



# Construction Environmental Management Plan

## Company name:

Cairn Homes Construction Ltd.  
45 Mespil Road,  
Dublin 4,  
D04 W2F1.

## Site address:

Clonburriss Tile 3,  
Clondalkin, Co Dublin

## Date compiled:

Revision 1: November 2023

Revision 2:

Revision 3:


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ISSUE NO	DATE	DESCRIPTION OF AMENDMENTS	REVIEWED BY	APPROVED BY
01	Oct/2023	Creation of Document	Francis Kelly	Tommy Carey

## 1.0 Scope




Figure 1: Site Layout.

This Construction Environmental Management Plan (CEMP) has been prepared by Cairn to support the development of Clonburris Tile 3, Clondalkin, Co. Dublin.

The development comprises the construction of 157 no. dwellings on a site of c.3.45 hectares in the Clonburris South West Development Area of the Clonburris Strategic Development Zone. The development comprises 81 no. houses, including 3 no. two-bedroom houses, 64 no. three-bedroom houses, and 14 no. four-bedroom houses. These will be two-story houses with private open space and parking. Furthermore, the apartment building (Block 1) will comprise 76 no. units across 4 storeys, featuring 30 no. 1-bedroom and 46 no. 2-bedroom units.

The development will be accessible from the permitted street under SDZ21/0022, the permitted Clonburris Southern Link Street (SDZ20A/0021), and R113 (Fonthill Road) to the east. The development will also include ancillary site development works such as footpaths, landscaping, boundary treatments, public and private open space areas, car parking (170 spaces), and bicycle parking (170 spaces). Additionally, there will be single-storey ESB sub-stations, bin and bicycle stores, and all ancillary site development/construction works.

The site will work out of the centralised compound that is located onsite. All staff and contractors will park in the designated area (as shown below) and access site through a biometrically operated access point.

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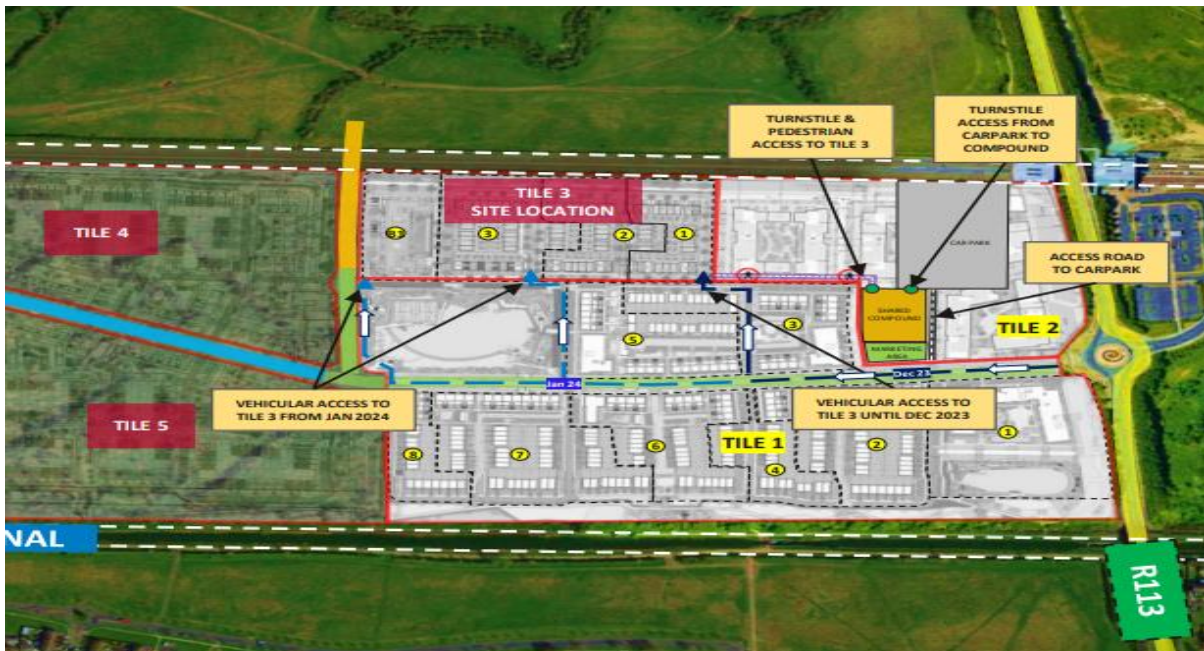


Figure 2: Tile Map.

## 2.0 Purpose

The purpose of this CEMP is to provide an environmental framework to aid and allow site management during all phases of the construction, implementing best practise environmental management on site. Cairn will manage and ensure mitigation to all levels of environmental risk onsite which will minimise negative environmental impacts during the construction phase of the development. The construction phase will include all site preparation enabling works, material delivery, waste management, engineering works and all construction activities.

This CEMP will outline all requirements with regard to environmental management on site. This will include appropriate mitigation, monitoring, inspecting and reporting of all environmental impacts the development has the potential to cause. Compliance with the CEMP will ensure the smooth running of the site and will enable all works to proceed in line with all legislation and bylaws relating to construction activities.

The CEMP has been produced as part of the planning application to ensure compliance with legislative requirements and to implement mitigation measures outlined in the Environmental Impact Assessment Report (EIAR) that has been identified for the development. This document is a live document and will be updated as required if processes and risk associated with the development change during the works. A copy of the most recent version will be available on 'ZUTEC'.

This CEMP provides a framework to:

- Outlines the best practise environmental management for this development during the construction phase.
- Identify and Implement mitigation measures identified in the EIAR



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- Identify the relevant roles and responsibilities for all involved in the environmental management of the site for the duration of the construction phase; and
- Outline the procedures for all environmental aspects in relation to communication and reporting throughout the construction phase.

### 3.0 Structure

This CEMP has been structured as the following:


- Section 1: Introduces the development and outlines the purpose of the CEMP
- Section 2: Describe in detail the development
- Section 3: Overview of the main responsibilities and communication procedures through which successful environmental management will be achieved
- Section 4: Outline the procedures to be employed during the construction phase to manage all environmental impacts; and
- Section 5: Review of environmental impacts outlined in the developments EIAR and how all mitigation measures will be implemented throughout the site

### 4.0 Project Description

#### Characteristics of the Site



Figure 3: Site Location.

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The development site is situated within the Clonburris/Cappagh townland, approximately 10.2km southwest of Dublin City Centre and 1.75km southwest of the M50 motorway. The site is currently in a greenfield state, forms a part of the larger Clonburris Strategic Development Zones (SDZ) lands, which span approximately 280 hectares in the western part of Dublin, as seen in Figure 2.

The SDZ lands are divided from east to west by the Kildare railway and the Grand canal lies to the south, while two strategic roads run through them - the Grange Castle Road, located at the centre of the site, and the Fonthill road, situated to the east. The Grange Castle Business Park is located to the south of the SDZ lands, while the adjacent northwest boundary of the SDZ land is shared with the Adamstown SDZ.

There are hedgerows within the development site boundary. The development site is located within the Liffey and Dublin Bay Catchment (Catchment ID: 09) and the Liffey\_SC\_090 sub catchment. There are no watercourses within the site boundary, with the nearest watercourse being the manmade Grand Canal, located approximately 292m to the south of the site. A drainage ditch for Irish Rail infrastructure is present on the boundary of the site and this is to be reviewed with interested parties.

There are a number of dry drainage ditches found in the southern section of the site and standing water was found to be present in the ditches in the northern section and along the northern boundary. Additionally, there is a drainage ditch running parallel to the railway line. The Grand Canal pNHA (Site Code: 002104) is situated about 285m south of the site. The River Camac (EPA Code: 09C02 – Order 4), the nearest natural watercourse, is located approximately 1.34km southeast of the site, as shown in Figure 3.

The development site is situated in the Liffey and Dublin Bay Catchment (Catchment ID: 09) within the Liffey\_SC\_090 subcatchment. There are no watercourses within the site boundary. However, the manmade Grand Canal is located approximately 292m south of the site. On the site boundary, there are several drainage ditches. In the southern section of the site, the drainage ditches were dry; however, in the northern section and along the northern boundary, there was standing water present in the ditches. The Grand Canal pNHA (Site Code: 002104) is located about 285m south of the site. The nearest natural watercourse, River Camac (EPA Code: 09C02 – Order 4), is situated about 1.34km southeast of the site, as shown in Figure 3.




Figure 4: Site Development Surrounding Environment.

The development site boundary does not contain any Annex I habitats listed under the EU Habitats Directive. Upon thorough observation, it was found that the site does not have any flora species protected under the Flora (Protection) Order (1999, as amended 2015), listed in the EU Habitats Directive (92/43/EEC), or listed in the Irish Red Data Books, nor does it have any suitable habitat for such species. Moreover, no invasive species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. 477/2011 were observed on the site. All species recorded on the site are commonly found in the Irish landscape.

The development site of Clonburris T3 is mainly used as a commuting route and foraging area for bats. A total of five bat species were recorded in the bat surveys conducted at this site. As part of the development, a lighting plan and landscape plan will be implemented. In addition, recommended bat mitigation measures will be put in place, such as constructing a bat box scheme and establishing a new eastern boundary. Due to extensive landscape mitigation measures and a proposed dark corridor within the Grand Canal Park, the development is not expected to have significant negative effects on local bat populations.

Rural / Urban	Rural
Area to North of site	Undeveloped lands and the Dublin-Cork railway line
Area to South of site	Grand Canal to the south.
Area to East of site	The R113 (Fonthill Road) to the east and the
Area to West of site	Undeveloped lands
Rivers in the vicinity	Yes Grand canal is 285 m south of the site.
Any SAC, SPA or NHA in vicinity	The Grand Canal pNHA (Site Code: 002104) is located approximately 285m.
School, houses, business nearby	New housing development Parkleigh in Seven Mills
Known archaeological sites	Yes (Monument is classified as an Enclosure)
Contaminated ground sites	No



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## 5.0 Development

The development comprises the construction of 157 dwellings on a site of c.3.45 hectares in the Clonburris South West Development Area of the Clonburris Strategic Development Zone. The development comprises 81 no. houses, including 3no. two-bedroom houses, 64 no. three-bedroom houses, and 14 no. four-bedroom houses. These will be two-story houses with private open space and parking. Furthermore, the apartment building (Block 1) will comprise 76 no. units across 4 storeys, featuring 30 no. 1 - bedroom and 46 no. 2-bedroom units.

The development will be accessible from the permitted street under SDZ21/0022, the permitted Clonburris Southern Link Street (SDZ20A/0021), and R113 (Fonthill Road) to the east. The development will also include ancillary site development works such as footpaths, landscaping, boundary treatments, public and private open space areas, car parking (170 spaces), and bicycle parking (170 spaces). Additionally, there will be single-storey ESB sub-stations, bin and bicycle stores, and all ancillary site development/construction works.

## 6.0 Environmental Management

As part of the environmental management for the Clonburris Tile 3. Cairn and all subcontractors will be required to comply with all relevant environmental legislation and adhere to all national guidelines and codes of practise to achieve environmental compliance throughout all phases of the construction phase of the development.


This CEMP will set guidelines to achieve a good environmental performance throughout the construction phase and will outline all necessary steps to mitigate against and monitor all environmental impacts highlighted in the EIAR. All Cairn management and subcontractors must review this CEMP to ensure environmental compliance is achieved for all aspects associated with the site.

## 7.0 Responsibilities

### Leadership Team

The Leadership Team is ultimately responsible for environmental management within the company and is specifically responsible for:

- Ensuring adequate resources are in place
- Ensuring the environment is considered as important as all other business functions and that this message is communicated
- Leading by example and promoting behaviours that support the company's positive environmental culture
- Setting environmental objectives and targets and reviewing progress towards them
- Ensuring the environmental management system is implemented across the business, and reviews its performance as required

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- Performing reviews of environmental performance; and
- Reviewing and approving the Environment Policy.

### **Construction Manager**


The Construction Manager is responsible for environmental performance on the construction project and is specifically responsible for:

- Defining roles and responsibilities within the development
- Leading by example and promoting behaviours that support the company's positive environmental culture
- Reviewing environmental performance of the development
- Promoting and championing the environment
- Ensuring adequate resources are in place
- Taking part in performance reviews as required; and
- Identifying contractors that have a likeminded view of the environment as Cairn when appointing them.

### **Environmental Project Lead**

The Environmental Project Lead is the competent person providing advice on environmental management on all developments and is specifically responsible for:

- Prepare and maintain the site Construction Environmental Management Plan
- Providing support to the Leadership Team, H&S Team, Construction Manager and all required departments within Cairn as required for the completion of the works
- Providing advice to Site Teams when planning and carrying out work
- Leading by example and promoting behaviours that support the company's positive environment culture
- Overseeing that site and works comply with Cairn Environmental Procedures and all required legislation.
- Liaising with the on-site teams to ensure that environment impacts are identified, and control measures are put in place.
- Performing proactive and reactive monitoring of control measures as required on a site-by-site basis.
- Performing regular audits in order to review compliance with the Company environmental procedures and work specific plans.
- Providing feedback to management team on environmental matters
- Facilitate communications with the external auditors and regulatory bodies to aid the external environmental audit process
- Environmental Communications and liaisons with the councils, Cairn Teams and all interested parties
- Maintain a detailed understanding of current environmental legal and requirements applicable to Cairn

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- Maintain documentation of the site/work specific Environmental Management Plans, Waste Management Plans and Environmental Emergency Response Plans; and
- Investigating non-compliance activities, recording findings and ensuring corrective and preventative actions are taken within the agreed timescales.

### Health and Safety Officer


The Health and Safety Officer is present onsite in a full-time capacity and is present to ensure all measures outlined in the CEMP are being applied throughout the site. they will be specifically responsible for:

- Providing support to the Environmental Project Lead
- Providing support to site management to achieve operational requirements with consideration for environmental controls at all times
- Conducting site audit and inspections to ensure that site practices comply with the Cairn Environmental procedures
- Leading by example and promoting behaviours that support the company's positive environment culture
- Promoting realistic and achievable environment compliant working practices
- Carrying out environmental monitoring and supporting the preparation of routine reports
- Providing advice and support in relation to environmental incidents
- Ensuring that works are carried out in accordance with environmental best practice and current environmental legal and regulatory requirements
- Attend site meeting "White Board Meeting" and identify any potential risk to environmental receptors
- Review Method Statement so that all environmental risk is mitigated against
- Identify in site induction any high-risk environmental receptors for site; and
- Report all environmental complaints to the Environmental Team in a timely manner.

### Site Management

Site management is all the construction team that is present on a specific development. All personnel within the construction team are responsible for ensuring that project/site works are carried out in accordance with the site-specific Construction Environmental Management Plan, environmental legal and regulatory requirements and in an environmentally responsible manner. These controls include but are not limited to the following:

- Ensure the Environmental Management System is adhered to Environmental performance within their work area
- Leading by example and promoting behaviours that support the company's positive environment culture
- Working collaboratively with Environmental Project Lead and Health and Safety Officer
- Record all environmental interaction from the site on the site tracker

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- Reviewing non-compliance activities, ensuring corrective and preventative actions are taken within the agreed timescales
- Ensuring those under their supervision are aware of their environmental responsibilities
- Ensuring the importance of environmental compliance is communicated within their area of responsibility
- Supporting Environmental Project Lead on environment matter
- Liaising with the on-site contractors to ensure that environmental management controls are considered
- Investigating non-compliant activities, recording findings, and ensuring corrective and preventative actions are taken within the agreed timescales
- Participate in the assessment of site-specific environmental aspects and impacts and the stipulation of the appropriate control measures required; and
- Have a clear understanding of the Cairn environmental legal and regulatory requirements

### **8.0 Sub-Contractors (including Consultants and Specialists)**

All Contractors employed by Cairn will be responsible for following all environmental requirements outlined during the Company induction and in the work/site specific Environmental Plans. In addition, all Sub Contractors have a specific duty to:

- Take a proactive role in assessing the Company's Environmental performance and suggesting ways via their manager in which improvements can be made.
- Carry out all works in accordance with the site/work specific Environmental Plans and in an environmentally responsible manner.
- Report all defects in plant, equipment, and tools as soon as possible to their immediate supervisor
- Report any non-compliant environmental acts to their immediate supervisor as soon as possible
- Report all non-compliant environmental activities to site management; and
- Be aware of actions to be taken in the event of an environmental emergency.

### **9.0 Communication Procedures**

Cairn will take all necessary steps to engage with stakeholders and the surrounding community who may be potentially affected by the construction phase of Clonburriss Tile 3. Communication with the local community and South Dublin County Council must be frequent prior to the commencement of construction works and an appropriate communication level must be maintained throughout the construction phase. Where communications are related to environmental issues, the Environmental Project Lead will be notified and engaged with.



Cairn will ensure that local residents, businesses, general users of the area and relevant stakeholders are notified in advance of construction activities that may affect them.

All notifications will detail the nature, estimate duration and working hours. All notifications will include a project specific contact number to which any enquiries can be directed to and dealt with. Cairn will be responsible for preparing and issuing the notifications.


An emergency contacts list will be established and circulated around all personnel working on site. The contacts list must be placed prominently on site as well as suitable locations where construction activities are ongoing. This contacts list must include key environmental representatives that may need to be contacted in the case of an environmental incident.

Site Contact Details	
Site Manager	Tommy Carey (086 7013860)
Contracts Manager	Sean Ferguson (086 4410361)
Site Foreman	Philip Noble (086 6080606)
Environmental Health and Safety Manager	Francis Kelly (086 6080594)
Health and Safety Manager	Derek Roche (087 7370267)
Health and Safety Officer	Brian Quinn (086 7778261)

## 10.0 Enquiries & Complaints

Cairn will need to establish a process for handling all enquiries and complaints. All enquiries must be recorded and logged and include a detailed response and action taken. This log will be available upon request for South Dublin County Council and relevant stakeholders and Cairn personnel. All complaints and enquiries must be dealt with in a swift manner.

All Cairn environmental personnel must be notified of any complaints and queries that have been raised. Where necessary, Cairn environmental representatives will be responsible for notifying for South Dublin County Council and relevant stakeholders if a complaint is made.

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## 11.0 Site Specific Controls

- Project specific significant environmental aspects and impacts and associated control measures shall be communicated to Sub-Contractors and the site management during induction and site-specific training prior to commencement of works
- Details relating to significant project environmental aspects and impacts associated control measures may be communicated to current or potential clients. All information provided to clients must be reviewed by the Environmental Project Lead, prior to despatch to ensure accuracy
- Other environmental information may be submitted to clients as required
- Client requests in relation to environmental data shall be passed to the Environmental Coordinator for assessment, review and planning. Approved records shall be provided to the client electronically in an agreed format
- An Environmental Alert may be initiated because of one of the following:
  - A change in the Environmental policy
  - A change in Environmental legislation
  - Following an environmental incident
- All persons working for or on behalf of Cairn shall be trained in relation to actions to be taken in the event of an environmental emergency as per Emergency Procedure
- Prior to commencement of sub-contract work for Cairn, the sub-contractors are requested to agree to all contract requirements as detailed In Pre-Start meetings and correspondence
- Sub-Contractors are made aware of the Environmental Policy, Procedures and associated environmental control measures at site prestart meeting and site inductions; and
- Additional Environmental awareness information in relation to persons working for and on behalf of Cairn shall be addressed during regular Toolbox Talks and Environmental Alerts.

## 12.0 Environmental Management Procedures

### Training, Awareness and Competence

Cairn will be required to employ personnel with appropriate qualifications, skills and experience necessary to carry out all necessary works during the construction phase. A baseline level of environmental awareness must be established amongst Cairn staff and with all subcontractors before the commencement of any works. The Cairn induction will identify high level waste management for the site works. Key site-specific environmental considerations will be identified in the site-specific induction for site and will be incorporated into all aspects of construction works if they have the potential to negatively affect the surrounding environment.

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Site briefings and talks will be carried out on a regular basis to ensure that construction staff are aware of site progress and if there are any potential environmental issues associated with such progress.

### **Environmental Monitoring**

Environmental mitigation and monitoring will be carried out in accordance with legislative requirements, best practice and in line with the site EIAR so that construction activities are carried out in a manner that does not have a negative environmental impact. Suitable monitoring will need to be carried out in accordance with planning requirements and the advice from a hired external specialist consultant (where required for works) and in accordance with the specifications outlined in the site CEMP.

The results of all environmental monitoring will be reviewed by the Environmental Project Lead and saved in the correct site-specific folder on 'ZUTEK'. This will enable the Environmental Project Lead to monitor site performance, foresee trends of exceedances and enable corrective actions as necessary. Reports will be issued as required for compliance with site **requirements, external bodies or senior management.**

### **Environmental Inspections**


Environmental Inspections will be carried out onsite as required for the works and will be monitored daily by all Cairn site teams. This will be incorporated in their daily site walks and review with all issues identified to be closed out. External audits are carried out on Cairn sites on a monthly basis and this incorporates an environmental review of the site. Depending on the site, a specific number of environmental inspections may be required to ensure all mitigation measures on site are being effectively implemented and maintained. The routine inspections will be appropriately documented by the personnel appointed to carry out the environmental inspection. All records will be stored on 'ZUTEK' and easily assessable to Cairn management and stakeholders.

Depending on the potential risk and nature of the monitoring required on site, a site environmental audit may be carried out by an external specialist consultant on a monthly basis to review the implementation of all mitigation measures present on site. The consultant will be required to provide a list of areas to improve upon which the Environmental Project Lead will be responsible to manage and oversee.

The requirements for an Environmental Consultant will be identified by Cairn and where required employed for the works.

## **13.0 Incident Response**

Corrective actions are measures that must be implemented if there is a non-conformance/exceedance on environmental criteria. If this is the case on site, an investigation must be carried out by the Environmental Project Lead to identify the cause of any non-conformances. Appropriate actions must be taken to enable

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compliance with environmental criteria to limit further exceedances. Where new measures are implemented, the CEMP will be updated accordingly.

#### 14.0 Environmental Incidents

Environmental incidents are an occurrence of an incident that gives rise to potential significant negative environmental effects on site. All environmental incidents no matter how small must be reported to Cairn site management as soon as is reasonably practicable. Examples of environmental incident include but are not limited to:

- Circumstance with the potential for environmental pollution/runoff
- Emergencies that give rise to environmental effects such as spillages
- Malfunction of site environmental mitigation measures/protection systems; and
- Fuel / Oil or chemical spillage.

#### Spill Control

Every effort will be made by Cairn and subcontractors to limit spill incidents on site associated with fuel/oil or chemicals. The following steps will provide an outline on how to respond to an oil/fuel spillage on site:

- Identify and stop the source of the spill and alert all personnel working in the vicinity
- The Environmental Project Lead must be informed about the spillage so appropriate action can be taken
- Eliminate any source of ignition if applicable to the spill
- Contain the spill using the correct spill control measures
- Cover/bund off any vulnerable areas that are in the vicinity
- Clean up as much as possible using the correct spill control measures; and
- Appropriate stakeholders must be informed (Local Authority, EPA, Department of Communications, Climate Action and Environment and National Parks and Wildlife Services).


All environmental incidents must be appropriately investigated, recorded, and reported by the Environmental Project Lead and all necessary site-specific Cairn personnel must be notified.

#### Environmental Records

Cairn is responsible for maintaining easily accessible environmental records which includes monitoring, test results and environmental plans. All records must be kept up to date on 'ZUtec' and made available for routine audits and inspections. Cairn will maintain the following environmental records which will be made available to relevant stake holders and relevant Local Authorities:

- Construction Management Plan
- Monthly environmental reports



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- Record of environmental incidents
- Register of environmental complaints
- Environmental inspection checklist/reports
- Easily accessible monitoring figures
- Waste trackers/figures
- Excavated material trackers; and
- Health and safety records.

## 15.0 Environmental Management

### Overview

Cairn is aware of its responsibilities to prevent, reduce and mitigate any potential environmental impact that may arise during the construction phase of future developments. Cairn is liable to carry out best practise environmental management across all sites ensuring all environmental legal and regulatory requirements are adhered to from day one of construction. This CEMP will set guidelines to achieve a good environmental performance throughout the construction phase and will outline all necessary steps to mitigate against and monitor all environmental impacts highlighted in the site specific EIAR.

This section will outline the main environmental requirements identified in the EIAR for Clonburriss Tile 3.


It must be noted that the contents of this section provide a summary of the minimum requirements that should be implemented throughout the site during the duration of the construction phase. All measures highlighted must be discussed with relevant Cairn personnel in order to support the identification of environmental issues associated with the site.

A summary of all environmental plans (Waste Management, Dust Minimisation/Noise Vibration Management Plan etc.) will be included in this section to provide a baseline understanding of the mitigation measures required on site.

### Population and Human Health

Population and Human Health refers to the surrounding community who may be adversely affected by the construction phase of Clonburriss Tile 3. Cairn will take all the necessary steps to engage with stakeholders prior to the commencement to construction works and create an appropriate communication level throughout the construction phase.

*Cairn is responsible for implementing the following mitigation measures in relation to the impact population and human health caused by Dust nuisance during construction phase of this development.*

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- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic
- Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and / or windy conditions
- Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads
- Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20 kph, and on hard surfaced roads as site management dictates
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods
- During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.

*Cairn is responsible for implementing the following mitigation measures in relation to the impact population and human health caused by **Noise & Vibration** nuisance during construction phase of this development.*

- Site compound will be located in excess of 30m away from sensitive receptors within the site constraints. The use lifting bulky items, dropping and loading of materials within these areas should be restricted to normal working hours
- For all materials handling ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials
- Selection of quiet plant/location of plant; plant which will have the least impact in term of noise will be selected
- Plant will only be left running during works and will be switched off at all other times. Plant will not be left idling
- Hours of work - all construction related works, other than emergency works and security will be carried out during normal construction working hours
- Works will not be undertaken outside of normal working hours without the written permission of the local authority; and
- Provision of a 2m hoarding around the site.

*Cairn is responsible for implementing the following mitigation measures in relation to the impact population and human health caused by **Construction Traffic** during construction phase of this development.*

- Signage will be displayed in the adjoining areas directing the heavy plant and deliveries to the site entrance

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- Signage will be erected on the outside of the site entrance gates and on the public road approaching the site entrance
- Signage will be displayed in accordance with section 7 – Safety at Roadworks and in accordance with the traffic management plans prepared in advance of any road works outside the site boundary
- The site access points will be clearly highlighted for public vehicular and pedestrian traffic.

### **Biodiversity**

This section refers to the development at Clonburriss Tile 3. potential impact on the surrounding environment with a focus on biodiversity. This section gives an insight into the baseline receiving environment and focusses on the flora and fauna found in close proximity to the site or are found on site at present. Here the predicted impacts will be scoped out with mitigation measures recommended before works commence on site and throughout the construction phase.

Cairn is responsible for implementing the following mitigation measures in relation to biodiversity during construction.

- *Habitat Loss – Mitigate by replacement.*
    - The new development will include landscape planting with a range of native and non-native species. Although a high value, category A tree is not directly replaceable in the short or medium-term, the site as a whole will retain its biodiversity value due to this compensation planting
  - *Mortality to animals during construction – Mitigate by avoidance.*
    - The removal of treeline and scrub vegetation must not take place between March to August
  - *The following measures must be taken from the bat survey report:*
    - “Trees, which are to be removed, will be felled during the autumn months of September, October or November (felling during the spring or autumn months avoids the periods when the bats are most active). Prior to tree removal, a resurvey of the trees proposed to be felled will be undertaken in consultation with the tree surgeon. This will allow a plan to be formulated in relation to tree felling. Surveying of trees, including a Phase II survey (closer examination of the trees) and dusk/dawn surveys of trees to determine their bat usage is recommended prior to felling and to inform the felling plan
  - Briefing of all site contractors regarding the sensitivity of the watercourses within the site and the need for strict site management in relation to potential runoff
  - A visual assessment is recommended prior to felling and a felling plan should be undertake in consultation with the tree surgeon
- Pollution during construction – mitigation by reduction

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## Land and Soils

This section refers to the geological and hydrological impacts associated with the development during the construction and operational stages. A detailed description of the existing geological and hydrological environment will be provided in the EIAR and details of the potential impacts associated with the construction and operational stage will be assessed. Cairn has developed an in-depth Excavated Material Management Procedure that will be used for guidance across all sites. This plan will provide a basis to track and trace all excavated materials leaving Cairn sites. The plan will help prevent waste by planning for excess soil and stone material to be used onsite or as a by-product and not discarded as waste unless it is necessary to do so.

In order to prevent/minimise potential significant impacts to soils, surface water and groundwater, a number of mitigation measures will be adopted as part of the construction works on site. The main areas of potential impact and mitigation measures are set out below:

- Control of soil excavation and fill placement works
- Fuel and chemical handling, transport and storage
- The use of lime, concrete and cement during foundation construction
- Surface water runoff during the construction phase
- Sources of fill and aggregates for the project
- Temporary storage of soil will be carefully managed in such a way as to prevent potential negative impact on the receiving environment
- Spoil and temporary stockpiles including stone stockpile areas will be positioned in locations which are distant from drainage systems and retained drainage channels, away from areas subject to flooding so as not to cause potential run off to soil and groundwater
- Minimise movements of materials within the stockpiles in order to reduce the degradation of the soil structure
- Designating a bunded storage area at the contractor's compound for all oils, solvents and paints used during construction. All containers within the storage area will be clearly labelled so that appropriate remedial action can be taken in the event of a spillage. When moving drums from the bunded storage area to locations within the development a suitably sized spill pallet will be used for containing any spillages during transit
- Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in a designated area which will be away from surface water gullies or drains. Spill kit facilities will be provided at the fuelling area in order to provide for accidental releases or spillages in and around the area. Any used spill kit materials will be disposed of as hazardous waste using a hazardous waste contractor



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- Ready-mixed concrete will be brought to the site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil; and
- The pouring of concrete will take place within a designated area to prevent concrete runoff into the soil/groundwater

### Water

This section refers to the hydrological impacts associated with the development. A detailed assessment of the existing hydrological environment will be included in the EIAR and details of the potential impacts associated with the construction phase and operational phase will be included.

During the construction phase, the mitigation measures will ensure that no sediment contamination, contaminated runoff or untreated wastewater will enter watercourses on or near the site. Drains carrying high sediment load will be diverted through settlement ponds. Surface water runoff from working areas will not be allowed to discharge directly to the local watercourses. To achieve this, the drainage system and settlement ponds should be constructed prior to the commencement of major site works.


- Excavations will only remain open for the shortest possible time to reduce groundwater ingress silt traps will be placed around the site to reduce silt loss and these will be inspected and cleaned or replaced regularly.
- Runoff from spoil heaps will be prevented from entering watercourses by diverting it through the on-site settlement ponds and removing material off-site as soon as possible to designated storage areas.
- Runoff from spoil heaps will be prevented from entering watercourses by diverting it through the on-site settlement ponds and removing material off-site as soon as possible to designated storage areas.
- Stockpiles of earth are sealed and bermed onsite
- There is to be no storage of any fuel types within 10m of river
- All fuel is to be bunded and drip trays used during re-fuelling; and

### Air Quality and Climate

This section provides the measures that shall be implemented during the construction and operational phase and into the design of the development to minimise the impacts on the receiving environment, local population and human health, livestock and agricultural lands, local flora and fauna, local businesses and on climate.

*“Cairn is responsible for implementing the following mitigation measures in relation to Air Quality and Climate during construction. All measures can be found in the Dust Minimisation Management Plan.*

- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic

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- Any road that has the potential to give rise to fugitive dust must be regularly watered by a road sweeper, as appropriate, during dry and / or windy conditions
- Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads
- Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20 kph, and on hard surfaced roads as site management dictates
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods
- During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.

#### **Noise and Vibration**

This section provides an understanding of the baseline noise levels associated with the site before works commence. Site wide mitigation measures may be required with regular monitoring during the construction phase also. A Construction Phase Noise Management Plan (Appendix 6.5) shall be introduced to help reduce noise being produced by the site.

*Cairn is responsible for implementing the following mitigation measures in relation to noise and vibration during construction.*

- Site compound will be located in excess of 30m away from sensitive receptors within the site constraints. The use lifting bulky items, dropping and loading of materials within these areas should be restricted to normal working hours
- For all materials handling ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials
- Selection of quiet plant/location of plant; plant which will have the least impact in term of noise will be selected
- Plant will only be left running during works and will be switched off at all other times. Plant will not be left idling
- Hours of work - all construction related works, other than emergency works and security will be carried out during normal construction working hours
- Works will not be undertaken outside of normal working hours without the written permission of the local authority; and
- Provision of a 2m hoarding around the site.

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### Landscape and Visual

The remedial measures proposed revolve around the implementation of appropriate site management procedures – such as the control of site lighting, storage of materials, placement of compounds, delivery of materials, car parking, etc. Visual impact during the construction phase will be mitigated somewhat through appropriate site management measures and work practices to ensure the site is kept tidy, dust is kept to a minimum, and that public areas are kept free from building material and site rubbish.

*The primary proposed mitigation measures in relation to landscape are as follows:*

- Site hoarding will be erected around the site boundary creating a boundary between the site and public view
- The areas set aside for open spaces will be fenced off with no compounds or storage of materials taking place in these areas, in accordance with an agreed Construction and Environmental Management Plan
- To ensure the successful retention of trees and hedgerows, an Arborist is recommended to be retained by the contractor or developer to monitor and advise any works within the Root Protection Zones of retained trees

### Traffic and Transportation


Cairn is responsible for implementing the following mitigation measures in relation to traffic and transportation during construction. All Cairn staff and subcontractors must adhere to all measures outlined in the Traffic Management Plan

- Signage will be displayed in the adjoining areas directing the heavy plant and deliveries to the site entrance
- Signage will be erected on the outside of the site entrance gates and on the public road approaching the site entrance
- Signage will be displayed in accordance with section 7 – Safety at Roadworks and in accordance with the traffic management plans prepared in advance of any road works outside the site boundary
- The site access points will be clearly highlighted for public vehicular and pedestrian traffic


### Waste Management

Cairn is required to implement the following in relation to waste management on site during construction. All waste generated on site must be tracked and traced on a monthly basis and uploaded onto the site-specific folder on 'ZUTE'. All measures in relation to waste management can be found in the Waste Management Plan (Appendix 6.2).

- Waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source

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- All waste receptacles leaving site will be covered or enclosed
- Panda Waste Ltd. Will be responsible for removing all waste generated by Cairn
- All soil will be screened and segregated as per composition. Tests will be carried out to indicate soil composition for the site. It is proposed to re-use as much of the excavated material as if scientifically and structurally possible
- When material is to be removed off-site it could be reused as a by-product (and not as a waste). If this is done, it will be done in accordance with Article 27 of the *European Communities (Waste Directive) Regulations 2011*
- Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Article 27
- If the material is deemed to be a waste, then removal and reuse/recycling/ recovery/disposal of the material will be carried out in accordance with the *Waste Management Acts 1996 – 2011* as amended, the *Waste Management (Collection Permit) Regulations 2007* as amended and the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended
- Where silt and petrochemical interception are required, silt and sludge waste arisings will be collected by a suitably permitted contractor and removed offsite to a suitably authorised facility.
- The majority of concrete blocks, bricks, tiles and ceramics generated as part of the construction works are expected to be clean, inert material and should be recycled, where possible
- As hard plastic is a highly recyclable material, much of the plastic generated will be primarily from material off-cuts. All recyclable plastic will be segregated and recycled, where possible
- Timber that is uncontaminated, i.e., free from paints, preservatives, glues etc., will be disposed of in a separate skip and recycled off-site
- Metals will be segregated, stored in skips and recycled where possible
- Plasterboard from the construction phase will be stored in a separate skip, pending collection for recycling
- Glass materials will be segregated for recycling, where possible
- Any Waste Electrical & Electronic Equipment will be stored in dedicated covered cages/receptacles/pallets pending collection for recycling.
- Where any other recyclable wastes such as cardboard and soft plastic are generated, these will be segregated at source into dedicated skips and removed off-site
- C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and some cardboards, will be placed in separate skips or other receptacles. Prior to removal from site, a member of the waste team will inspect the skip to determine if recyclable materials were accidentally placed in there by mistake

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- On-site storage of any hazardous wastes produced (i.e., contaminated material if encountered and/or waste fuels) will be kept to a minimum, with removal off-site organised on a regular basis; and
- All waste will be documented prior to leaving the site. Waste will be weighed by the contractor, either by weighing mechanism on the truck or at the receiving facility. These waste records will be maintained on site by the nominated project Waste Manager

### **15.0 Archaeology**


All topsoil stripping onsite is to be monitored by an archaeologist. The following is to be adhered to for the completion of the works:

- Preliminary digging is to be carried out in controlled manner and requires monitoring
- Any archaeological evidence must be conveyed to the national museum of Ireland; and
- No archaeological artefacts etc. to be removed from site.

### **Storage of Fuels and Materials**

The following rules apply to site for storage of fuel and chemicals:

- All Jerri cans, water containers & hazardous liquid containers to be labelled
- Jerri cans to be stored in an upright secure position
- Jerri cans / hazardous liquids to be stored on drip trays or bunds to ensure that fuel spillages are fully contained when not in use
- Ensure all materials are stored to prevent damage, deterioration & loss
- Ensure the area is tidy and free from litter at all times
- Ensure plant is in good working condition. No evidence of leaks/spills
- Drip trays to be used when refuelling all plant/machinery
- Always use a spout or funnel when refuelling with a Jerri can
- Fuel Bowsers:
  - All fuel bowser to be double skinned and has a bund attached
  - Care will be taken when refuelling with the bowser
  - The drip tray provided will be used when refuelling
  - The hose will be replaced back into the bund after use; and
  - Please note the spill kit for the bowser is located in the stores nearby

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**16.0 Appendix**  
**Environmental Emergency Response**

<b>Project Name:</b>	Clonburris Tile 3.		
<b>Contracts Manager</b>	Sean Ferguson (086 4410361)	<b>Site Manager:</b>	Tommy Carey 086 7013860
<b>Date and version of plan:</b>	24.11.23	<b>Person responsible for plan:</b>	Cyrr Julius Estember
<b>Summary of Activities</b>			
<b>DEFINITIONS</b>			
<b>Incident</b>	An unplanned event which includes loss, damage or pollution.		
<b>Near Miss/Hazard</b>	An unplanned event which does not cause environmental pollution or damage but could have or has the potential of doing so.		
<b>Site Specific Instructions:</b>			
<ol style="list-style-type: none"> <li>1. The CEMP includes controls for potential environmental receptors on site.</li> <li>2. All potential environmental receptors will be identified to site team and contractors at site induction</li> <li>3. All incidents to be reported to Cairn site Management immediately on happening</li> <li>4. All fuel storage area to be double bunded and have crash protection in place</li> <li>5. Concrete wash areas are sealed, and all water is pumped to sediment tank before been discharged off site.</li> <li>6. All water must pass through the sediment tank before been discharged off site.</li> <li>7. Stockpiles of earth are to be sealed and have berms erected on the boundaries to prevent excess runoff and deterioration of soil</li> <li>8. There is to be no storage of <b>any</b> fuel types within 10M of river.</li> </ol>			
<b>Incident Management</b>			
As soon as the incident occurs/has been dealt with and all measures have been put into place to protect the crew, the public and the surrounding environment the Cairn Environmental Project Lead must be contacted to report the incident that has occurred.			
<b>Reporting of Incident</b>			
NOTE: If any advice or assistance is needed call the Environmental Project Lead Francis Kelly on 086 608 0594			
	Identify the Incident that has occurred		
	identify the measures that have been taken to control the incident		
	Even where the incident has been fully and successfully dealt with, the Project /Contract Manager must notify the Environmental project lead as soon as practicable possible.		
	In the event of a significant Emergency Cairn Environmental project lead will notify the Environmental Health and Safety Manager immediately. The notification will be by phone call or text message as soon as possible.		
	The Environmental Health and Safety Manager shall also notify the appropriate Regulatory Authorities.		



<b>CAIRN</b> PLC	No:	TEMPLATE - 11	Version:	01	Effective Date:	10.11.23
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This Emergency Response Plan must be relayed to all site staff and must be posted on the main site office / yard notice board.

### EMERGENCY ASSISTANCE

The Project /Contracts Manager will contact the following (as required) in the event of an emergency:

Emergency Contact	Contact Number
Fire Brigade/Gardaí/Ambulance	999 or 112
ESB Emergency Service	1850 372 999
Gas Networks Ireland Emergency Service	1850 205 050
Health and Safety Authority	01 614 7000
Health and Safety Manager	086 608 0594
Site Health and Safety Officer	086 777 8261
Spill Response and Pollution Control - Rilta	01 4018 000

#### EXAMPLE: ENVIRONMENTAL INCIDENT (loss, damage or pollution)

Fuel /hazardous liquid material spill to ground / water

Contaminating general waste with hazardous waste (egg aerosols / oily rags)

Excessive dust from road cutting (not using water suppression)

Excessive noise causing disturbance / complaints

Black smoke emitting from plant / machinery

Damage to trees / tree roots

#### EXAMPLE: NEAR MISS/HAZARD (event which does not cause pollution or damage, but could have done)

Fuel container tipping over but not spilling its contents

A missing sign from a skip / bin

Not having a tree fenced off when carrying out works in close proximity

Excessive mud on a roadway

Pumping water from site with no control measures in place

Fuel containers not stored on a drip tray

Not having a spill kit onsite / in the crew van

Over hanging branches in the vicinity of works

Fuel / water containers without labels

Discovering unidentified contaminated land

Discovering an invasive plant species e.g. Japanese Knotweed