work being undertaken, the required control measures, the applicable legislation, and having sufficient practicable experience to apply these effectively. There are two categories of competent person, 1) competent asbestos operative and 2) specialist asbestos operative.

Appendix A – Asbestos Bulk Identification Report

ASBESTOS BULK IDENTIFICATION REPORT

Report on:
Identification of asbestos content of suspected asbestos containing materials (ACM's) sampled from the following location/site:

No. 17 Henry Place
Dublin 1

TEST RESULT

SAMPLE NO	LAB. REF.	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS TYPE IDENTIFIEID
		No sample taken.		

Glossary

*NADIS = No Asbestos Detected in Sample
VFT = Vinyl Floor Tile

Chrysotile (white asbestos) Amosite (brown asbestos) Crocidolite (blue asbestos)

Analyst: John Kelleher

Appendix B – Schedule of Survey Sheets

Ref No.	Building or Area of Site	Location or Functional Space	Sample No.	Material Description, surface treatment and condition	Extent	Asbestos identified (presumed, strongly presumed or identified)	Product type	Condition	Surface treatment	Asbestos type	Material assessment score	Recommendations	Photo
1	No. 17 Henry Place	Roof		Galvanised sheeting		NAD							
2	No. 17 Henry Place	Wall		Flue from adjoining premises		NAD							
3	No. 17 Henry Place	Internal walls		Plasterboard to partitions		NAD							
4	No. 17 Henry Place	Internal walls		Plasterboard to partitions		NAD							

Key
NAD = No asbestos detected
AIB = Asbestos insulation board
AC = Asbestos cement
VFT = vinyl floor tile
NQ = Not Quantified/Quantifiable
SM = Square Meters
LM = Linear Meters

Confirmed Asbestos
Presumed/Strongly presumed ACM Or Non Accessed Area

Material Assessment Score	Risk
≤ 4	Very Low
5 - 6	Low
7 - 9	Medium
≥ 10	High

No condition assessment is normally necessary for refurbishment and demolition surveys but, where the period between survey and the event is significant, e.g. more than 3 months, then a material assessment should be conducted and interim management arrangements put in place.

APPENDIX 14.2 OPERATIONAL WASTE MANAGEMENT PLAN

awnconsulting

The Tecpro Building,
Clonshaugh Business & Technology Park,
Dublin 17, Ireland.

T: + 353 1 847 4220
F: + 353 1 847 4257
E: info@awnconsulting.com
W: www.awnconsulting.com

OPERATIONAL WASTE MANAGEMENT PLAN FOR PROPOSED RESIDENTIAL DEVELOPMENT

MASTERPLAN, SITE 3, SITE 4 AND SITE 5.

APPENDIX 14.2

Report Prepared For

Dublin Central GP Limited or shortened to DCGP Ltd.

Report Prepared By

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Our Reference

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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) on behalf of Dublin Central GP Limited or shortened to DCGP Ltd. The Dublin Central project is an expansive (c.2.3 Ha) and complex regeneration project. It needs to be delivered in stages to overcome site and project constraints. A site wide cumulative masterplan has been prepared by 'the Applicant' to set out the overall development vision for the Dublin Central project. 'The Masterplan' area encompasses almost entirely three urban blocks. The area is bounded generally by O'Connell Street Upper and Henry Place to the east, Henry Street to the south, Moore Street to the west, and O'Rahilly Parade and Parnell Street to the north. Moore Lane extends south from Parnell Street through the centre of the masterplan area, as far as its junction with Henry Place.

This OWMP has been prepared to ensure that the management of waste during the operational phase of the proposed development is undertaken in accordance with the current legal and industry standards including, the *Waste Management Act 1996 – 2011* as amended and associated Regulations [1], *Protection of the Environment Act 2003* as amended [2], *Litter Pollution Act 2003* as amended [3], the *'Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021'* [4] and Dublin City Council (DCC) *'Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws' 2018* [5]. In particular, this OWMP aims to provide a robust strategy for storing, handling, collection and transport of the wastes generated at site.

This OWMP aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. The OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). The plan estimates the type and quantity of waste to be generated from the proposed development during the operational phase and provides a strategy for managing the different waste streams.

At present, there are no specific guidelines in Ireland for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given to the requirements of national and regional waste policy, legislation and other guidelines.

2.0 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Government issued a policy statement in September 1998 titled as *'Changing Our Ways'* [6] which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill and finding alternative methods for managing waste. Amongst other things, Changing Our Ways stated a target of at least 35% recycling of municipal (i.e. household, commercial and non-process industrial) waste.

A further policy document *'Preventing and Recycling Waste – Delivering Change'* was published in 2002 [7]. This document proposed a number of programmes to increase recycling of waste and allow diversion from landfill. The need for waste minimisation at source was considered a priority.

This view was also supported by a review of sustainable development policy in Ireland and achievements to date, which was conducted in 2002, entitled *'Making Irelands Development Sustainable – Review, Assessment and Future Action'* [8]. This

document also stressed the need to break the link between economic growth and waste generation, again through waste minimisation and reuse of discarded material.

In order to establish the progress of the Government policy document *Changing Our Ways*, a review document was published in April 2004 entitled *'Taking Stock and Moving Forward'* [9]. Covering the period 1998 – 2003, the aim of this document was to assess progress to date with regard to waste management in Ireland, to consider developments since the policy framework and the local authority waste management plans were put in place, and to identify measures that could be undertaken to further support progress towards the objectives outlined in *Changing Our Ways*.

In particular, *Taking Stock and Moving Forward* noted a significant increase in the amount of waste being brought to local authority landfills. The report noted that one of the significant challenges in the coming years was the extension of the dry recyclable collection services.

In September 2020 the government released a new policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan *'A Waste Action Plan for a Circular Economy'* [10] was prepared in response to the 'European Green Deal' which sets a roadmap for a transition to a new economy, where climate and environmental challenges are turned into opportunities. Replacing the previous national waste management plan "A Resource Opportunity (2012).

It aims to fulfil the commitment in the Programme for Government to publish and start implementing a new National Waste Action Plan. It is intended that this new national waste policy will inform and give direction to waste planning and management in Ireland over the coming years. It will be followed later this year by an All of Government Circular Economy Strategy. The policy document shifts focus away from waste disposal and moves it back up the production chain. To support the policy, regulation is already being used (Circular Economy Legislative Package) or in the pipeline (Single Use Plastics Directive). The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection & Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

Since 1998, the Environmental Protection Agency (EPA) has produced periodic *'National Waste (Database) Reports'* [11] detailing among other things estimates for household and commercial (municipal) waste generation in Ireland and the level of recycling, recovery and disposal of these materials. The 2018 National Waste Statistics, which is the most recent study published, along with national waste statistics web resource (August 2020) reported the following key statistics for 2018:

- **Generated** – Ireland produced 2,912,353 t of municipal waste in 2018, this is almost a five percent increase since 2017. This means that each person living in Ireland generated 600kg of municipal waste in 2018;
- **Managed** – Waste collected and treated by the waste industry. In 2018, a total of 2,865,207 t of municipal waste was managed and treated;
- **Unmanaged** –Waste that is not collected or brought to a waste facility and is therefore likely to cause pollution in the environment because it is burned, buried or dumped. The EPA estimates that 47,546 t was unmanaged in 2018;
- **Recovered** – the amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In 2018, around 85% of municipal waste was recovered, this is an increase from 77% in 2017;
- **Recycled** – the waste broken down and used to make new items. Recycling also includes the breakdown of food and garden waste to make compost. The recycling rate in 2018 was 38%, which is down from 41% in 2017; and
- **Disposed** – Less than a quarter (15%) of municipal waste was landfilled in 2018, this is a decrease from 23% in 2017.

2.2 Regional Level

The proposed development is located in the Local Authority area of Dublin City Council (DCC).

The *EMR Waste Management Plan 2015 – 2021* is the regional waste management plan for the DCC area which was published in May 2015.

The regional plan sets out the following strategic targets for waste management in the region that are relevant to the proposed development:

- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130-150 per tonne of waste which includes a €75 per tonne landfill levy introduced under the *Waste Management (Landfill Levy) (Amendment) Regulations 2013.*

The *Dublin City Development Plan 2016 – 2022* [13] sets out a number of policies and objectives for Dublin City in line with the objectives of the regional waste management plan. The plan identifies a need to further reduce the role of landfilling in favour of higher value recovery options.

Waste policies and objectives with a particular relevance to this development are:

Policies:

- *SI19: To support the principles of good waste management and the implementation of best international practice in relation to waste management in order for Dublin city and the region to become self-reliant in terms of waste management.*
- *SI20: To prevent and minimise waste and to encourage and support material sorting and recycling.*
- *SI21: To minimise the amount of waste which cannot be prevented and ensure it is managed and treated without causing environmental pollution.*
- *SI22: To ensure that effect is given as far as possible to the "polluter pays" principle.*

Objectives:

- *SIO16: To require the provision of adequately-sized-recycling facilities in new commercial and large scale residential developments, where appropriate.*
- *SIO18: To implement the current Litter Management Plan through enforcement of the litter laws, street cleaning and education and awareness campaigns.*
- *SIO19: To implement the Eastern-Midlands Waste Management Plan 2015 - 2021 and achieve the plan targets and objectives.*

2.3 Legislative Requirements

The primary legislative instruments that govern waste management in Ireland and applicable to the project are:

- Waste Management Act 1996 (No. 10 of 1996) as amended 2001 (No. 36 of 2001), 2003 (No. 27 of 2003) and 2011 (No 20 of 2011). Sub-ordinate and associated legislation includes:

- European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) as amended
- Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820 of 2007) as amended
- Waste Management (Facility Permit and Registration) Regulation 2007 (S.I No. 821 of 2007) as amended
- Waste Management (Licensing) Regulations 2000 (S.I No. 185 of 2000) as amended
- European Union (Packaging) Regulations 2014 (S.I. No. 282 of 2014) as amended.
- Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997) as amended
- Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015)
- European Communities (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014)
- Waste Management (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended
- Waste Management (Food Waste) Regulations 2009 (S.I. No. 508 of 2009) as amended
- European Union (Household Food Waste and Bio-waste) Regulations 2015 (S.I. No. 191 of 2015)
- Waste Management (Hazardous Waste) Regulations 1998 (S.I. No. 163 of 1998) as amended
- Waste Management (Shipments of Waste) Regulations 2007 (S.I. No. 419 of 2007) as amended
- *European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994)*
- European Union (Properties of Waste Which Render it Hazardous) Regulations 2015 (S.I. No. 233 of 2015) as amended

- Environmental Protection Act 1992 (S.I. No. 7 of 1992) as amended;
- Litter Pollution Act 1997 (Act No. 12 of 1997) as amended and
- Planning and Development Act 2000 (S.I. No. 30 of 2000) as amended [13]

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996 - 2011* and subsequent Irish legislation, is the principle of *"Duty of Care"*. This implies that the waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.) As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final disposal area, waste contractors will be employed to physically transport waste to the final waste disposal site.

It is therefore imperative that the residents and the proposed building management company undertake on-site management of waste in accordance with all legal requirements and employ suitably permitted/licenced contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contactor handle, transport and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR)

or waste permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended or a waste or IE (Industrial Emissions Directive) licence granted by the EPA. The COR/permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

2.3.1 Dublin City Council Waste Bye-Laws

The DCC "Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018)" were bought into force in May 2019. These bye-laws repeal the previous '*Bye-Laws for the Storage, Presentation and Collection of Household and Commercial'*. The bye-Laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the DCC functional area. Key requirements under these bye-Laws of relevance to the proposed development include the following

- Kerbside waste presented for collection shall not be presented for collection earlier than 5.00 pm on the day immediately preceding the designated waste collection day;
- All containers used for the presentation of kerbside waste and any uncollected waste shall be removed from any roadway, footway, footpath or any other public place no later than 10:00am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law 2.3;
- Documentation, including receipts, is obtained and retained for a period of no less than one year to provide proof that any waste removed from the premises has been managed in a manner that conforms to these bye-laws, to the Waste Management Act and, where such legislation is applicable to that person, to the European Union (Household Food Waste and Bio-Waste) Regulations 2015; and
- Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

The full text of the Waste Bye-Laws is available from the DCC website.

2.4 Regional Waste Management Service Providers and Facilities

Various contractors offer waste collection services for the residential sector in the DCC region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and are all operated by the private sector. There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second facility in Poolbeg in Dublin.

There is a DCC North Strand Recycling Centre at Shamrock Terrace, North Strand located c.1.2km to the north east of the development, which can be utilised by the residents of the development for other household waste streams while a bottle and textile bank can be found c. 800m m to the south west at St Mary's church carpark.

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all waste/IE licenses issued are available from the EPA.

3.0 DESCRIPTION OF THE PROJECT

3.1 Location, Size and Scale of the Development

Master Plan

The Dublin Central project is an expansive (c.2.2 Ha) and complex regeneration project. It needs to be delivered in stages to overcome site and project constraints.

A site wide cumulative masterplan has been prepared by 'the Applicant' to set out the overall development vision for the Dublin Central project.

'The Masterplan' area encompasses almost entirely three urban blocks. The area is bounded generally by O'Connell Street Upper and Henry Place to the east, Henry Street to the south, Moore Street to the west, and O'Rahilly Parade and Parnell Street to the north. Moore Lane extends south from Parnell Street through the centre of the masterplan area, as far as its junction with Henry Place.

Site 3

Located in the south west corner of 'the Masterplan' area, Site 3 is bounded by Henry Street to the south, Moore Street to the west and Henry Place to the north and east. Site 3 includes Nos. 36 – 41 Henry Street, Nos. 1 – 9 Moore Street and Nos. 3 – 13 Henry Place.

Site 3 lies within the O'Connell Street ACA.

The proposed development generally comprises a mixed-use scheme accommodating a hotel, residential units and associated amenities, cultural, retail and café / restaurant uses in 2no. blocks ranging in height from 1 – 9 storeys over existing and new single storey basements. Provision of a new Passageway linking Henry Street with Henry Place / Moore Lane.

Site 4

Located in the west of 'the Masterplan' area, Site 4 is bounded by Moore Street to the west, Moore Lane to the east, Henry Place to the south and Site 5 to the north. Site 4 includes Nos. 10 – 13 and Nos. 18 – 21 Moore Street, Nos. 5 – 8 and Nos. 10 – 12 Moore Lane.

Site 4 excludes the site of the National Monument and its protection zone at Nos. 14-17 Moore Street (protected structures) and the open area to the rear at Nos. 8 & 9 Moore Lane.

The proposed development generally comprises a mixed-use scheme accommodating residential units and associated amenities, retail and café / restaurant uses, in two parts located north and south of the Nos. 14 – 17 Moore Street (National Monument / Protected Structures). Building height ranges from 1 – 3 storeys, including retained independent single storey basements. Provision of part of the proposed new public plaza and an archway onto the proposed new public plaza.

Site 5

Located in the west of 'the Masterplan' area, Site 5 is bounded by Moore Street to the west, Moore Lane to the east, O'Rahilly Parade to the north and Site 4 to the south. Site 5 includes Nos. 22 – 25 Moore Street, Nos. 1 – 8 O'Rahilly Parade and Nos. 13 – 15 Moore Lane.

The proposed development generally comprises a mixed-use scheme accommodating office and café / restaurant uses in a single building ranging in height from 2 – 6 storeys (top floor set back) over new single storey localised basement. Provision of a part of the new public plaza.

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the proposed development will include the following:

- Dry Mixed Recyclables (DMR) - includes waste paper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste generated from internal plants/flowers;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

In addition to the typical waste materials that will be generated at the development on a daily basis, there will be some additional waste types generated in small quantities which will need to be managed separately including:

- Green/garden waste may be generated from external landscaping;
- Batteries (both hazardous and non-hazardous);
- Waste electrical and electronic equipment (WEEE) (both hazardous and non-hazardous);
- Printer cartridges/toners;
- Chemicals (paints, adhesives, resins, detergents, etc.) ;
- Lightbulbs;
- Textiles (rags);
- Waste cooking oil (if any generated by the residents);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

Wastes should be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling and recovery of waste with diversion from landfill wherever possible.

3.3 European Waste Codes

In 1994, the *European Waste Catalogue* [14] and *Hazardous Waste List* [15] were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List* [16], which was a condensed version of the original two documents and their subsequent amendments. This document has recently been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*' [17] which became valid from the 1st June 2015. This waste classification system applies across the EU and is the basis for all national and international waste reporting, such as those associated with waste collection permits, COR's, permits and licences and EPA National Waste Database.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code (also referred to as European Waste Code or EWC) for typical waste materials expected to be generated during the operation of the proposed development are provided in Table 3.1 below

Waste Material	LoW/EWC Code
Paper and Cardboard	20 01 01
Plastics	20 01 39
Metals	20 01 40
Mixed Non-Recyclable Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats	20 01 25
Textiles	20 01 11
Batteries and Accumulators*	20 01 33* - 34
Printer Toner/Cartridges*	20 01 27* - 28
Green Waste	20 02 01
WEEE*	20 01 35*-36
Chemicals (solvents, pesticides, paints & adhesives, detergents, etc.) *	20 01 13*/19*/27*/28/29*30
Fluorescent tubes and other mercury containing waste*	20 01 21*
Bulky Wastes	20 03 07

** Individual waste type may contain hazardous materials*
Table 3.1 Typical Waste Types Generated and LoW Codes

4.0 ESTIMATED WASTE ARISINGS

A waste generation model (WGM) developed by AWN, has been used to predict waste types, weights and volumes arising from operations within the proposed development. The WGM incorporates building area and use and combines these with other data including Irish and US EPA waste generation rates.

The estimated quantum/volume of waste that will be generated from the residential units and hotel rooms has been determined based on the predicted occupancy of the units. While the floor area usage (m^2) has been used to estimate the waste arising from the office, retail and F&B units.

The estimated waste generation for the development for the main waste types is presented in Table 4.1, 4.2, 4.3 & 4.4.

Masterplan

Waste Type	Waste Volume (m^3/week)			
	Residential Units (combined)	Retail and F&B Units (combined)	Hotel Units (Combined)	Office Units (Combined)
Organic Waste	1.14	5.28	2.49	2.81
Dry Mixed Recyclables	8.06	27.23	5.08	22.06
Glass	0.22	2.88	3.52	0.51
Mixed Non-Recyclables	4.24	42.09	5.95	26.77
Confidential Paper	-	-	-	4.19
Cardboard (For Baling)	-	55.65	-	21.34
Plastic (For Baling)	-	18.97	-	18.22
Total	**13.66**	**152.10**	**14.55**	**95.90**

Table 4.1 *Estimated waste generation for the Masterplan Site Units*

Site 3

Waste Type	Waste Volume (m^3/week)		
	Residential Units (combined)	Retail and F&B Units (combined)	Hotel Unit
Organic Waste	0.98	0.58	1.04
Dry Mixed Recyclables	6.93	3.06	2.00
Glass	0.19	0.32	2.39
Mixed Non-Recyclables	3.64	4.48	2.02
Confidential Paper	-	-	-
Cardboard (For Baling)	-	6.43	-
Plastic (For Baling)	-	2.11	-
Total	**11.74**	**16.97**	**6.41**

Table 4.2 *Estimated waste generation for the Site 3 Units*

Site 4

Waste Type	Waste Volume (m^3/week)		
	Residential Units (combined)	Retail and F&B Units (combined)	Office Unit
Organic Waste	0.11	0.47	0.02
Dry Mixed Recyclables	0.80	1.83	0.16
Glass	0.02	0.24	0.01
Mixed Non-Recyclables	0.42	4.82	0.20
Confidential Paper	-	-	0.03
Cardboard (For Baling)	-	3.28	0.16
Plastic (For Baling)	-	1.72	0.14
Total	**1.35**	**12.36**	**0.73**

Table 4.3 *Estimated waste generation for the Site 4 Units*

Site 5

Waste Type	Waste Volume (m^3/week)	
	F&B Units (combined)	Office Units
Organic Waste	0.20	0.87
Dry Mixed Recyclables	1.29	4.06
Glass	0.11	0.09
Mixed Non-Recyclables	2.73	4.69
Confidential Paper	-	3.27
Cardboard (For Baling)	2.16	3.79
Plastic (For Baling)	0.69	3.70
Total	**4.33**	**20.46**

Table 4.4 *Estimated waste generation for the Site 5 Units*

5.0 WASTE STORAGE AND COLLECTION

This section provides information on how waste generated within the development will be stored and how the waste will be collected from the development. This has been prepared with due consideration of the proposed site layout as well as best

practice standards, local and national waste management requirements including those of DCC. In particular, consideration has been given to the following documents:

- BS 5906:2005 Waste Management in Buildings – Code of Practice,
- EMR Waste Management Plan 2015 – 2021;
- Dublin City Council Development Plan 2016 – 2022 (Appendix 10);
- DCC Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018); *and*
- DoEHLG, Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (Section 4.8-4.9) (2020) [19].

Dedicated communal Waste Storage Areas (WSA) have been allocated within the development design at basement and ground floor levels for the residential units and can be viewed in the drawings submitted with the application.

Masterplan

Dedicated shared Waste Storage Areas (WSA) have been allocated within the development design at ground floor level for the residential and commercial tenants and can be viewed in the drawings submitted with the application.

Commercial Waste

Using the estimated figures in Tables 4.1 it is anticipated that glass waste will be collected on a weekly basis. Organic, cardboard and plastic waste will be collected on a twice weekly basis, while MNR and DMR will be collected between two and three times per week.

Residential Waste

It is anticipated that DMR, MNR, glass and organic waste will be collected on a weekly basis.

Site 3

Commercial Waste

Using the estimated figures in Tables 4.2 it is anticipated that glass waste will be collected on a weekly basis, while DMR, MNR, organic, cardboard and plastic waste will be collected on a twice weekly basis.

Residential Waste

It is anticipated that DMR, MNR, glass and organic waste will be collected on a weekly basis.

Site 4

Commercial Waste

Using the estimated figures in Tables 4.3 it is anticipated that glass waste will be collected on a weekly basis, while DMR, MNR, organic, cardboard and plastic waste will be collected on a twice weekly basis.

Residential Waste

It is anticipated that DMR, MNR, glass and organic waste will be collected on a weekly basis.