Mount St Mary's Outline Environmental Construction Management Plan

20.10. 2024

24093-X-XXX-RP-TNT-CE-0008

TENT ENGINEERING

Site Address:

Mount Saint Mary's,
Dundrum Road,
Dundrum,
Dublin 14

Client Name:

Dún Laoghaire–Rathdown County Council

TENT ENGINEERING

Revision and Review

This report has been prepared for the sole benefit, use and information of the client. The liability of Tent Engineering with respect to the information contained in this report will not extend to any third party.

PURPOSE

- ☐ P1 Information
- ☐ P2 Coordination
- ☐ P3 Planning
- ☐ P4 Building Control
- ☐ P5 Pre-tender
- ☐ P6 Tender
- ☐ P7 Construction

ACCEPTANCE (BY OTHERS)

- ☐ S Issued
- ☐ A Accepted
- ☐ B Accepted subject to comments
- ☐ C Rejected
- ☐ D Acceptance not required

Accepted by

REVISION(S)

Rev.	Description	Date
00	1st Issue	20.10.2024
01	2nd Issue	28.02.2025

AUTHOR(S)

Name
Conor Edwards Civil Engineer

REVIEWER(S)

Name
Diarmuid Healy Co-founder, Director Structural Engineer
BEng (Hons) MIEI CEng MIStructE FIStructE

Office address:

Tent Engineering Ltd.
32 Francis Street, Dublin
Co. Dublin, D08NN96

Contents

1 Introduction 5

2 Receiving Environment 6

3 Site Management 7

4 Provision for Construction 10

5 Duties and Responsibilities 12

6 Environmental Considerations 16

7 Environmental Management Plans 17

8 Auditing, Monitoring and Response 25

9 Summary and Conclusion 28

1 Introduction

This Outline Construction Environmental Management Plan (CEMP) for the proposed Mount St MAry's residential development has been prepared by Tent Engineering Ltd. on behalf of Dún Laoghaire–Rathdown County Council.

This plan has been specifically created for this project and details the construction practices, environmental management strategies, and mitigation measures that will be followed during the construction phase to ensure the work is carried out in line with best practices, minimizing any impact on the surrounding environment.

Before construction begins, the appointed Main Contractor will develop a detailed CEMP, incorporating the methods and guidelines outlined in this document. This Outline CEMP will serve as the basis for managing construction activities on-site, ensuring that environmental management practices are implemented to reduce environmental effects during the project.

1.1 CEMP Purpose and Objectives

The Construction Environmental Management Plan (CEMP) describes how the appointed contractor(s) will establish and implement a Site Construction Management System that addresses the following:

- Contractual
- Regulatory and Statutory Requirements
- Environmental Mitigation Measures
- Planning Conditions

The objective of this Outline CEMP is to prevent, reduce, and manage any negative environmental effects related to the construction activities. It serves as a practical tool for contractors, ensuring compliance with all applicable planning and environmental regulations.

This CEMP is particularly focused on minimizing and managing environmental impacts in the surrounding areas. It is important to note that no Special Areas of Conservation (SAC) or Special Protection Areas (SPA) are located near the site.

The document sets out the work practices, construction procedures, roles and responsibilities, mitigation strategies, and monitoring plans that must be followed to ensure the project progresses in an environmentally responsible way.

All personnel on-site must familiarize themselves with the CEMP requirements relevant to their specific duties.

Additionally, the contractor(s) must keep the CEMP updated throughout the project's progress, particularly in terms of any changes in roles or responsibilities during construction.

While this version of the Outline CEMP establishes a foundation for good practice, contractors are encouraged to adopt alternative methods or improvements that further reduce environmental risks wherever feasible.

2 Receiving Environment

2.1 Land Use

The subject site is situated on a greenfield area on the grounds of former chapel. The surrounding areas predominantly consist of recreational and residential settlements, characterized by low-density housing, including single-family homes, townhouses, and upscale properties.

The site is currently cleared and is not being used. The surrounding area primarily comprises of business parks, retail establishments, and residential settlements, with most of the residences being single-family homes.

2.2 Site Location

The general location of the subject site in relation to the surrounding road network is illustrated in Figure 2.1 below whilst Figure 2.2 shows the extent of the subject development plot. The development site is located on the Dundrum Road in the Dundrum area of Dublin. It is located approximately 4km to the south of Dublin City Centre. It is bounded to the North by the former Mount Saint Mary's Chapel, to the west by a Dundrum Road, to the south by CUS Rugby Grounds and east by a residential development.

Fig 2.1 - Site Location in Relation to the Regional Road

Fig 2.2 - Site Location in Relation to the Local Road Network

3 Site Management

3.1 Site Establishment

The contractor will provide all necessary accommodation, material handling and secure storage for its operations.

The facilities to be provided and maintained by the contractor will include:

- construction plant;
- hoisting equipment and cranes;
- scaffolding, platforms, access ladders, barriers, handrails;
- barricades and hoardings;
- temporary driveways, road crossovers and construction zone;
- 24/7 emergency vehicle access to site during working hours;
- on-site hardstand areas for vehicle loading and unloading;
- storage sheds and compounds;
- rubbish sorting areas;
- site amenities with all required equipment and facilities;
- construction worker facilites;
- first aid facilities;
- site administration offices.

Construction plant and site amenities will comply with the requirements of all relevant authorities and be wholly contained within the hoarded site. All construction plant and equipment will be progressively removed when no longer required.

First Aid facilities for the use of all construction staff in the form of a fully provisioned first aid area within the site office with life-saving and safety equipment as required by relevant statues, authorities and awards will be maintained at all times by the contractor.

The contractor will obtain all required permits, pay the applicable fees and comply with all conditions.

3.2 Hoarding and Fences

Prevention of unauthorised access to the site is a very high priority and will be vigorously managed throughout the construction period. When the contractor is appointed, the site will be secured with site barriers and hoardings in accordance with the final construction management plan. Any hoardings and signboards to the perimeter of the site will comply with the requirements of the relevant authorities and the relevant Health and Safety Acts.

The contractor will be required to erect a single project signboard to the hoarding at the main entrance points to identify the site.

3.3 Services Relocations and Temporary Protection of Public Domain

Prior to any works commencing on site, detailed dilapidation reports will be carried out for footpaths, kerbs, road pavements and utility infrastructure features of the main access routes in the immediate vicinity to the site.

The contractor will provide protection to existing surrounding building elements potentially impacted by the works. Protection may be in the form of screened hoardings, scaffolding and fencing, taped drop sheets and the like, all installed prior to commencement of the demolition works.

The type of required hoardings, scaffolding and fencing will vary over the duration of the works, depending on how the site activities potentially impact on the adjoining public domain and neighbourhood.

Dial-before-you-dig enquiries and detailed services location investigations shall be carried out to identify any need for temporary protection of elements of existing utility infrastructure that are not to be diverted as part of the works.

All temporary protection is to be installed and maintained during the duration of the works until they are no longer required.

3.4 Major Plant and Equipment

Plant and equipment used during the entire works are:

- articulated and rigid trucks;
- rigs, bulldozers, excavators, backhoes, with ancillary equipment (saws);

- tower cranes;
- concrete delivery trucks;
- concrete pumps;
- man, and material hoists;
- scissor, boom and fork lifts.

All plant and equipment will be operated by experienced and qualified personnel with the appropriate registrations.

3.5 Vehicular Access to Site

Construction site access will be via the Dundrum Road which runs in a North to South direction.

- Advanced warning provided to all users on the road and directional signage for site traffic

Revised measures will be developed further as part of the Construction Traffic Management Plan (CTMP) developed by the contractor in consultation with the Design Team and DLRCC.

The principal objective of the CTMP is to ensure that the impacts of all building activities generated during the construction of the proposed development upon both the public (off-site) and internal (on-site) workers environments, are fully considered and proactively managed / programmed respecting key stakeholders requirements thereby ensuring that both the public's and construction workers safety is maintained at all times, disruptions minimised and undertaken within a controlled hazard free / minimised environment. It is noted that the impact of the construction works will be temporary in nature.

The CTMP will be prepared in accordance with the principles outlined below and shall always comply with the requirements of:

- Chapter 8 of the Department of the Environment Traffic Signs Manual, current edition, published by The Stationery Office, and available from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2;
- Guidance for the Control and Management of Traffic at Road Works (June 2010) prepared by the Local Government Management Services Board; and
- Any additional requirements detailed in the Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS).

Note that all construction traffic will travel to and from the site via the proposed leapordstown Road. In order to ensure satisfactory operation of the construction stage the following is proposed

- Provision of sufficient employee and visitor parking and compounding to ensure no potential overflow onto the local network.

Site offices and compound will be located within the site boundary where feasible. Due to the location and nature of access to the site, there will be limited site parking or construction parking anywhere in the vicinity of the site. Nearby off-site car parking will be identified to avoid congestion in the surrounding areas. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.

Finally, truck wheel washes will be installed at construction entrances and any specific recommendations regarding construction traffic management made by the Local Authority will be adhered to.

The following mitigation measures will be incorporated into the CTMP:

- During the pre-construction phase, the site will be securely fenced off from adjacent properties, public footpaths and roads.
- The surrounding road network will be signed to define the access and egress routes for the development.
- The traffic generated by the construction phase of the development will be strictly controlled in order to minimise the impact of this traffic on the surrounding road network.
- All road works will be adequately signposted and enclosed to ensure the safety of all road users and construction personnel.
- Nearby off-site car parking will be identified for use by employees and visitors to avoid congestion in the surrounding areas.
- Construction staff will be encouraged to use public transport and information on local transportation will be published on site.
- A programme of street cleaning if/when required.
- Any associated directional signage
- Any proposals to facilitate the delivery of abnormal loads to the site

- Measures to obviate queuing of construction traffic on the adjoining road network.

3.6 Site Security

Access to site will be controlled by means of an electronic access control system and camera remote monitoring system for out of hours use. During working hours, a gateman will control traffic movements and deliveries. All personnel working on site will be required to have a valid Safe Pass card.

3.7 Material Hoisting & Movement Throughout the Site

It is envisaged that a tower crane will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork element and general building materials. A detailed crane analysis will be prepared for verification of the safe load parameters. No loads will be lifted over the public domain or adjacent properties.

Hoists and teleporters may also be used within the site and around its perimeter as required during the project, to facilitate material and waste movements into and out of the site.

3.8 Deliveries & Storage Facilities

All deliveries to site will be scheduled to ensure their timely arrival and avoid the need for storing large quantities of materials on site. Deliveries will be scheduled outside of rush hour traffic to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

No effluent or wastewater will be discharged on-site. Wastewater tanks and sewage will be emptied as necessary and transported to a licensed facility. Staff facilities will be removed once the construction phase is complete.

3.9 Site Accommodation

On-site facilities shall include:

a materials and equipment storage area;

- a site office;
- staff welfare facilities (e.g. toilets, drying room, canteen, etc.).
- Electricity will be provided to the site via national grid.

Water supply to the site during construction works will be provided by means of a temporary connection to a public watermain. Similarly, a temporary connection for foul water drainage will be made to the public network.

3.10 Site Parking

Due to the location and nature of access to the site, there will be limited site parking or construction parking anywhere in the vicinity of the site. Nearby off-site car parking will be identified to avoid congestion in the surrounding areas. Construction staff will be encouraged to use public transport and information on local transportation will be published on site.

3.11 Site Working Hours

Subject to the agreement of the Planning Authority, the following site operation hours are proposed:

- Monday to Friday: 07:00 to 19:00
- Saturdays: 08:00 to 14:00
- Sundays & Bank Holidays: Works not permitted

It may be necessary for some construction operations to be undertaken outside these times, for example: service diversions and connections; concrete finishing and fit-out works; etc. There may also be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times.

4 Provision for Construction

4.1 Hoarding, Set-up of Site & Access/Egress Points

The site area will be enclosed with hoarding, details of which are to be agreed with Dun Laoghaire Rathdown County Council (DLRCC). Hoarding panels will be maintained and kept clean for the duration of the project.

This will involve erecting the hoarding around the proposed site perimeter in line with the finished development description.

The restricted confines of the site will require the contractor to set up an off-site "Construction Staging Area". This off-site facility should be suitably located to allow efficient delivery of materials and personnel to site. A "Just in Time" approach will be required for the delivery of particular building materials such as concrete formwork and reinforcement cages for the piles. The location of this facility should be highlighted within the Construction Management Plan.

4.2 Removal of Services

Prior to any works a utility survey will be carried out to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers.

4.3 Site Clearance

The site is a mix of residential and greenfield and does not generate any significant vehicular traffic. The following is a high-level method statement for the clearance of the site:

- Establish a site set-up and welfare facilities;
- Carry out an invasive species survey using a qualified and approved surveyor.
- Carry out a detailed services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties.
- Carry out any necessary services diversions and decommissioning works.

4.4 Excavation

This development will involve a bulk excavation and removal of material during the construction of the building foundations. The Contractor will prepare a Construction Waste Management Plan in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" (Department of Environment, Heritage and Local Government, 2006) and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

4.5 Site Service Installations

Drainage, power, water and the like will be installed to serve the proposed development.

4.6 Construction Stage

The super structure is a series of 2 blocks ranging varying in height, reaching up to 5 storeys. The buildings are constructed as an RC frame of loading bearing perimeter and internal walls, supporting floor slabs. The building façade will be constructed in accordance with the Architect's specification.

Works to the façade will commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works will take place.

Works to the façade will commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works will take place.

4.7 Superstructure

The construction of the superstructure will involve complex sequencing of activities. The building will be constructed as a reinforced concrete frame subject to change in detailed design stages. As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor.

The following outlines a general construction sequence for the superstructure:

Buildings Structure

- Site clearance including install/removal of below ground services, demolition and removal of existing building.
- Excavation of site and construction of the foundation and ground slab
- Construction of rising elements to ground floor and construction of ground floor slab
- Construct the RC floor slab
- Repeat for upper floors.

Envelope / Cladding:

- Commencement of envelope works to ground floor when structure has progressed to approximately Level 2/3, with suitable temporary openings in the façade left for ease of transport of construction material.
- Advancing of external leaf two or three levels behind the structure

Mechanical & Electrical fit-out:

- First fix will commence at each level behind structure;
- This will be followed by the second fix and the final connections

Fit-out:

- Initial installation of stud work when cladding is complete, and floor is weather tight;
- Installation of equipment and associated connection to services;
- Completion of finishes.
- The final commissioning period will commence during fit-out

The above is an indicative construction sequence. The final sequence will be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

Erection and operation of cranes

It is envisaged that a tower crane will be temporarily erected to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork element and general building materials. These visits will be coordinated with the other site activities and crane operations to ensure all risks are correctly assessed and mitigated against. The Contractor will need to obtain all necessary licences from the Local Authority.
A “mast climber” maybe installed at some local areas to facilitate particular façade features. The mast climber is essentially a climbing platform that allows the user safely to access any level without the requirement for a full scaffold tower.

5 Duties and Responsibilities

While the Project Supervisor Construction Stage (PSCS) / Contractor will manage the obligations of the project during construction, Dun Laoghaire-Rathdown County Council (client) and the Project Supervisor Design Process (PSDP) will ensure same is undertaken correctly.

The general role of key people on site implementing the CEMP will be;

- **The Project Manage**r - liaises with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the main contractor's project team.
- **The Construction Manager** - liaises with the Environmental Manager when preparing site works where there is a risk of environmental damage and manages the construction personnel and general works.
- **The Design Engineer** - undertakes and certifies the Design and supervises the standard of works, including geotechnical aspects.
- **The Environmental Manager** - ensures that the CEMP is developed, implemented and maintained.

The following roles and responsibilities are indicative and will be updated once the main contractor (Contractor) is appointed. Specific details of the personnel and their responsibilities must be included in the final version of the CEMP. The roles listed below are subject to revision.

5.1 Project Manager

A Project Manager will be appointed by the main Contractor to oversee the entire project. This role includes responsibilities such as:

- Implementing the Construction and Environmental Management Plan (CEMP.
- Executing the Health and Safety Plan.
- Managing the construction project.
- Serving as the main point of contact for the client or developer.
- Liaising with the Project Team.
- Delegating roles and responsibilities related to the CEMP.
- Creating the construction schedule.
- Managing the procurement of materials.
- Maintaining the project diary for the site.

5.2 Construction Manager

The Construction Manager will be responsible for overseeing all construction activities on behalf of the main contractor and will report to the Project Manager. Responsibilities associated with the CEMP include:

5.2.1 General Responsibilites

- Ensuring awareness of all project Environmental Commitments and Requirements.
- Communicating important project details (timing, methodology, etc.) to the Environmental Manager to facilitate environmental planning.
- Planning excavation works and sharing the schedule with the Environmental Manager.
- Providing necessary resources for environmental protection measures.
- Coordinating with the Design Engineer to address environmental considerations throughout the construction phase.
- Assigning CEMP responsibilities to the project team.
- Ensuring the Environmental Manager conducts regular site inspections to monitor environmental compliance.

5.2.1.1 Site-Specific Method Statements

- Collaborating with the Environmental Manager to develop Method Statements for activities with potential environmental risks, incorporating relevant Environmental Control Measures and Sheets.
- Working with the Environmental Manager to review and update these Method Statements when any Environmental Control Measures or Sheets are modified.
- Coordinating with the Environmental Manager and relevant third parties for agreement on Method Statements and Environmental Control Measures.

5.3 Design Engineer

The Design Engineer will be appointed by the Contractor and will report to the Project Manager. Responsibilities include:

- Designing the project works.
- Reviewing and approving relevant sections of Method Statements and assisting the Construction Manager in the review process.
- Overseeing geotechnical elements of the project, potentially with a geotechnical engineer if needed.
- Participating in consultations with third parties.
- Liaising with third parties through the Environmental Manager.

5.4 Environmental Manager

The Environmental Manager will be appointed by the Contractor and report to the Project Manager. Key responsibilities include:

- Understanding the project's environmental commitments and requirements.
- Familiarizing themselves with baseline data collected for the Environmental Impact Assessment and pre-construction surveys.
- Assisting the Construction Manager with environmental management during the project, including liaising with the Design Engineer.
- Assigning CEMP-related duties to the project team.
- Implementing the environmental procedures outlined in the CEMP.
- Working with the Construction Manager to ensure the implementation of environmental mitigation measures.
- Coordinating with the client or developer on environmental matters.
- Auditing construction activities for environmental compliance.

5.4.1 Site-Specific Method Statements

Working with the Construction Manager to prepare site-specific Method Statements that account for environmental risks, incorporating the necessary Environmental Control Measures. Reviewing and updating Method Statements with the Construction Manager as needed. Coordinating with third parties and the Construction Manager on agreements related to Method Statements and Environmental Control Measures.

5.4.2 Third-Party Consultations

- Leading third-party consultations as required by law, contract, or best practice.
- Documenting formal communications, meetings, and issuing certificates to the Design Engineer when needed.
- Coordinating with prescribed bodies for site visits, consultations, and inspections.
- Updating the CEMP based on new Environmental Control Measures agreed upon through consultations.
- Working with the Construction Manager to implement changes in site-specific Method Statements where needed.

5.4.3 Licensing

- Ensuring all required permits, licenses, and certificates are in place for the project.
- Liaising with license holders on any necessary Wildlife Act-related permits.
- Informing the project team of any legal constraints or timing issues related to environmental tasks.

5.4.4 Waste Management Documentation

- Maintaining copies of all permits and licenses from waste contractors.
- Ensuring that all activities requiring registration, permits, or licenses are authorized.
- Managing documentation related to waste disposal.

5.4.5 Legislation

- Staying informed about changes in environmental legislation that could impact the construction phase.
- Advising the Construction Manager on legal updates.
- Amending the CEMP to reflect legislative changes and ensuring the contractor's senior management and subcontractors are informed.

5.4.6 Specialist Environmental Contractors

- Identifying the need for specialist

environmental contractors, such as ecologists or spill response teams, before the project begins.

- Procuring and coordinating with these specialists for site access and reporting.
- Ensuring specialists are competent and able to manage environmental issues effectively.
- Managing the activities of all specialist contractors involved in the project.

5.4.7 Environmental Induction Training and Tool Box Talks

- Ensuring all site personnel undergo Environmental Induction Training, which may be integrated with Safety Induction Training.
- Providing toolbox talks on specific environmental control measures to those directly involved in relevant tasks.

5.4.8 Environmental Incidents/ Spillages

- Preparing and being ready to implement an Emergency Response Plan at all times.
- Reporting any environmental incidents to relevant authorities.
- Investigating and producing reports on incidents, sharing them with relevant authorities, the Design Engineer, and the Construction Manager.

5.4.9 Site Environmental Inspections

- Conducting regular site inspections to ensure compliance with Environmental Control Measures and Method Statements.
- Performing daily inspections of bunded areas and site drainage systems.
- Attaching inspection reports to the CEMP
- Coordinating repairs or maintenance with the Construction Manager as needed following inspections.

5.5 Other Roles

5.5.1 Health and Safety Personnel

(To be updated upon appointment of Contractor/ finalization of CEMP).

Health and Safety personnel, appointed by the Contractor, are responsible for:

- Acting as the Project Supervisor Construction Stage (PSCS).
- Conducting safety inductions for all site staff.
- Implementing the Health and Safety Plan.
- Auditing and updating the Health and Safety Plan as needed.

5.5.2 Project Ecologist

(To be updated upon appointment of Contractor/ finalization of CEMP).

The Ecologist, potentially appointed by the Contractor, will be responsible for:

- Ensuring ecological mitigation measures are implemented on-site.
- Conducting weekly toolbox talks to make construction personnel aware of site sensitivities and method statements.
- Ensuring staff are familiar with emergency procedures and trained in spill kit usage.
- Having the authority to suspend works if environmental measures are not being followed.

5.5.3 All Site Personnel

Site personnel appointed by the Contractor are responsible for:

- Complying with Environmental Control Measures and site-specific Method Statements.
- Following the Health and Safety Plan.
- Immediately reporting any incidents, such as spills or unauthorized discharges, to the Environmental Manager and Construction Manager.

6 Environmental Considerations

The key potential environmental impacts associated with the proposed development and construction works are outlined in Section 7. The relevant sensitive receptors, such as habitats and wildlife, are identified.

Natura 2000 encompasses both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), established to protect key environmental sites within Europe:

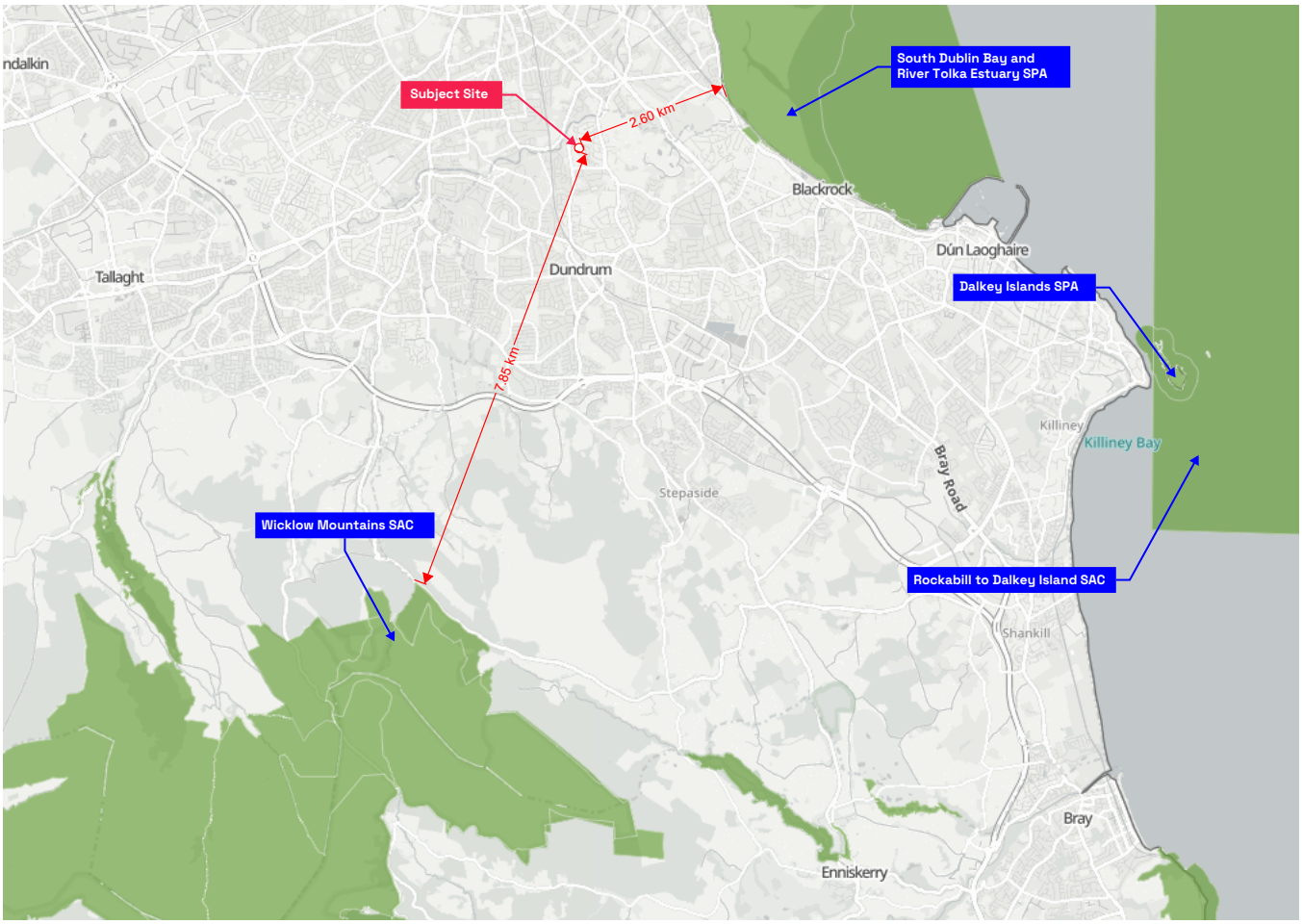
- SPAs (Special Protection Areas): These are designated under the EU Birds Directive (Directive 2009/147/EC) and aim to protect wild birds and their habitats.
- SACs (Special Areas of Conservation): Designated under the EU Habitats Directive (Directive 92/43/EEC), SACs are established to conserve important habitats, species, and overall biodiversity across Europe.

Although no SACs or SPAs are located within immediate proximity to the site, it is important to note the distance to key Natura 2000 sites:

- **Wicklow Mountains SAC:** Located 7.85km to the south
- **South Dublin Bay and River Tolka Estuary SPA:** Situated 2.6km to the northeast.
- **Dalkey Island SPA:** Situated 10.5km to the east.
- **Rockabill to Dalkey Island SAC:** Situated 11km to the east.

The proximity of these Natura 2000 sites, though not directly affected by the construction activities, requires careful consideration in terms of preventing potential impacts on the broader ecological network. Figure 6.1 illustrates the locations of the SPA and SAC relative to the development site, helping to visualize their distances and context.

Fig 6.1 - Site Location in Relation to SAC's and SPA's



7 Environmental Management Plans

A number of environmental management plans (EMP) have been prepared for managing the impacts of Construction Activities associated with the development. These plans are to be implemented by the Project Manager and/or Project Contractor as relevant.

7.1 EMP 1: Management of Excavations

This section outlines the measures for managing all excavation activities on the site.

General Guidelines

- Machinery will be confined to designated areas and will not operate outside of these limits.
- Vehicle movement will be restricted to the development's approved footprint.
- The appointed contractor will assess the suitability of excavated material for reuse, ensuring proper handling, processing, and segregation.
- Excavated soils will be stockpiled using methods to minimize weathering effects. Dust generation, groundwater infiltration, and runoff will be managed during reworking.
- A qualified professional will monitor excavations to identify and segregate any contaminated materials (e.g. nitrocellulose or asbestos).
- These will be stored in areas safe from runoff or infiltration, avoiding contamination of clean soils on-site.
- Excavated material will be reused for landscaping and re-profiling within the project area.
- Any surplus suitable material not required for the development will be directed to other projects if approved.
- Machinery will not operate directly on stockpiled soils.
- Equipment and materials will be stored only in approved locations (e.g. the site compound) and positioned to avoid surcharging existing or new slopes.

Responsibilities

- The Environmental Manager will monitor excavation areas, and associated drainage.
- The Construction Manager will oversee vehicle movements during the construction phase.
- The Project Manager will supervise the excavation phases and machinery movements across the site.
- All construction personnel will be informed of measures to prevent pollution of watercourses.
- The Design Engineer and Sub-contractors will take on specific responsibilities as required.

Final allocation of responsibilities will be determined by the appointed contractor.

7.2 EMP 2: Surface Water Run-off Control

This plan outlines the measures for managing surface water and runoff on the site to protect watercourses and the surrounding road network (Dundrum Road), with a focus on sediment and erosion control.

General Guidelines

- Implement erosion control to prevent runoff flowing across exposed ground and become polluted by sediments.
- Implement sediment control such as silt-traps to slow down runoff allowing suspended sediments to settle in situ.
- Implement the erosion and sediment controls before starting site clearance works.
- Minimise area of exposed ground by maintaining existing vegetation that would otherwise be subject to erosion in the vicinity of the embankments and keeping excavated areas to a minimum.
- Avoid working near drains during or after prolonged rainfall or an intense rainfall event and cease work entirely near drains when it is evident that pollution is occurring.
- Install a series of silt fences or other appropriate silt retention measure where there is a risk of erosion runoff to drainage channels.
- Provide recommendations for public road cleaning where needed particularly in the vicinity of drains.

Responsibilities

- The Environmental Manager is tasked with implementing suitable measures to prevent water pollution. If standards are not met and corrective actions are required, an investigation must be conducted in collaboration with the Construction Manager.
- Additionally, the Environmental Manager must ensure that spill kits are accessible.
- The Construction Manager, or their delegate, is responsible for keeping spill kits well-stocked and notifying the Environmental Manager when supplies have been used.

Final allocation of responsibilities will be determined by the appointed contractor.

7.3 EMP 3: Fuels and Oil Management

This plan describes measures for the management of all fuel and oils on site.

General Guidelines

- To prevent hydrocarbons from entering existing drains and local watercourses, refuelling of construction machinery and vehicles will only occur in designated areas.
- Refuelling will be done using double-bunded mobile bowsers with a 110% capacity, operated by trained personnel. These bowsers will be equipped with spill containment gear, and operators will be fully trained in its use.
- Only vehicles and machinery that are mechanically sound will be allowed on site to minimize the risk of oil leaks.
- Delivery vehicles will be visually inspected for major leaks to reduce potential hazards.
- Contractors delivering concrete and crushed stone will be required to use roadworthy vehicles as part of their contractual agreement.
- For crane operations, the crane supplier will be contractually obligated to ensure the cranes are well-maintained, serviced, and free of leaks before bringing them to the site.
- In the event of an oil leak or spill, immediate containment will be ensured using oil spill kits, and any nearby dirty water drain outlets will be blocked with oil-absorbent booms until the spill is cleaned up and the contaminated material is removed and disposed of at a licensed facility.
- The Environmental Manager will be promptly notified of any oil leaks or spills. They will assess the cause, oversee the clean-up, inspect nearby drains for contamination, and initiate further clean-up if required.
- Easy access to oil spill kits will facilitate swift action. Kits containing absorbent pads and socks will be available at the site compound and kept in site vehicles and machinery.

- All vehicle and machinery operators will be trained in the proper use of spill kits, as well as in the containment and clean-up of oil spills. This training will be provided during site induction by the Environmental Manager.
- In the case of a major oil spill, a specialist company that provides rapid response services for fuel spills will be contacted immediately.
- Their contact details will be available in the site office and within spill kits in vehicles and machinery.

Responsibilities

The Construction Manager and Environmental Manager are responsible for ensuring that fuel and oil are managed according to this procedure. The Appointed Contractor, when updating the CEMP, must designate personnel to handle tasks related to fuel and oil management as outlined.

7.4 EMP 4: Wheel Wash Management

This plan outlines measures for protecting watercourses and public roads from contamination by dirty water from construction vehicles.

General Guidelines

The Appointed Contractors will minimize the risk of road contamination from heavy vehicle traffic by implementing the following measures:

- A wet/dry wheel wash facility will be installed at the site entrance.
- The wheel wash facility will be cleaned and maintained as needed.

Responsibility

The Construction Project Manager will oversee the implementation of these measures.

7.5 EMP 5: Waste Management

This plan outlines the measures for managing all waste generated during the construction of this residential development.

General Guidelines

General Waste:

- Access to materials will be controlled, and a dedicated storage area will be established in the site compound for materials.
- Access to stored materials will be restricted, with the site compound securely fenced and locked when not in use.
- Multiple skips will be provided for waste management: one for recyclables and others for various construction waste. These will be emptied as needed by a licensed waste management company.
- Waste oil and oil drums will be stored in containers on a bounded tray within the storage area.
- Work will be carried out in phases, and at the end of each phase, unused materials or waste will be cleared, stored for reuse, or disposed of appropriately.

Wastewater:

- Any wastewater will be removed from the site and taken to a licensed facility.

Responsibility

- The Environmental Manager will be responsible for identifying a waste contractor for recycling and reuse. They will also maintain records of all waste removed from the site.
- The Construction Manager will be responsible for organizing the removal of full skips from the site.

7.6 EMP 6: Construction Noise Management

This plan outlines measures for managing construction noise impacts.

General Guidelines

Control of Noise at Source:

- All plant and equipment will be regularly and properly maintained.
- Compressors, if required, will be 'sound-reduced' models with acoustic covers that are properly lined, sealed, and kept closed while in use.
- All vehicles and machinery will be equipped with effective exhaust silencers.
- Best practices, as outlined in BS5228 –1&2:2009 + A1 2014, Code of Practice for the Control of Noise and Vibration on Construction and Open Sites, will be followed during construction to minimize noise and limit disturbances to nearby residents.
- All plant and equipment will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations 1996 (SI 359/1996) and other applicable regulations.

Responsibility

- The Construction Manager will be aware of noise-sensitive areas and will notify the Environmental Manager in advance of work near these locations.
- The Environmental Manager will review any relevant planning conditions when updating this noise management plan.

7.7 EMP 7: Dust Management

This plan describes the measures for the management of nuisance impacts on air quality from construction generated dust.

General Guidelines

Dust prevention measures shall be included for control of any site airborne particulate pollution.

- A regime of "wet" road sweeping can be set up to ensure the roads around the immediate site are as clean and free from dirt/dust arising from the site, as is reasonably practicable.
- Footpaths immediately around the site can be cleaned by hand regularly, with damping as necessary.
- Scaffolding to be cleaned regularly. Netting can be provided to enclose scaffolding at sensitive areas of the site.
- Vehicle waiting areas or hard standings can be regularly inspected and kept clean.
- Vehicle and wheel washing facilities can be provided at the site exit where practicable. If necessary, vehicles can be washed down before exiting the site.
- Internal combustion plant should not be left running unnecessarily.
- Where possible fixed plant such as generators should be located away from residential areas.
- The number of handling operations for material should be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates should be carried out using covered/sheeted lorries.
- Vehicles loading should be dampened down and drop heights for material to be kept to a minimum.
- Dust dispersal over the site boundary should be minimised using static sprinklers or other watering methods necessary.
- Stockpiles of material should be kept to a minimum and may be sheeted or watered down. These should be located away from sensitive boundaries.
- Equipment and techniques for cutting/ grinding sawing/sanding etc. which minimise dust emissions and which have the best available dust suppression measures, should be employed.
- Where possible pre-mixed plasters and masonry compounds should be used to minimise dust arising from on-site mixing.

Responsibilities

The Contractor shall monitor dust levels in the vicinity of the site in accordance with planning conditions. Records shall be kept of such monitoring for review by the Planning Authority. The minimum criteria to be maintained shall be the limit for Environmental Protection Agency (EPA) specification for licensed facilities in Ireland, which is 350mg/m^2/day.

The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project.

7.8 EMP 8: Site Environmental Training and Awareness

This plan outlines measures for training all site personnel and construction teams who may have an impact on environmental protection and relevant control measures.

General Guidelines

An initial environmental induction and ongoing training will be provided to communicate the key elements of the CEMP to all site personnel. Open communication will be encouraged to foster a culture of environmental responsibility. The following key points will be shared with site staff:

- Environmental procedures outlined in the CEMP.
- Information on environmental buffers and exclusion zones.
- Guidelines for housekeeping of materials and waste storage areas.
- The Environmental Emergency Response Plan. Housekeeping and Storage of Hazardous Materials.
- Hazardous materials labelled with specific symbols will be securely stored in a designated container within the site compound.
- Subcontractors will supply Material Safety Data Sheets (MSDS) for all hazardous substances brought on-site.
- All CEMP policies related to managing fuels, oils, concrete, and controlling sediment, erosion, and drainage will be strictly followed and communicated to the site personnel.
- Environmental training, including spill kit usage and silt fence installation, will be provided by the Appointed Contractor, with training records maintained in the site office.

Responsibility

- Environmental Manager
- Construction Manager
- All site personnel

Details of the induction and training programs will be finalized by the Appointed Contractor.

7.9 EMP 9: Monitoring and Auditing

This plan outlines measures for environmental monitoring during construction and auditing of control measures to ensure environmental protection.

General Guidelines

All mitigation measures, planning conditions, and relevant construction methods will be monitored on-site. The Appointed Contractor will designate an Environmental Manager to oversee the works. The Environmental Manager will use audit checklists to regularly inspect the site's control measures and ensure continuous environmental protection.

Monitoring will be conducted to ensure compliance with the following minimum requirements:

- EMP-1 Management of Excavations
- EMP-2 Surface Water Run-off Control
- EMP-3 Fuels and Oils Management
- EMP-4 Wheel Wash Management
- EMP-5 Waste Management
- EMP-6 Construction Noise
- EMP-7 Dust Management
- EMP-8 Site Environmental Training and Awareness
- EMP-10 Environmental Accidents, Incidents, and Corrective Actions
- EMP-11 Environmental Complaints

Audit checklists for daily, weekly, or monthly site inspections will be finalized by the Environmental Manager, and relevant personnel will be informed of their responsibilities. These checklists will confirm proper storage of fuel, compliance with waste management rules, maintenance of environmental buffers, effective surface water run-off controls, and adherence to the concrete chute wash-out procedure. The final checklists will be integrated into the Contractor's finalized CEMP.

All environmental records, including completed checklists, will be stored at the site office.

Responsibility

- Project Manager
- Environmental Manager
- Construction Manager
- Project Ecologist

Details of the induction and training programs will be finalized by the Appointed Contractor.

7.10 EMP 10: Environmental Accidents, Incidents and Corrective Actions

This plan outlines measures for documenting, investigating, and resolving any environmental accidents or incidents that occur on-site.

General Guidelines

- The Environmental Manager or Construction Manager will be informed immediately if there is an incident with potential environmental impacts (e.g. minor oil spills or blocked drainage pipes).
- The Emergency Response Plan and standard emergency procedures will be implemented to control the situation and prioritize safety, preventing injury or loss of life.
- Work in the affected area will cease, and the Environmental Manager will be summoned to evaluate the situation and determine the appropriate initial response and corrective actions.
- After the situation is brought under control, the environmental accident or incident will be documented, and the cause will be investigated.
- Remedial actions will be taken to mitigate damage and prevent recurrence.
- Corrective measures will be communicated to all personnel and subcontractors, particularly if the incident leads to changes in procedures.

Examples of Environmental Accidents & Incidents:

- Major fuel or concrete spills from a delivery truck (emergency response needed).
- Minor fuel or oil leaks.
- Waste or debris left in undesignated areas.
- Breaches of ecological, archaeological, or watercourse buffer zones.
- Failure of control measures (e.g., silt fences damaged during a storm).
- Concrete chute washouts in unauthorized areas.
- Unplanned vehicle movement off designated access tracks.

- Unauthorized vehicle movement within a buffer zone.

Responsibility

- Site staff must immediately notify the Environmental Manager or Construction Manager of any incidents with potential environmental consequences.
- The Environmental Manager is responsible for informing relevant authorities.

Details of the Environmental Accidents, Incidents, and Corrective Actions Procedure, including a chain of responsibility, will be finalized by the Appointed Contractor and communicated to all personnel and subcontractors.

7.11 EMP 11: Environmental Complaints

This plan outlines measures for documenting and addressing complaints from third parties, such as local residents or members of the public.

General Guidelines

All environmental complaints, whether internal or external, will be recorded and investigated. Immediate action should be taken to resolve complaints, where necessary, to prevent inconvenience to the community or environmental harm.

This procedure involves:

- Logging complaints in the Site Log.
- Investigation and follow-up by the Environmental Manager or relevant site representative.
- Implementation of any necessary remedial actions.
- Continued communication with the complainant to confirm the issue has been resolved.
- Providing any necessary training or updates to site personnel and subcontractors in response to the complaint.

Responsibility

- Project Manager
- Environmental Manager
- Construction Manager

Details of the Environmental Complaints Procedure will be finalized by the Appointed Contractor.

8 Auditing, Monitoring and Response

8.1 Environmental Monitoring Schedule

The Environmental Monitoring Schedule will take into account all mitigation measures as well as any relevant planning conditions specified in the planning permission. The schedule for construction will also include inspections of equipment, material storage, transfer areas, and specific environmental controls.

A Preliminary Monitoring Schedule is outlined below (Table 8.1) and will be finalized upon the appointment of the Contractor. The daily site checklists developed by the Contractor must include, at a minimum, the following details:

The Contractor will assign an on-site Environmental Manager to oversee daily construction activities. Responsibilities will include completing the required checklists (Table 8.2) and coordinating with relevant personnel (e.g., Project Ecologist, Design Engineer) to ensure all environmental monitoring is conducted properly.

Table 8.1 - Preliminary monitoring Schedule

Aspect	Monitoring Required	Frequency	Responsibility
Water (Sediment & Erosion Controls)	At least weekly during construction and after significant rainfall events	Refer to Table 3 below	Environmental Manager
Water (Fuel & Oil Storage)	Daily	Refer to Table 3 below	Environmental Manager
Ecology (Material and Waste Storage)	Daily	Refer to Table 3 below	Environmental Manager
Water (Water Quality Monitoring)	Fortnightly	Minimum parameters: pH, Suspended Solids, metals, nitrates, phos-phates	Environmental Manager

Table 8.2 - Site Inspection Checklist

Area of Inspection	Environmental Hazards
Silt Filters	Missing filters Blocked filters due to sediment build-up
Post and wire boundary fence	Signs of movement (i.e., not aligned properly) Damaged or collapsed sections
Adjacent land to the development	Presence of waste Presence of construction equipment Detection of invasive species identified during preconstruction survey
Site Roads	Excessive sediment or silt on the road surface Presence of waste
Site compound – storage area	Damage Disorganization
Site compound – waste collection area	Damage Disorganization Full skips
Site compound – oil storage area	Damage to containers or equipment Leaks Unsecured storage containers
Dry wheel wash	Sediment accumulation
Wastewater facilities	Holding tank requiring emptying
Site entrance	Excessive sediment or silt on the road surface Presence of waste

8.2 Environmental Performance Indicators

The Appointed Project Contractor will define key performance indicators to assess effective site management in preventing pollution and protecting the environment.

- At a minimum, the environmental performance indicators will include:
- Number of environmental incidents recorded
- Breaches of procedures and corrective actions taken
- Number of environmental complaints received
- Results from site audits

The appointed contractor will finalize these indicators and communicate them to all personnel and subcontractors. The schedule for reviewing the site's performance indicators must also be established.

8.3 Response Procedure

In case of an environmental incident, procedure breach, or complaint, an investigation must be carried out to determine contributing factors, and corrective actions must be taken. The contractor will ensure the following steps:

- Inform the Project Manager, PSDP, and Client of any incidents, breaches, or complaints, and record them in the incident/complaint register.
- The Project Manager will conduct or coordinate an investigation to identify the factors leading to the non-compliance.
- The Project Manager will notify and work with relevant site personnel, such as the Site Environmental Manager or Project Ecologist, as needed.
- If required, the Project Manager will inform the appropriate regulatory authority, depending on the nature of the incident.
- The details of the incident will be recorded on an Incident/Complaints Form, which will document the cause, extent, actions, and remedial measures taken, along with any recommendations to prevent recurrence.
- The Project Manager will oversee the implementation of corrective actions, such as investigative reports, alternative construction methods, or environmental sampling, and advise the Main Contractor accordingly.
- The Site Project Manager will ensure the relevant environmental management plans and procedures are updated as necessary.

8.4 Corrective and Preventive Action

Corrective Action Requests will be issued to ensure timely action is agreed upon and implemented, addressing any deviations from CEMP requirements or other environmental issues effectively.

9 Summary and Conclusion

9.1 Summary

The Construction Environmental Management Plan (CEMP) for the Mount St MAry's residential development in Dundrum, Co. Dublin, provides a framework for managing environmental impacts during construction. The plan includes Environmental Management Plans (EMPs) focused on areas such as surface water runoff, erosion control, fuel and oil management, waste disposal, noise, dust, and training.

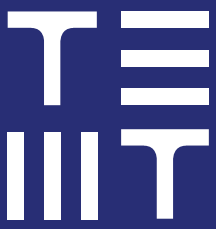
Preventive measures include installing erosion and sediment controls before site clearance, using designated refuelling areas to prevent hydrocarbon pollution, and implementing waste segregation and disposal systems. Vehicle and machinery maintenance, along with silt fences and wheel-washing facilities, reduce the risk of contamination to watercourses and public infrastructure. Noise and dust management strategies are in place to limit the impact on local residents and comply with regulations.

The Environmental Manager and Construction Manager are responsible for overseeing environmental compliance, conducting audits, managing incidents, and providing training to staff. Procedures for responding to environmental incidents and complaints are established to ensure timely corrective actions.

9.2 Conclusion

The CEMP for the Mount St Mary's residential development sets out a structured approach to managing environmental risks during construction. By providing specific guidelines for erosion control, waste management, noise and dust reduction, and training, the plan addresses potential environmental challenges. The allocation of responsibilities, along with continuous monitoring and auditing, supports compliance with environmental regulations. Successful execution of the CEMP will depend on adherence by the contractor and site personnel to these measures, aiming to minimize environmental impact and ensure the development proceeds responsibly.

TENT ENGINEERING



TENT ENGINEERING