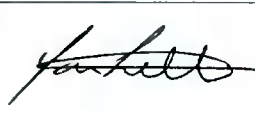
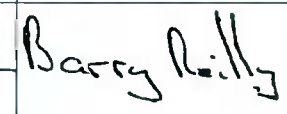
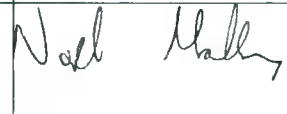


|                           |   |
|---------------------------|---|
| <b>Contract</b>           | <b>DUB 14&amp;15 MSFT Dublin, Ireland</b> |
| <b>Document Title</b>     | <b>Site Waste Management plan</b>         |
| <b>Document Reference</b> |   |



|                             |   |  |
|-----------------------------|---|--|
| <b>The Client</b>           |  <b>Microsoft</b>  | <b>Microsoft</b>                                   |
| <b>The Contractor/ PSCS</b> |    | <b>Winthrop Engineering &amp; Contracting Ltd.</b> |
| <b>Project Scope</b>        | <p>This document outlines the Winthrop Engineering &amp; Contracting Ltd. Waste management arrangements on the Microsoft DUB 14 Dublin, Ireland project. It details the typical waste management arrangements in place to facilitate the reduce, reuse, and recycle hierarchy of controls that should be in place to minimise the disposal of waste to landfill. It also details responsible persons on the project</p> |  |
| <b>Date</b>                 | <b>06<sup>h</sup> June 2021</b>   | <b>Status</b>                                      |
|                             |   | <b>Revision 1.0</b>                                |
|                             |   |  |

|                |  |                |
|----------------|--|----------------|
| Job title      | Microsoft DUB 14&15 Dublin Data Centre Project | Job number     |
|                |  | 1192           |
| Document title | Microsoft DUB 14&15 Dublin Data Centre Project | File reference |

|          |          |             |  |  |   |  |
|----------|----------|-------------|--|--|---|--|
| Revision | Date     | Filename    | Construction Stage- Waste Management Plan  |  |   |  |
| Rev 1    | 09.06.21 | Filename    | Construction Stage- Waste Management Plan  |  |   |  |
|          |          | Description | Construction Stage – Construction Waste Management plan prepared to comply with Local Authority Guidelines |  |   |  |
|          |          |             | Prepared by  | Checked by   | Approved by   |  |
|          |          | Name        | Jon Lillico.   | Barry Reilly   | Noel Molloy   |  |
|          |          | Signature   |                         |  |  |  |
| Rev 2    |          | Filename    |  |  |   |  |
|          |          | Description |  |  |   |  |
|          |          |             | Prepared by  | Checked by   | Approved by   |  |
|          |          | Name        |  |  |   |  |
|          |          | Signature   |  |  |   |  |
| Rev 3.0  |          | Filename    |  |  |   |  |
|          |          | Description |  |  |   |  |
|          |          |             | Prepared by  | Checked by   | Approved by   |  |
|          |          | Name        |  |  |   |  |
|          |          | Signature   |  |  |   |  |

**CONTENTS**

1. EXECUTIVE SUMMARY ..... 4

2. INTRODUCTION ..... 5

3. PROJECT DESCRIPTION ..... 5

4. WASTE GENERATION..... 7

5. WASTE MANAGEMENT ..... 8

6. WASTE MATERIAL GENERATION ..... 9

7. SITE RULES REGARDING WASTE MANAGEMENT ..... 9

8. WASTE TYPES & QUANTITIES ..... 11

9. WASTE MANAGEMENT RESPONSIBILITIES ..... 12

9.1 The Project Director ..... 12

9.2 The Project Manager ..... 12

9.3 EHS Dept. .... 12

9.4 Site Staff & Sub Contractors ..... 13

10. RECORD KEEPING ..... 13

11. INSPECTIONS ..... 14

12. EMERGENCY CONTACT LIST ..... 14

13. PROCEDURE FOR THE IMPORTING OR EXPORTING OF SPOIL..... ERROR!  
BOOKMARK NOT DEFINED.

13.1 Inert or Non-Hazardous Spoil ..... 14

13.2 Hazardous or Contaminated Spoil ..... 15

## 1. EXECUTIVE SUMMARY

This waste management plan details how waste materials will be managed during works on the Microsoft DUB14&15 Project. The plan describes how waste management practices will be addressed on a day-to-day basis and details the different waste streams generated, where they will arise and how they will be recycled, re-used, recovered or disposed.

The plan takes into account the requirements of the following:

- Current waste management legal and regulatory requirements.
- Current environmental best practice in the waste and construction industry.
- Relevant national, regional, and local waste policies and plans
- “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects”

Measures will be implemented on-site to ensure that good waste management practices are adhered to throughout the project. These include:

- Minimisation of waste materials generated on site through efficient ordering and proper storage.
- Separation of waste streams generated on site where possible to maximise reuse potential.
- Maximise reuse on-site of all clean and undamaged material through proper storage
- Maximise reuse on-site of material off-cuts.

- Training and continual awareness, auditing and updating of the waste management plan as works progress.

## 2. INTRODUCTION

The waste management plan for the DUB 14&15 Dublin project has been prepared in accordance with "*Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects*" as seen as good practice.

## 3. PROJECT DESCRIPTION

Winthrop Engineering & Contracting Ltd. have been engaged by the client, Microsoft to service to fulfil construction project as detailed below:

The scope of works in the contract provides for the construction of; •

Civil Works.

- Completion of the site access road
- Demolition of Domestic House & Removal of Asbestos via specialist contractors
- Architectural & Structural Works
- Groundwork's
- Mechanical & Electrical Installation
- Soft finishes

### **Civil, Structural & Building Works**

The following construction & civil engineering works will be required.

- Ground disturbance works for new underground services and foundations
- New structural steel supports within the building footprint
- Formation of roof penetrations
- Installation of Plant support systems
- Steel works to generator yard
- Installation of external stairs
- External Fencing
- Installation of external car park furniture, bollards, kerbing-external cladding and building envelope
- Internal Building partitions
- External Glazing to Admin areas
- Car Park Marking
- Excavation for underground services
- Hard standing and road finishes

### **Mechanical & Electrical Works**

The following mechanical and electrical engineering works will be required;

#### **Electrical.**

- Installation of Electrical E-Houses
- Installation of Electrical generators
- Installation of MV Equipment & Generators
- Installation of Primary Plant containment, subfloor and above ceiling containment
- Installation of Remote Power Panels, Distribution boards and PDU's
- Primary & Secondary Cabling
- Lighting cabling & fittings
- Security controls, sensors and services
- Data cabling
- Testing & Commissioning of Systems
- Installation of internal power distribution and telecoms services with associated controls.

#### **Mechanical**

- Installation of Air Handling Plant and associated ductwork both external and internal as detailed on the project drawings.
- Installation of mechanical pipework, process, and humidification
- Condensate Drainage pipework as required
- Supply & Installation of water treatment plant
- Position and Install External Plant
- Ventilation and Fire Dampers as required
- Installation of insulation and cladding too internal/external pipework/ductwork
- Mains/ hot & cold-water services

#### 4. WASTE GENERATION

Wastes generated during the works will be managed by Sean Crowley (Winthrop) - Logistics Manager in accordance with current waste management legal and regulatory requirements.

The waste materials as listed in *Table 1 – Waste Generated*, will be created during the works:

| <b><i>EWC Code</i></b> | <b><i>Waste Type</i></b>                            | <b><i>Site Works</i></b>                |
|------------------------|---|---|
| 20 01 08               | Canteen waste and general mixed municipal waste     | Canteen and general clean-up            |
| 17 04 01               | Copper Piping                                       | Mech services install                   |
| 17 04 05               | Stainless Steel                                     | M&E Containment Install                 |
| 17 06 05               | Glass Fibre insulation                              | Mech Service lagging/ insulation        |
| 08 04 10               | Waste containers- pvc pipe adhesive                 | Gluing of PVC pipe joints               |
| 17 02 03               | PVC Pipe offcuts                                    | Install of PVC pipework.                |
| 17 02 04               | Plastics  | Packaging wastes                        |
| 15 01 01               | Paper and cardboard packaging                       | Packaging waste                         |
| 17 05 06*              | Soil & Stones                                       | Contaminated soil                       |
| 17 02 01               | Timber  | offcuts                                 |
| 17 05 04               | Soil and Stones (not containing hazardous material) | Strip of ground surface and foundations |
| 17 08 02               | Gypsum Based Materials                              | Office partitions                       |
| 17 01 01               | Concrete  | Waste concrete                          |

*Table 1 – Wastes Generated*

The Logistics Manager will aim to keep waste surplus/deficits to a minimum through the use of the following control measures:

- Order material as required
- Careful estimation of material quantities and no over ordering of material.
- Ensure that all materials stored on site are stored in a manner so as to prevent damage, deterioration and loss.
- Materials will remain wrapped or bound until ready for use in order to minimise spoil.

## **5. WASTE MANAGEMENT**

All works on this site shall be managed in a manner so as to minimise waste. All waste material generated during the works will be dealt with in accordance with:

current waste management legal and regulatory requirements and take account of the current waste management hierarchy.

## **6. WASTE MATERIAL GENERATION**

Waste materials generated during the project will be recycled, recovered, re-used, or disposed as detailed in *Table 2 – Waste Management Re-use / Recycling / Recovery / Disposal Routes*. Waste materials will be stored in a designated waste storage area in suitable waste receptacles to await collection by the nominated permitted contractors.

All waste materials taken off site must be taken by a permitted contractor to an authorised facility/site where the material can be accepted. The waste contractor will be requested to provide details on the percentage of waste for recycling/recovery and percentage for disposal.



## 7. SITE RULES REGARDING WASTE MANAGEMENT

- Separate skips shall be provided for different waste streams as far as is practical.
- All waste skips will be clearly marked with the waste type contained for better segregation of the
- All domestic waste skips must be of closed type to prevent access to vermin
- No eating is permitted on site or in parking areas. Eating is only permitted in the canteen areas.
- All waste, wrapping, debris etc. must be placed into skips as soon as they are generated, and cannot be stockpiled for disposal at a later date.
- Spoil heaps must be tamped down to prevent dusts, and where required should be dampened down or covered.
- The concrete wash out area is to be used for cleaning the chutes of all concrete trucks. The wash out area must be clearly marked and warning signs to be provided for all users.
- Suppliers are to be contacted prior to orders to assess whether waste packaging and pallets can be returned
- Waste oils, lubricant cans and cartridges must be stored in the stores and sent to the designated Waste Management Company at the completion of the project
- Safety Data Sheet documentation must be in place for all chemicals on site with details of the disposal arrangements
- Timber is to be reused where possible for formworks, pegs, shims etc. before re-ordering
  - Asbestos to be removed by specialist licensed contractor

### 8. WASTE TYPES & QUANTITIES

The Logistics Manager will retain all waste records for the duration of the project to facilitate the calculation of waste management costs on completion of the project.

Any Asbestos removal will be by specialist appointed contractor

| Waste Description                            | EWC Code | Waste Re-use / Recycling / Recovery / Disposal | Waste Hauler (Name & Permit Number)        | Waste Recycling / Recovery / Disposal Destination | Facility Licence / Permit No | Comments | Anticipated Quantities | Environmental benefits with treatment |
|--|----------|--|--|---|------------------------------|----------|------------------------|---------------------------------------|
| Wood C&D (Construction & Demolition)         | 170201   | Recycling                                      | Starrus Eco Holding Ltd- NWCPO-13-11193-05 | West Dublin                                       | W0188-01                     | N/A      | 139t/year              | N/A                                   |
| MSW (Household Waste)                        | 170904   | Recycling                                      | Starrus Eco Holding Ltd- NWCPO-13-11193-05 | West Dublin                                       | W0188-01                     | N/A      | 3.6t/year              | N/A                                   |
|  | 200301   | Recovered.                                     | Starrus Eco Holding Ltd- NWCPO-13-11193-05 | West Dublin                                       | W0188-01                     | N/A      | 140t/year              | N/A                                   |
| Mixed Recycling- Cardboard, Plastic & Paper) | 200307   | Recovered                                      | Starrus Eco Holding Ltd- NWCPO-13-11193-05 | West Dublin                                       | W0188-01                     | N/A      | 4.5t/year              | N/A                                   |
|  | 200301   | Recycling                                      |  | West Dublin                                       | W0188-01                     | N/A      | 166t/year              | N/A                                   |

Table 2 – Proposed Waste Management Re-use / Recycling / Recovery / Disposal Routes



## **9. WASTE MANAGEMENT RESPONSIBILITIES**

Responsibilities in relation to waste management are as follows.

### **9.1 The Project Director (Noel Molloy Dub 14 & 15)**

- Responsibility for overseeing waste management practices on site and ensuring that they are managed in an environmentally responsible manner in accordance with current waste management legal and regulatory requirements.

### **9.2 The Project Manager (Mark Browne DUB 14 & Tom MacRory Dub 15)**

- Ensure that all waste management practices are carried out in accordance with waste management legal and regulatory requirements and waste management best practice.
- Prevent waste, insofar as possible, and for those wastes which are generated, achieve maximum recycling recovery of materials.
- Train all staff and contractors working for and on behalf of Winthrop Engineering & Contracting Ltd in relation to the project specific waste management practices.
- Ensuring that all materials removed off site are fully traceable.
- Retain waste management records as per waste management legal and regulatory requirements and the site-specific waste management plan.
- Inspection of waste management activities on site and initiating actions as required.
- Ensure that an acceptable standard of housekeeping is maintained in the waste area and that there is no evidence of littering.

### **9.3 EHS Manager (Jon Lillico Dub 14 & Keith Farrell Dub 15.)**

- Documentation of a Waste Management Plan in consultation with the Project Manager to include, waste management contractor details, waste

material details and the subsequent recovery/recycling/re-use/disposal routes.

- Update of the Waste Management Plan as required in consultation with the Project Manager.
- Inspection of waste management activities on site. Implementing recommendations for improvement and corrective actions where practically possible.

#### **9.4 Site Staff & Sub Contractors**

- Ensure that all waste practices on site are carried out as detailed in this Waste Management Plan.

### **10. RECORD KEEPING**

The logistics manager is responsible for the retention of all waste records and associated waste documentation for all material taken off site. This is essential in order to accurately calculate a cost of waste management when works have been completed. In accordance with waste management legal and regulatory requirements, the following waste records will be retained as a minimum.

- Waste material identified by EWC Code.
- Waste recovery/re-use/recycling/disposal route
- Waste haulier names and Collection Permit numbers for all waste materials taken off site.
- Waste facility license's/permits
- Waste Dockets (detailing the quantity of material removed)
- Waste Transfer Forms and shipment documentation for all hazardous material taken off site.

## **11. INSPECTIONS**

Inspections will be carried out by the EHS Dept. on a regular basis. The inspection will represent a systematic study of the waste management practices applied to the Project and recommendations for improvements as the project progresses.

## **12. EMERGENCY CONTACT LIST DUB 14.**

Site Logistics Plan-Sean Crowley - +353 86 1429157

Project Director-Noel Molloy - +353 86 014 4922

Project Manager- Mark Browne - +353 86 060 7277

EHS Manager- Jon Lillico. - +353 86 021 5979

## **EMERGENCY CONTACT LIST DUB 15.**

Site Logistics Plan-John O Neill - +353 86 602 3642

Project Director-Noel Molloy - +353 86 014 4922

Project Manager- Tom MacRory - +353 86 174 3648

EHS Manager- Keith Farrell - +353 86 783 7486

When there is a requirement to export spoil off the site the following procedure will be followed.

### **12.1 Inert or Non-Hazardous Spoil**

- The destination for the spoil must have a direct use for the spoil, which has been dealt with in a planning application, and it must not require additional treatment beyond normal industry practice

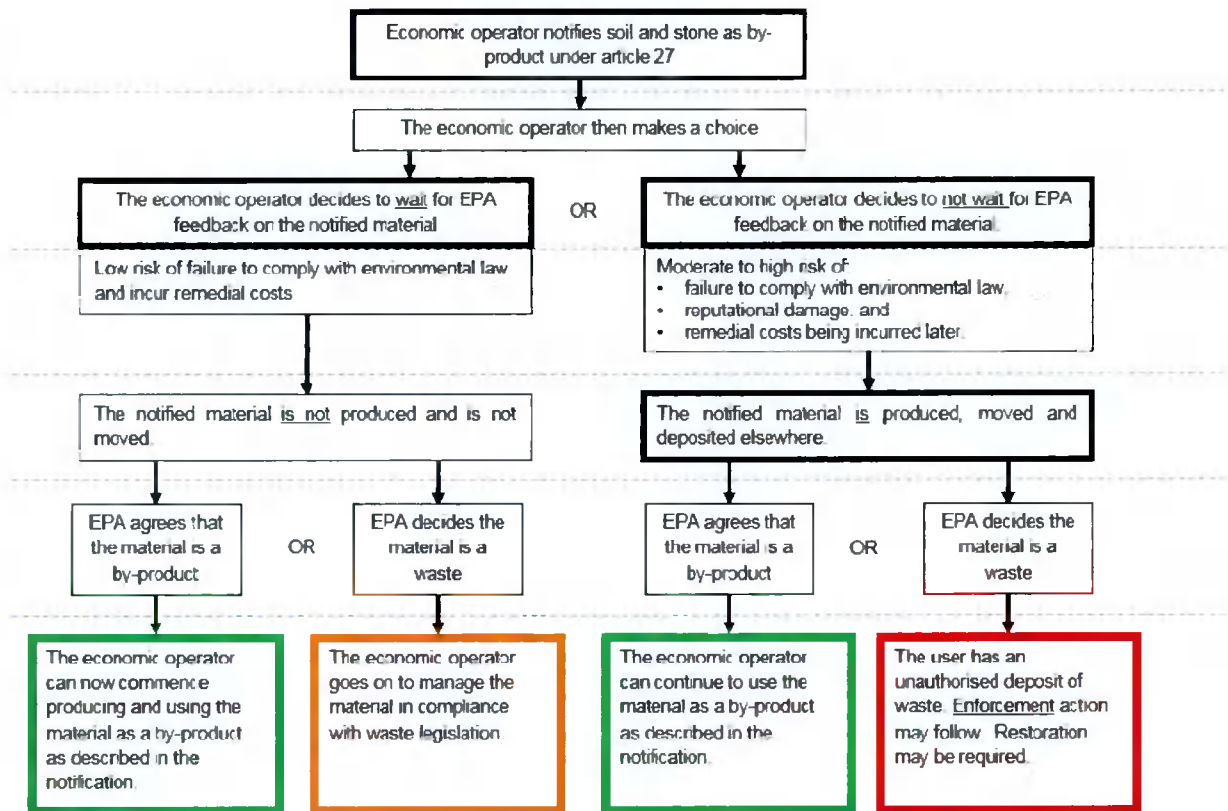


Fig 1: EPA Guidance on Classification and notifications of Soil & Stone as a by-product

## 12.2 Hazardous or Contaminated Spoil

- Where the WAC and EPA assessment shows that the spoil is contaminated, the waste spoil shall be disposed of in a licenced facility by a company with appropriate facility permits and waste carrier licences.
- All exportation of contaminated spoil must be carried out in compliance with the appropriate with current legal and regulatory requirements and certification must be retained by Winthrop.

