

**CS CONSULTING
GROUP**
DUBLIN - LONDON - LIMERICK

CRONIN & SUTTON CONSULTING (part of the CS Consulting Group)
19-22 Dame Street, Dublin 2, D02 E267, Ireland

T | 353 1 5480863

E | info@cscsconsulting.ie

W | www.cscsconsulting.ie

Waste Management Statement for Demolition & Construction Spencer Place Residential Block 2, Spencer Dock, Dublin 1

Client: Spencer Place Development Company Limited

Job No. R043

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Limerick Office:

45 O'Connell Street
Limerick, V94 XE18
Ireland

T: 353 (0)61 594988
E: info@cscsconsulting.ie
W: www.cscsconsulting.ie

London Office:

45 Beech Street
London, EC2Y 8AD
UK

T: +44 (0) 207 070 3660
E: info@cscsconsultinguk.com
W: www.cscsconsultinguk.com

KP & Associates Consulting Engineers Ltd. T/A Cronin & Sutton Consulting
Directors: K. Cronin, D. Rehill, O. Sullivan, P. Sutton
Associate Directors: N. Barrett, R. Fitzmaurice, M. McEntee, L. McNamee Associates: C. Twomey, C. Barry
Registered Office: 1st Floor, 19-22 Dame Street, Dublin 2, D02 E267, Ireland | Company No. 505303





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WASTE MANAGEMENT STATEMENT FOR DEMOLITION & CONSTRUCTION

SPENCER PLACE RESIDENTIAL, BLOCK 2, SPENCER DOCK, DUBLIN 1

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1.0 INTRODUCTION

In conjunction with the multi-disciplinary Design Team, CS Consulting were commissioned by Spencer Place Development Company Limited, to input and coordinate a “Waste Management Statement for Demolition, Construction and Operation” to accompany a planning application for the redevelopment of the site at City Block 2, bound by Sheriff Street to the north, Mayor Street to the south and New Wapping Street to the east, Spencer Dock, Dublin 1

The purpose of this Waste Management Plan (WMP) is to ensure that waste generated during the construction phase and operations phase will be managed and disposed of in a way that ensures the provisions of the Waste Management Acts 1996 - 2013 and associated Regulations and the Waste Management Plan for the Dublin Region 2005 – 2010 are complied with. It will also ensure that optimum levels of waste reduction, re-use and recycling are achieved.

Development comprising of an amendment to permitted development Reg. Ref. DSDZ2896/18 and as amended by Reg. Ref. DSDZ4279/18 at Spencer Place North, City Block 2, Spencer Dock, Dublin 1. The proposed development seeks revisions to the permitted Block 1 and 2 to provide for an increase in the number of residential units from 349 no. to 464 no. apartment units and the change of use of the permitted aparthotel development to shared accommodation. The proposed development will increase the height of the permitted development) increasing the maximum height of Block 1 from 7 no. storeys (27.5 m) to a maximum height of 13 no. storeys (46.8m) and increasing the maximum height of Block 2 (27.5m) to 11 no. storeys (40.5m). The proposed development will also include the provision of a link bridge between Block 1 and Block 2 at 6th floor level, revised landscaping, the provision of communal open space,

revised under croft level, provision of roof terraces and all other associates site development works to facilitate the development.

A full description of the scheme is outlined in the Planning Report prepared by John Spain and Associates which accompanies this submission.

The site, of 1.26Ha, is bound by Sheriff Street to the north, Mayor Street to the south and New Wapping Street to the east.

The site also includes the existing operational North Lotts Pumping Station and its associated infrastructure – the development of the planning application involves building adjacent to, and over, the Pumping Station.

The site has an average topographical level of approximately 2.5mAOD (Malin Head). The site is located within the Strategic Development Zone (SDZ) for the North Lotts and Grand Canal Dock Planning Scheme 2014.

All associated and ancillary site development and landscaping works will be undertaken including provision of internal routes for pedestrians, hard and soft landscaping with integrated lighting and provision of communal open space for amenities as well as all other site excavation and development works above and below ground.

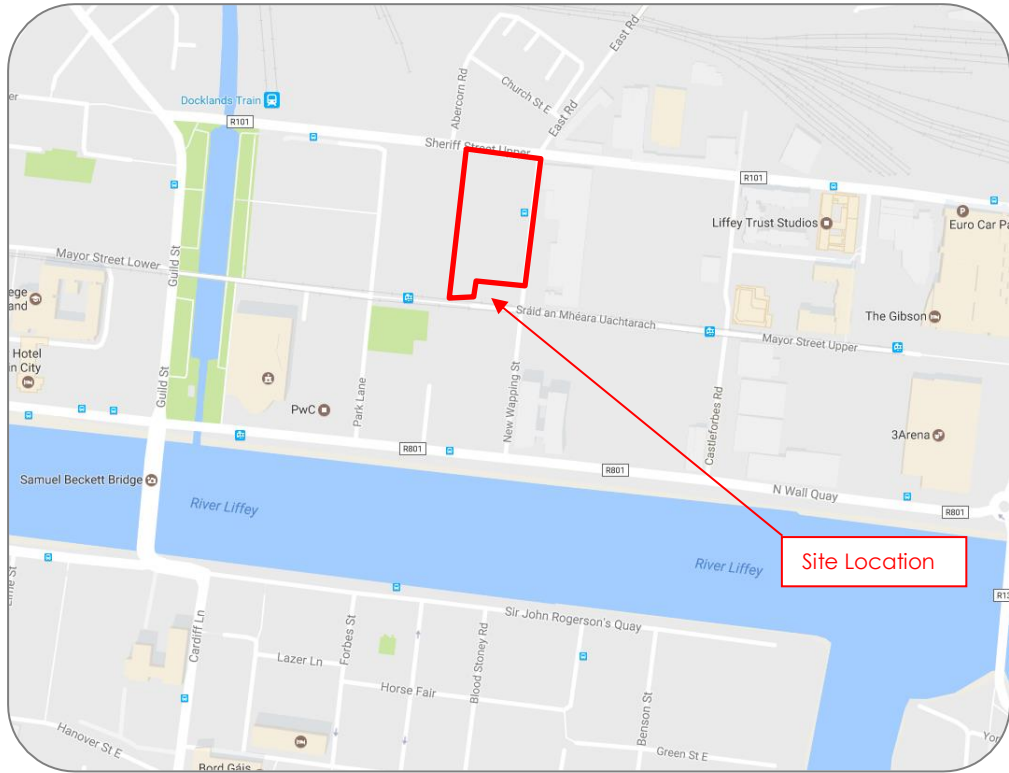
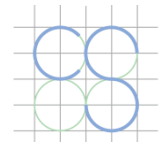
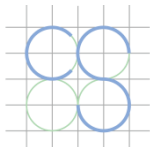


Figure 1– Site Location
(Image source: Google maps)



2.0 SCOPE OF WORKS

CS Consulting were commissioned by Spencer Place Development Company Ltd to prepare the following Waste Management Statement for the Construction and Operation to accompany a planning application for the development of the site at Spencer Place North, Block 2, Spencer Dock, Dublin 1.

3.0 GOVERNMENTAL POLICY

3.1 National Level

The publication, "Changing Our Ways", which identifies objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland, was issued by the Government in September 1998. The target for C&D waste in this Strategy was to recycle at least 50% of C&D waste by 2003, with an increase to at least 85% by 2013.

The 'Forum for the Construction Industry' which represents the waste sector of the industry, released a report titled "Recycling of Construction and Demolition Waste" concerning the development and implementation of a voluntary construction industry programme to meet the governments objectives for the recovery of construction and demolition waste. The National Construction and Demolition Waste Council (NCDWC) was launched in June 2002 and subsequently produced "Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects" in July 2006. There are thresholds set out in the Guidelines to determine whether a C&D WMP is required. The development requires a C&D WMP for new residential developments of 10 houses or more and new developments, including institutional, educational, health and other public facilities, with an aggregate floor area in excess of 1,250 m².

The Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion. The guidelines include the following:

- Predicted demolition & construction wastes and procedures to prevent, minimise, recycle and reuse wastes;
- Waste disposal/recycling of C&D wastes at the site;

- List of sequence of demolition operations to be followed;
- Provision of training for waste manager and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plan
- Details of consultation with relevant bodies, i.e. waste recycling companies, Dublin City Council, etc.

In 2002, the Construction Industry Federation (CIF) issued the "*Construction and Demolition Waste Management – a handbook for Contractors and Site Managers*".

Annually the Environmental Protection Agency (EPA) issue a "*National Waste (Database) Reports*" detailing, C&D waste generation and the level of recycling, recovery and disposal of this material, domestic and municipal waste rates etc.

The latest and most current policy document was published in July 2012 titled "*A Resource Opportunity*". The Policy Document stresses the environmental and economic benefits of better waste management, particularly in relation to waste prevention.

3.2 Regional Level

The Dublin Region first produced a Waste Management Plan in 1999, which encompasses the Local Authorities of Dublin City Council, South Dublin County Council, Dun Laoghaire Rathdown County Council and Fingal County Council. The Plan has been revised for the period 2005 – 2010 and is awaiting a further review.

One of the primary objectives of the existing Plan is to achieve more sustainable waste management practices in the C&D sector. The

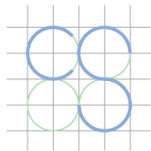
treatment/recycling rates for C&D waste adopted by the Dublin Region are currently around 83% (2011). This requires the following actions.

- The development company must employ best practice at the design, planning and construction stage to ensure waste prevention and recycling opportunities are identified and implemented.
- Waste Collectors are required to introduce source-separation of recyclables and introduce graduated charges to incentivize better site practices.
- Local Authorities will ensure the voluntary industry code is applied to development control, to regulate the collection and treatment of waste to meet the Plan objectives, and also work to develop markets for recycled materials.

3.3 Legislative Requirements

One of the guiding principles of European waste legislation, which has in turn been incorporated into the Waste Management Act 1996 (as amended by the Waste Management (Amendment) Act 2001) 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.) Following on from this is the concept of '*Polluter Pays*' whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect management of waste produced, including the actions of any contractors engaged (e.g.: for collection and transport of waste).

Waste contractors are typically engaged to transport waste off-site. Each contractor must comply with the provisions of the *Waste Management Act 1996* and associated Regulations. This includes the requirement that a contractor handle, transport and 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 the relevant 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 waste permit granted by the local authority under the Waste Management (Facility Permit & Registration) Regulations 2007 1 as amended or a waste license granted by the EPA. The permit/license held will specify the type and quantity of waste able to be received, stored, sorted, recycled and/or disposed of at the specified site.

4.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

4.1 Existing Site-Specific Information

The site, of 1.26Ha, is bound by Sheriff Street Upper, Park Lane, Mayor Street Upper and New Wapping Street, Dublin 1.

The site also includes the existing operational North Lotts Pumping Station and its associated infrastructure – the development of the planning application involves building adjacent to, and over, the Pumping Station.

The site has an average topographical level of approximately 2.5mAOD (Malin Head). The site is located within the Strategic Development Zone (SDZ) for the North Lotts and Grand Canal Dock Planning Scheme 2014.

The site is currently under construction under the permitted scheme.



Figure 2 – Indicative Site Layout
(Image source: Google Maps)

4.2 Proposed Development

Development comprising of an amendment to permitted development Reg. Ref. DSDZ2896/18 and as amended by Reg. Ref. DSDZ4279/18 at Spencer Place North, City Block 2, Spencer Dock, Dublin 1. The proposed

development seeks revisions to the permitted Block 1 and 2 to provide for an increase in the number of residential units from 349 no. to 471 no. apartment units and the change of use of the permitted aparthotel development to Co-Living to provide for 109 no. co-living units. The proposed development will increase the height of the permitted development) increasing the maximum height of Block 1 from 7 no. storeys (27.5 m) to a maximum height of 13 no. storeys (46.8m) and increasing the maximum height of Block 2 (27.5m) to 11 no. storeys (40.5m). The proposed development will also include the provision of a link bridge between Block 1 and Block 2 at 6th floor level, revised landscaping, the provision of communal open space, revised undercroft level, provision of roof terraces and all other associated site development works to facilitate the development.

A full description of the scheme is outlined in the Planning Report prepared by John Spain and Associates which accompanies this submission.

5.0 DEMOLITION WASTE GENERATED BY THE PROPOSED DEVELOPMENT

The typical type of waste can be summarised as;

- Soil and stones;
- Concrete (including blocks);
- Timber;
- Glass;
- Mixed Metals;
- Gypsum based materials;
- Tiles / Ceramics;
- Insulation Materials (asbestos free);
- Waste electrical and electronic equipment;
- Fixtures and fittings etc

5.1 Estimated Waste Arisings

The EPA issued the European Waste Catalogue in January 2002 and this system was used to classify all wastes and hazardous wastes into a consistent waste classification system across the EU. The EWC for typical waste materials to be expected to be generated during the demolition of the existing buildings are as follows;

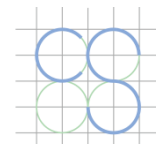


Table 1 – European Waste Catalogue

Waste Material	EWK Ref
Non-Hazardous	
Concrete, bricks, tiles, ceramics	17 01
Wood, glass and plastic	17 02
Bituminous mixtures, coal tar and tarred products	17 03
Metals (including their alloys)	17 04
Soil, stones and dredged spoil	17 05
Gypsum-based construction material	17 08
Hazardous	
Electrical and Electronic Components	16 02
Batteries	16 06
Wood Preservatives	03 02
Liquid Fuels	13 07
Soil and stones containing dangerous substances	17 05 03
Insulation materials containing asbestos	17 06 01
Other insulation materials consisting of or containing dangerous substances	17 06 03
Construction materials containing asbestos	17 06 05
Construction and demolition waste containing mercury	17 09 01
Construction and demolition waste containing PCBs	17 09 02
Other construction and demolition wastes containing dangerous substances	17 09 03

The proposal for an undercroft type of car-park is for the purpose of minimising volumes of excavated material. It is proposed to carry out cut

and fill works within the site to minimise the exportation of excavated material from site.

5.2 Mitigation Measures

A site-specific Construction and Development Waste Management Plan (C&D WMP) for the demolition and construction of the development will be employed to ensure effective waste management and recycling of waste generated at the site.

Mitigation measures proposed are summarised below:

- On-site segregation of all waste materials into appropriate categories including:
 - made ground, soil, subsoil, bedrock
 - concrete, bricks, tiles, ceramics, plasterboard
 - metals
 - dry recyclables e.g. cardboard, plastic, timber
- All waste materials will be stored in skips or other suitable receptacles in a designated area of the site.
- An asbestos survey has been completed in the demolished buildings.
- Wherever possible, left over materials (e.g. timber off cuts) and any suitable demolition materials shall be re-used on-site.
- Any potentially contaminated soil to be removed from site will be tested to confirm its contamination status and subsequent management requirements.

- All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams where appropriate facilities are currently not available.
- All waste leaving the site will be transported by suitable permitted contractors and taken to suitably licensed or permitted facilities.
- All waste leaving the site will be recorded and copies of relevant documentation maintained.

These mitigation measures will ensure the waste arising from the demolition and construction of the development is dealt with in compliance with the provisions of the Waste Management Act 1996 (as amended 2001), and associated Regulations, the Litter Act of 1997 and the Dublin Waste Management Plan (2005 - 2010), and achieve optimum levels of waste reduction, re-use and recycling.

6.0 CONSTRUCTION WASTE GENERATED BY THE PROPOSED DEVELOPMENT

General Construction and Demolition (C&D) waste generated during construction at a typical site includes the following:

- Concrete, bricks, tiles, and cement
- Wood
- Glass
- Plastics
- Bituminous mixtures, coal tar, and tarred products
- Metals (including their alloys)
- Soil and stones
- Insulation materials (possibly including asbestos-containing materials)
- Gypsum-based construction material
- Materials containing mercury
- PCB-containing materials (e.g. sealants, resin-based floorings, capacitors, etc.)
- Waste electrical and electronic equipment
- Oil wastes and waste of liquid fuels
- Batteries and accumulators
- Packaging (paper/cardboard, plastic, wood, metal, glass, textile, etc.)

6.1 Mitigation Measures

Mitigation measures proposed to manage impacts arising from waste generated during the construction of the proposed development are summarised below:

- On-site segregation of all waste materials into appropriate categories, including:
- top-soil, sub-soil, bedrock;
- concrete, bricks, tiles, ceramics, plasterboard;
- asphalt, tar, and tar products;
- metals;
- dry recyclables (e.g. cardboard, plastic, timber).
- All waste material will be stored in skips or other suitable receptacles in a designated waste storage area on the site.
- Wherever possible, left-over material (e.g. timber cut-offs) and any suitable demolition materials shall be reused on or off site.
- Uncontaminated excavated material (top-soil, sub-soil) will be reused on site in preference to the importation of clean fill, as soil to be reused or removed from site must be tested to confirm its contamination status and subsequent management requirements.
- All waste leaving the site will be transported by a suitably licensed/permitted contractor and taken to a licensed/permitted facility.
- All waste leaving the site will be recorded and copies of relevant documentation retained.

6.2 Predicted Impacts of the Proposed Development

Assuming all the proposed mitigation measures are implemented, the following impacts are expected to arise as a result of the proposed development.

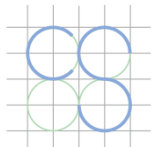
Relatively low volumes of waste materials will be generated during the construction of the proposed development, including the initial site clearance. Careful management of these, including segregation at source, will help to ensure maximum recycling, reuse and recovery is achieved, in accordance with current local and national waste targets. It is expected, however, that a certain amount of waste will still need to be disposed of at landfill.

Assuming appropriate facilities are provided, environmental impacts (e.g. litter, contamination of soil or water, etc.) arising from waste storage are expected to be minimal. Particular attention must be given to the appropriate management of demolition (and construction) waste containing contaminated or hazardous materials. The use of suitably licensed waste contractors will ensure compliance with relevant legal requirements and appropriate off-site management of waste.

In summary, with a high level of due diligence carried out at the site, it is envisaged that the environmental impact of the construction phase of the proposed development will be of small scale and short duration, with respect to waste management.

7.0 OPERATIONAL WASTE GENERATED BY THE PROPOSED DEVELOPMENT

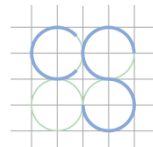
Please refer to separate Operational Waste Management Plan by AWN Consulting which accompanies this planning application.



8.0 CONCLUSION

The document outlines the principles of how the waste generated during the construction phase and operations phase will be managed and disposed of in a way that ensures the provisions of the *Waste Management Acts 1996 - 2013* and associated Regulations and the *Waste Management Plan for the Dublin Region 2005 – 2010* are complied with. It will also ensure that optimum levels of waste reduction, re-use and recycling are achieved.

Damien Byrne
For Cronin & Sutton Consulting



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