Guidance Notes

for

Environmental Management

of

Construction Projects

February 2022

1. Initial Design

Noise Planning

All relevant environmental issues should be considered at the initial project design stage and prior to commencing site works, taking full account of the ProPG: Planning & Noise; Professional Practice Guidance on Planning & Noise published by The Institute of Aucoustics. In Particular the following issues should be considered:

Implementation of good practice in relation to the layout and planning of new developments by

- Demonstrating a Good Acoustic Design Process
- Observation of internal Noise Level Guidelines
- Undertaking an External Amenity Area Noise Assessment
- Consideration of other relevant local issues

Waste Planning

Planning for waste minimisation and reuse taking full account of National and EU Policies in relation to the development of the Circular Economy

2. Waste – Construction phase

- Management of waste, including measures to ensure tracking of all waste generated to final destination. The recording of gate receipts for the licenced facility to which excavation and demolition wastes are brought is essential to ensure that waste materials removed from sites are properly disposed of and that site management is in compliance with statutory obligations under the Waste Management Acts 1996, as amended.

- Plans, including applications under Article 27 of the European Communities (Waste Directive) Regulations, 2011 for design of projects to facilitate maintenance, replacement and re-use of building materials, recycling of demolition material and the use of materials from renewable sources. In all developments in excess of 10 housing units and commercial developments in excess of 1000 sq.m, a materials source and management plan illustrating design for maintenance and replacement in addition to type of materials/proportion of re-use/recycled materials to be used shall be developed and implemented by the developer to support the development of the circular economy.

- Identification and management of any Hazardous Wastes likely to arise during the construction process. In the event that hazardous soil, or historically deposited hazardous waste is encountered during the work, the contractor must notify Dún Laoghaire Rathdown County Council, Environmental Enforcement Section, and provide a Hazardous/Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant mitigation or monitoring proposed, and destinations for authorised disposal/treatment, in addition to information on the authorised waste collector(s)

- Provision of a dedicated and secure compound, containing bins and skips into which all waste generated by construction site activities will be placed and designation of a single person with responsibility for provision of signage and verbal instruction to ensure proper housekeeping, maintenance of records and segregation of construction waste materials

3. Resource and Waste Management Plans

Waste planning shall take account of ***"BEST PRACTICE GUIDELINES for the preparation of resource & waste management plans for construction & demolition projects"***, published by the Environmental Protection Agency in 2021, particularly the requirements of ;

3.2.1.1 CLIENT ADVISORY TEAM (DESIGN TEAM)

The Client Advisory Team (engineers, architects, consultants, etc.) is procured by the Client and is responsible for the following :

● Drafting and maintaining the RWMP through the design, planning and procurement phases of the project.

● Appointing a Resource Manager (RM) to track and document the design process, inform the Design Team and prepare the RWMP.

● Include details and estimated quantities of all projected waste streams. This should also include data on waste types (e.g. waste characterisation data, contaminated land assessments, site investigation information) and prevention mechanisms (such as by-products) to illustrate the positive circular economy principles applied by the Design Team.

● Incorporate relevant conditions imposed in the planning permission into the RWMP.

● Handover of the RWMP to the Contractor at commencement of construction for the development of the RWMP in a similar fashion to how the safety file is handed over to the Contractor; and

● Work with the Contractor as required to meet the performance targets for the project.

3.2.2 LOCAL AUTHORITY

The Local Authority (or An Bord Pleanála) as the planning regulator is responsible for the following tasks:

● Ensure that the requirement for an RWMP for C&D Projects (as specified in these guidelines) is required for all planning applications (through setting this requirement as an objective of the County Development Plan or local planning policy) for development where construction or demolition is proposed.

● Ensuring that any RWMP submitted with planning complies with the requirements of these guidelines.

● Setting appropriate planning conditions as required in line with the requirements of Section 34(4)(l) of the Planning and Development Acts, as amended. A sample wording of a condition is included in Text Box 2; and

● Ongoing enforcement of these conditions through the construction phase

3.2.3 CONTRACTOR

The principal Contractor procured by the Client to undertake the construction operations is responsible for the following:

● Preparing, implementing and reviewing the RWMP through construction (including the management of all suppliers and sub-contractors) as per the requirements of these guidelines.

● Identifying a designated and suitably qualified Resource Manager (RM) who will be responsible for implementing the RWMP.

● Identifying all hauliers to be engaged to transport each of the resources / wastes off-site. Note that any resource that is legally a 'waste' must only be transported by a haulier with a valid Waste Collection Permit (refer to Appendix F for a resource to find a suitably authorised local haulier).

● Please note that the movement of hazardous waste material off-site falls under the European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations 2011. Each shipment of hazardous waste material off-site is to be legally accompanied by a Waste Transfer Form (see details Appendix F). Hazardous wase such as asbestos should be only be handled by competent persons with appropriate training and expertise. More information on handling of asbestos-containing material is available from the Health and Safety Authority.5

● Identifying all destinations for resources taken off-site. As above, any resource that is legally a 'waste' must only be transported to an authorised waste facility (refer to Appendix F for a resource to find a suitably authorised facility).

● End-of-waste and by-product notifications addressed with EPA where required;

● Clarification of any other statutory waste management obligations, which could include on-site processing;

● Full records of all resources (both wastes and other resources) should be maintained for the duration of the project; and

● Preparing a RWMP Implementation Review Report at project handover.

The templates in the appendices should be followed in the preparation of all Resource Management Plans

APPENDIX B TIER 1 PROJECTS – TEMPLATE RESOURCE AND WASTE MANAGEMENT PLAN

Section	Content
Project Details	At a minimum this section should provide the following information: • Name of the Contractor / Sub-Contractor/ Developer; • Name of the Site Manager; • Address of Contractor / Sub-Contractor / Developer; • Address of Development; • Planning Register Reference; • Name of the Person responsible for Implementation of this Plan (Resource Manager); • Site Telephone Number; • Mobile Phone Number; • E-mail address.
Project Description	At a minimum this section should provide the following information: • Site location; • Site description to include details of the existing site layout; • Details of any proposed site clearance and/or demolition; • Description of the development (at a minimum this should include the description included in the planning permission); • Description of the main construction elements including all new structures, roads, drainage or other infrastructure; • Any designing out waste initiatives adopted; • Identification of waste prevention mechanisms implemented
Key Materials, Quantities and Costs	Provide an estimated waste inventory in line with the template provided in Appendix D, including the following: • Identification of each waste stream generated; • The List of Waste (LoW) Code for each stream; • The predicted quantity of material generated (in tonnes); • The identified resource management route from prevention, reuse of resources and recycling, energy recovery, backfilling or other recovery and disposal for each waste material; • The estimated cost of resource management.

APPENDIX C TIER 2 PROJECTS – MINIMUM CONTENTS FOR RWMP

Section	Pre-Construction Phase Content	Construction Phase Content
1 Introduction	At a minimum this section should provide the following information: • Overview of the purpose of the RWMP; • Commitment to adherence to these Guidelines; • Environment and waste policy of the Client; • Relevant EU, national and local waste policy and legislation; • Outline the project-specific resource targets which should be set by the Client at the outset to the project – refer to Section 3.2 for more information; • Identify any complementary documents, i.e. Environmental Management Plan, Health and Safety Plan, etc	This section should be updated to include the following if relevant: • Environment and waste policy of the Contractor; • Any amendment to the project-specific resource targets; • Identify the Contractor's complementary documents, i.e. Environmental Management Plan, Health and Safety Plan, etc

Section	Pre-Construction Phase Content	Construction Phase Content
2 Project Description	At a minimum this section should provide the following information: • Site location, including site location map and site layout maps; • Site description to include site area, topography, description of existing structures, site access, adjoining land uses, sensitivity of the environment, etc.; • Site history including any details of previous land uses – in particular, potential for residual ground contamination from previous uses such as fuel/ material storage, industrial operations (gas works, foundries, collieries, etc.). • Details of any proposed demolition including descriptions of scale and building fabric of all structures; • Details of any site clearance including vegetation removal, topsoil stripping or other excavations to enable works, including estimations of potential volumes; • Description of construction elements including all new structures, roads, drainage or other infrastructure; • Material balance for the site indicating the cut/fill requirements for development and estimates for all other material imports; • Details of project programme and phasing; • In the event that asbestos-Containing material (ACM) is present on site, details of the volume, nature and condition of all material. Confirm if an ACM inventory for the site is available; • If there is known or suspected ground contamination on the site or adjoining lands, provide details of the nature and scale of contamination. This should include a gridded map of the site highlighting areas of contamination; • For any brownfield development or development where there is known or suspected ground contamination, a remediation plan should be prepared to present the scale and nature of the contamination and the proposed approach to remediation, i.e. full excavation and off-site treatment, in-situ treatment, etc.; • Details of any other hazardous materials known on site.	This section should be updated to include the following if relevant: • A summary of any significant design changes imposed since the Design Stage RWMP through mechanisms such as value engineering or other; • Details of planning permission (if relevant) and in particular any conditions imposed in relation to resource management; • Any issues related to ground contamination which were identified during the construction phase.

Section	Pre-Construction Phase Content	Construction Phase Content
3 Roles and Responsibilities	At a minimum this section should provide the following information: • Overview of the Design Team; • Description of the role of the named Client and key personnel; • Description of the role of the named Architect and key personnel; • Description of the role of the named Engineer and key personnel; • Description of the role of the named Resource Manager (RM) appointed to the Design Team to manage the RWMP through the design process; • Description of the role of the other parties and key personnel in the Design Team such as quantity surveyors, environmental consultants; • Description of the future role of the Contractor (unnamed).	At a minimum this section should provide the following information: • Overview of the Construction Phase roles including Client, Client's Representative, Contractor, Sub-Contractors, etc.; • Description of the role of the named Client and key personnel; • Description of the role of the Contractor's Project Manager; • Description of the role of the Contractor's Site Manager; • Description of the role of the Contractor's nominated Resource Manager (RM); ● Description of the role of the Quantity Surveyor on procurement and purchasing; • Description of the role of the named Sub-Contractors and Suppliers. Further details on the site management roles are presented in Section 5.2.
4 Design Approach	At a minimum this section should provide the following information to show how primarily prevention and then management of streams have been considered: • Scope, attendees, agenda and dates of any design out waste workshops; • Document design initiatives adopted for Reuse and Recycling – refer Section 4.3.1; • Document design initiatives adopted for Green Procurement – refer Section 4.3.2; • Document design initiatives adopted for Off-Site Construction – refer Section 4.3.3; • Document design initiatives adopted for Materials Optimisation – refer Section 4.3.4; • Document design initiatives adopted for Flexibility and Deconstruction – refer Section 4.3.5.	This section of the RWMP will only require update to reflect any significant design changes that have implications for resource management.

Section	Pre-Construction Phase Content	Construction Phase Content
5 Key Materials, Quantities and Costs	Provide a post design resource and waste inventory of all residual resources in line with the template provided in Appendix D listing the following: • Description of each residual resource stream predicted; • The List of Waste (LoW) Code for each stream; • The predicted quantity of material generated (in tonnes); ● The identified resource management route options from prevention, reuse, recycling, recovery and disposal for each material; • The estimated cost of resource management. • Further details for this section are included in Section 4.4.	Update the resource inventory in Appendix D listing the following: • Any changes to the generation volumes presented in the Design Phase Inventory; • Any changes to the management routes presented in the Design Phase Inventory; • The nominated authorised haulier who will be employed for each stream must be named along with the relevant permissions; • The nominated destination site for all streams must be provided along with the relevant permissions. Further details on this tracking are provided in Section 5.7
6 Site Management	Specify the following outline requirements that must be adopted by the Contractor at construction stage: • Need for a specified Resource Manager (RM) of the RWMP with responsibility for implementation at construction phase; • Requirements to include the RWMP in site induction training; • Requirements for tool box talks and all other training on the RWMP; • Procedures for identifying suitably authorised waste collection operators and waste destination sites – a resource for this task is included in Appendix F; • Requirements for resource-efficient supply chains; • Procedures for record keeping and reporting of all off-site export of resources; • Procedures for record keeping and reporting of all on site resource uses – this may include measures such as the use of an on-site mobile crusher for producing aggregate from suitable residual concrete (subject to the appropriate waste consent); • Requirements for communications with the local authority and other stakeholders; • Procedures for audits and inspections of resource management practices	Specify the following requirements that must be adopted at construction stage: • Need for a named Resource Manager with responsibility for implementation of the RWMP – further details are provided in Section 5.2; • Requirements to include the RWMP in site induction training and tool box talks and all other training on the RWMP – further details are provided in Section 5.4; • Implementing procedures for record keeping and reporting of all off-site export of resources as per Section 5.7; • Procedures for resource-efficient procurement in the supply chain – further details are provided in Section 5.5; • Procedures for audits and inspections of resource management practices – further details are provided in Section 5.6; • Requirements for engagement with the local authority and other stakeholders – further details are provided in Section 5.8; • Requirements for a final report summarising the outcomes of resource management processes adopted and the final inventory and cost for the project – further details are provided in Section 5.8

Section	Pre-Construction Phase Content	Construction Phase Content
7 Site Infrastructure	Specify the following infrastructure requirements that must be adopted by the Contractor at construction stage: • Minimum requirements for site signage on resource management; • Minimum requirements for resource storage (dedicated skips, hazardous materials storage, stockpile management, etc.); • Note there are specific requirements on stockpiling more than 50kg of certain persistent organic pollutants (from a construction perspective these may include some chlorinated hydrocarbon contaminants in ground contamination, EPS/XPS insulation building material containing brominated flame retardant (HBCDD) or polychlorinated biphenyls from removal of electrical equipment) under Article 5 of EU Regulation (EU) 2019/1021. • Handling and export of resources.	Specify the following infrastructure requirements that must be adopted: • Minimum requirements for site signage on resource management; • Minimum requirements for resource storage (dedicated skips, hazardous materials storage, stockpile management, etc.); • Handling and export of resources. • Further details are provided in Section 5.3.

4. Environmental Impacts – Construction Phase

a. Noise & Vibration

Detailed consideration should be given to;

- Details of the measures that require to be implemented to ensure that potential impacts relating to noise nuisance and disturbance and vibrational impacts are effectively minimised, controlled and monitored to ensure that site construction activities do not have an adverse or unacceptable impact on local receptors, adjacent property, adjacent users and human health and on the wider receiving environment.

- Where activities such as rock breaking or large scale demolition and excavation works are planned, specific attention should be paid to proposed hours of work and methods employed to minimise the creation of noise nuisance.

- In the case of the excavation of hard granite in established residential areas consideration should be given to the use of specialist techniques, such as microblasting or chemical rock splitting.

b. Dust & Odour

- All operations on-site shall be carried out in a manner such that air emissions do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary.
- A dust monitoring strategy should be implemented for the development.

c. Complaints Handling

- Maintenance of a site complaints log detailing
    - Name and address of complainant
    - Time and date complaint was made
    - Date, time and duration of noise
    - Characteristics, such as noise rumble, clatters, intermittent, etc.
    - Likely cause or source of nuisance
    - Weather conditions, such as wind speed and direction
    - Investigative and follow -up actions

- Liaison with Local Community and Businesses

    - Appointment of a Liaison Officer as a single point of contact to engage with the local community and respond to concerns

    - Keeping local residents and businesses informed of progress and timing of particular construction activities that may impact on them

d. Monitoring

- **Air Monitoring**

    - A programme of air quality monitoring shall be put in place at the site boundaries for the duration of excavation and construction activities to ensure that the air quality standards as set out in The Air Quality Standards Regulations 2011 relating to dust deposition and specifically PM10 levels are not exceeded

    - Measures to ensure that where levels exceed specified air quality limit values, dust generating activities cease and alternative working methods are identified and implemented.

    - The selection of sampling point locations will be completed after consideration of the requirements of Standard Method VDI 2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Institute) with to the location of the samplers relative to obstructions, height above ground and sample collection and analysis procedures. The optimum locations will be determined by a suitably qualified air quality expert to ensure that dust gauge locations are positioned in order to best determine potential dust deposition in the vicinity of site boundaries and existing buildings.

    - Technical monitoring reports detailing all measurement results shall be subsequently prepared and maintained on site.

- **Noise Monitoring**

    - Prior to the commencement of the proposed site works noise monitors stations shall be installed and maintained by a suitable qualified specialist firm to provide continuous noise monitoring to measure and record the impact of site activities on local receptors.

- All noise monitoring data shall be compiled into a weekly technical report which will include a full assessment of the noise impacts arising from site construction activities.

- Trigger limits at which remedial action will be taken and maximum limits at which work will be suspended should be clearly set out.

- Should construction noise trigger limits be approached or exceeded appropriate measures shall be implemented to address the issues raised.

5. Environmental Impacts – Operational Phase

A. Noise, Vibration and Odour

Consideration should be given to measures that require to be implemented to avoid the creation of serious environmental nuisance in the operation of the completed development, with specific reference to avoidance of the creation of noise nuisance to any third party receptor or on any residential units which form part of the development. For night time noise assessment the relevant World Health Organisation guidelines should be taken into account. Particular consideration should be given to the ventilation strategy for buildings and the acoustic design of noise generators such as gym facilities to prevent noise and air emissions that may cause either noise or odour nuisance, in accordance with the commitment set out in section 5.5 of the "Energy and Sustainability Report".

Detailed consideration should be given to;

- Measures required to avoid the generation of potential conflicts in terms of noise amenity within the development itself, whether from the incorporation of uses that can serve as noise generators or improperly sited building services.

- Appropriate design of the commercial units, including the mechanical services associated with these units shall be undertaken to ensure that the completed development provides a very high degree of sound insulation between adjoining units, so that one unit does not have a negative noise or vibration impact on another

B. Pest Control

An appropriate rodent/pest control plan should be put in place for the overall development.