

# **Ballyholme Yacht Club (BYC) Watersports Centre**

**Outline Construction  
Environmental Management  
Plan (oCEMP)**

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May 2026

Outline Construction Management Plan (oCEMP)

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|--------------------------------------|--------------------------------------------|
| Prepared by:                         | Prepared for:                              |
| <b>TetraTech</b>                     | <b>Ards and North Down Borough Council</b> |
|                                      |                                            |
|                                      |                                            |
| 74 Boucher Road,<br>Belfast BT12 6RZ |                                            |
| E                                    |                                            |

# BYC Watersports Centre – Outline Construction Environmental Management Plan (oCEMP)

| ROLE                                                                                  | COMPANY | NAMED CONTACT | CONTACT DETAILS |
|---------------------------------------------------------------------------------------|---------|---------------|-----------------|
| Projects Manager                                                                      | TBA     | TBA           | TBA             |
| Construction Manager                                                                  | TBA     | TBA           | TBA             |
| Environmental Manager                                                                 | TBA     | TBA           | TBA             |
| Mechanical & Electrical                                                               | TBA     | TBA           | TBA             |
| Site Supervisors                                                                      | TBA     | TBA           | TBA             |
| Site Personnel                                                                        | TBA     | TBA           | TBA             |
| Principal Contractor                                                                  | TBA     | TBA           | TBA             |
| Health & Safety Representative<br>(May be combined with<br>Construction Manager role) | TBA     | TBA           | TBA             |
| Other specialists as required (e.g.<br>geotechnical, drainage/civil<br>engineer)      | TBA     | TBA           | TBA             |

**NIEA Pollution Incident Hotline Number**

**0800 80 70 60**

**Any spillages / pollution incidents should be reported to the NIEA water pollution hotline within 30 minutes of the incident occurring unless it is not safe to do so**

**THE FINAL CEMP WILL BE ADOPTED BY THE APPOINTED CONTRACTOR FOR THE SCHEME. THE CONTRACTOR WILL ADHERE TO ALL MITIGATION AND MANAGEMENT MEASURES SET OUT IN THIS DOCUMENT. THE FINAL CEMP WILL CONTAIN ALL PREVIOUSLY AGREED MITIGATION MEASURES AS DETAILED IN THE SUBMITTED SUPPORTING DOCUMENTS.**

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# 1 Introduction

## 1.1 Purpose of this Document

RPS was commissioned by Ards and North Down Borough Council (ANDBC) to provide planning and environmental consultancy services in respect of the Proposed Redevelopment of lands at Ballyholme Yacht Club, Seacliff Road, Bangor BT20 5HT.

This document contains all the appropriate environmental mitigation and management techniques to help ensure no significant impacts are caused to the environment during the construction phase of the Proposed Redevelopment. It is a **'live'** document and may be updated as the project progresses. This OCEMP sets out the minimum requirements which will be adhered to during the construction phase of the Proposed Redevelopment.

The following report can be read in conjunction with the following appendices:

- **Appendix A: Proposed Redevelopment Plans**
- **Appendix B: Preliminary Construction Methodology**
- **Appendix C: Proposed Drainage Plans**

## 1.2 Site Location

The Proposed Redevelopment is located at Ballyholme Yacht Club, Seacliff Road, Bangor, a site location map is shown in **Figure 1.1**. The Proposed Redevelopment is located in a predominately residential area. Kingsland Park and Garden, Kingsland Table Tennis Club and Kingsland Care Centre are all located West of the site and Ballyholme Bay and Ballyholme Park are to the East.



**Figure 1.1: Site Location**

### 1.3 Site Surroundings

The site is located at Ballyholme Yacht Club, which is located off the Seacliff Road, within the settlement of Bangor. It is located on the shoreline of Ballyholme Bay with areas of open space located around the site, including tennis courts, dog play areas and a children's play park. The outer sections of the site are located within the areas identified as Outer Ards Special Protection Area (SPA), Areas of Special Scientific Interest (ASSIs), and Ramsar site.

The Proposed Redevelopment is located in a predominantly residential area with some recreational site such as Kingsland Park and Play to the North and Kingsland Foot/Frisbee Course and Kingsland Table Tennis Club and commercial buildings nearby. Furthermore, to the East of the Proposed Redevelopment is the Irish Sea. **Figure 1.2** below further illustrates the surrounding area.



Figure 1.2: Surrounding Area

### 1.4 Proposed Redevelopment

A description of the Proposed Redevelopment is:

*“Demolition and replacement of Ballyholme Yacht Club clubhouse and boathouse, installation of pv panels to roof, reconfiguration of boat parking, provision of landscaped courtyard and amenity space, relocation of vehicular and pedestrian access, resurfacing and widening of the existing Main Slipway, closure and infilling the existing North Slipway to create new hard-standing area, installation of a rock armour revetment to the northern (full extent) and eastern wall (partial extent) of the North Boatyard, demolition and reconstruction of existing finger jetty to create a new wider solid jetty, construction of a new slipway to the north of the solid jetty, underpinning of North boatyard wall, resurfacing throughout the Club premises and other ancillary works.”*

The Proposed Redevelopment plans are illustrated in **Appendix A**.

## 2 Defining The OCEMP

### 2.1 Purpose of the OCEMP

An OCEMP is a key tool for delivering environmental management during the construction phase. It sets out the mechanisms by which the various construction activities will be managed to comply with the relevant environmental legislation and best practice to minimise the impacts and effects on human receptors and environmental receptors.

It provides the framework for recording environmental risks and defines the measures required to mitigate and monitor construction effects, including the mitigation measures set out in the associated supporting environmental documents and assessments. It also outlines provisions for auditing and reporting and sets out action to be taken to resolve any corrective actions arising during construction. The purpose of the OCEMP is to:

1. Record environmental risks and identify how they will be managed during the construction period;
2. Provide a means of identifying environmental commitments, objectives and targets;
3. Provide a means of monitoring and reporting performance against the objectives and targets;
4. Provide a framework to ensure that all parties are aware of their responsibilities;
5. Establish a checklist of control procedures which can then be integrated into an overall environmental management protocol;
6. Describe how construction activities will be undertaken and managed in accordance with the obligations of environmental legislation and policy, and the requirements of environmental regulatory authorities;
7. Provide detailed environmental mitigation measures for reducing the potential for environmental impacts during pre-construction and construction;
8. Highlights that some activities may require consents or licences;
9. Act as a link and main document reference for environmental issues between the design, and construction stages; and,
10. Ensure the mitigation requirements of the associated environmental assessments are met.

The OCEMP will be a key part of the construction contract to ensure that all mitigation measures, which are considered necessary to protect the environment, prior to construction, during construction and, where relevant, during operation of the Proposed Redevelopment, are fulfilled.

The Projects Manager shall be responsible for ensuring that all contractors manage the construction activities in accordance with the OCEMP. The OCEMP will be fully adhered to by the Appointed Contractor (s). The Projects Manager will have ultimate responsibility for the implementation of the OCEMP and will work to ensure that the activities of its contractors are conducted accordingly. The contractor (s) will be contractually required to comply with all measures set out within the OCEMP.

The OCEMP has been compiled in consideration of DAERA guidance on information required in a OCEMP (<https://www.daera-ni.gov.uk/articles/outline-construction-environmental-management-plan-cemp>) which is as follows:

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- *A final Construction Environmental Management Plan (CEMP) will be developed to avoid, minimise or mitigate any construction effects on the environment;*
- *Such measures should be incorporated in method statements which should identify the perceived risks to the aquatic environment, identify potential pollution pathways, and the mitigation measures to be employed which will negate the risk to any aquatic environment. Some examples of those measures are as follows;*
- *Details of all proposed excavations and construction;*
- *Details of all areas to be used for the storage of substrate/spoil including a suitable buffer between location for storage of excavated spoil and construction materials and any watercourses or surface drain present on site or adjacent to site;*
- *Details of the pollution prevention measures to be employed during construction and operation;*
- *Detailed drawing plans, demonstrating a suitable buffer between location of refuelling, storage of oil/fuel, concrete mixing and washing areas and any watercourses or surface drain present on site or adjacent to site (at least 10m);*
- *A proposed storm drainage plan designed to the principles of Sustainable Drainage Systems (SuDS) in order to minimise the polluting effects of storm water on waterways. Construction of SuDS should comply with the design and construction standards as set out in The SuDS Manual - Construction Industry Research and Information Association (CIRIA) Report C753 (2015);*
- *Regular inspections of machinery onsite; and*
- *Emergency spill procedures in place.*

The DAERA guidance notes that the above list is not exhaustive but should merely be used as a starting point for considerations to be made. Matters contained within this OCEMP are considered appropriate in considering the nature of the Proposed Redevelopment, the construction requirements, and potential environmental effects.

The OCEMP also takes consideration of the content, findings, and recommendations of the CES which was provided in support of the planning applications for the Proposed Redevelopment.

The OCEMP includes all mitigation measures relevant to the construction phase of the Substation. Measures relating to environmental disciplines are included within the OCEMP as follows:

- Section 7: Pollution Prevention and Water Quality
- Section 8: Construction Noise Management Plan
- Section 9: Ecological Mitigation Measures
- Section 10: Geology, Soils and Groundwater
- Section 11: Environmental Emergency Management Plan
- Section 12: Air Quality

## 2.2 Scope of the oCEMP

The scope of the OCEMP covers all environmental effects related to the construction of that phase/section of the Proposed Redevelopment broadly defined as the construction of a site. The term 'construction' in the OCEMP includes all site preparation, demolition, earthworks, waste

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removal and related engineering and construction activities as authorised by the planning authority and associated permissions.

The CEMP will document the Contractor's plans to ensure compliance with its legal and contractual obligations as well as implement best practice in construction environmental management. The CEMP will be applicable to all works associated with that phase/section of the Proposed Redevelopment referred to above, including those carried out by sub-contractors.

### 2.3 Status of the oCEMP

The status of the OCEMP is as follows:

1. This document comprises the OCEMP and has been prepared following submission and consent of full planning of the Proposed Redevelopment.
2. The OCEMP is a 'live' document that can be reviewed on a regular basis and updated and approved where necessary where a change is required to reflect changes in personnel, input, or engagement with statutory bodies, new or changing environmental considerations.
3. The OCEMP will identify any further mitigation methods and control measures to be agreed with key stakeholders, including Northern Ireland Environment Agency (NIEA), The Department of Agriculture, Environment and Rural Affairs (DAERA), local authorities and Department for Infrastructure (DfI), and will be in place before construction begins.
4. The OCEMP may be revised to consider any modifications to the design (subject to any other statutory consents), changes in external factors (for example, regulations or standards), any unforeseen circumstances, and any failings in environmental performance arising from routine inspections.
5. The provisions of the OCEMP will be incorporated into the contracts for construction of the Proposed Redevelopment. It will be a mandatory requirement for all Appointed Contractors all subcontractors to comply with the OCEMP to ensure that best practice is implemented during construction and to safeguard the environment.
6. The requirements of the OCEMP do not remove or overwrite the legal duties, responsibilities, or obligations of all Appointed Contractors (and subcontractors) and other parties in accordance with the contract documents and legislation.
7. The OCEMP is the mechanism for ensuring that the Proposed Redevelopment adopts relevant best practice management techniques for sustainable construction.

### 3 Roles And Responsibilities

#### 3.1 Introduction

The Projects Manager will have overall responsibility for the construction of the Proposed Redevelopment. The full-time Environmental Manager will be responsible for developing the oCEMP and implementing the oCEMP (and its various potential iterations as it is a 'live' document) during construction. Other members of the project team will be assigned specific roles to assist the Project Manager in the implementation of the oCEMP and individual specialists will be appointed to provide expert advice.

Suitably qualified and experienced staff will fulfil the key roles of Projects Manager and Environmental Manager, recognising the significance of the roles and responsibilities. The assigned environmental roles and responsibilities for the relevant project personnel are detailed in [Table 3.1](#).

#### 3.2 Projects Manager

The Projects Manager will have an overall responsibility for the organisation and execution of all related environmental activities as appropriate, in accordance with regulatory and project environmental requirements. The principal duties and responsibilities of this position will include:

1. Overall responsibility for the Proposed Redevelopment and implementation of the OCEMP;
2. Allocating resources to ensure the implementation of the OCEMP;
3. Participating in the management review of the OCEMP for suitability, adequateness, and effectiveness; and,
4. Setting the focus of environmental policy, objectives, and targets for The Appointed Contractor.

#### 3.3 Construction Manager

The Projects Manager will have an overall responsibility for the organisation and execution of all related environmental activities as appropriate, in accordance with regulatory and project environmental requirements. The principal duties and responsibilities of this position will include:

1. Overall responsibility for the Proposed Redevelopment and implementation of the OCEMP;
2. Allocating resources to ensure the implementation of the OCEMP;
3. Participating in the management review of the OCEMP for suitability, adequateness, and effectiveness; and,
4. Setting the focus of environmental policy, objectives, and targets for The Appointed Contractor.

#### 3.4 Environmental Manager

The Environmental Manager will be responsible for, but not limited to, the following activities:

1. Ensuring that the requirements of the OCEMP are developed and environmental system elements (including procedures, method statements and work instructions) are implemented and adhered to with respect to environmental requirements;

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2. Reviewing the environmental responsibilities of other managed Contractors in scoping their work and during contract execution;
3. Ensuring that advice, guidance and instruction on all OCEMP matters are provided to all their managers, employees, construction contractors and visitors on site;
4. Reporting to the Construction Manager on the environmental performance of Line Management, Supervisory Staff, Employees and Contractors;
5. Advising site management (including, but not limited to the Major Projects Manager and Construction Manager) on environmental matters;
6. Maintaining environmental records;
7. Providing guidance for the site team in dealing with environmental matters, including legal and statutory requirements affecting the works;
8. Reviewing environmental management content of method statements;
9. Reporting environmental performance to the Construction Manager;
10. Liaising with statutory and non-statutory bodies and third parties with an environmental interest in the Proposed Redevelopment;
11. Monitoring and completing the waste register and ensuring the correct waste management procedures are implemented;
12. The Environmental Manager will be responsible for ensuring completion of environmental inspection and the recording of incidents;
13. Attending to any spills or environmental incidents that may occur on site;
14. Undertaking site environmental monitoring and walk overs;
15. Ensuring correct procedures are followed in the event of environmental incidents.

### 3.5 Ecological Clerks of Works

The Ecological Clerk of Works (ECoW) will be responsible for, but not limited to, the following activities:

1. Provide direction during both pre-construction and construction in relation to relevant international and national legislation relating to the protection of ecology.
2. Provide direction on the timing of works and the implementation of mitigation and compensation including measures as set out in Section 9 of the OCEMP.
3. Advise on applications for relevant derogation licences and on the location of site offices, material storage areas and site access locations.
4. Monitor identified works and will produce site inspection reports.
5. In accordance with BS 42020:2013 Biodiversity, the ECoW will be a person who has the ecological qualifications, training, skills, and relevant experience to provide specialist advice to site personnel on the necessary working practices required to safeguard ecological features on site, to aid compliance with any consents and relevant wildlife legislation and to undertake appropriate monitoring (BSI, 2013).

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6. The ECoW appointed will be familiar with the Proposed Redevelopment study area and fully aware of the matters identified within the OCEMP, well in advance of construction commencing.
7. Direction of the ECoW will be binding upon the construction / contract personnel, in order to ensure adherence to measures within the OCEMP and / or protection of the environment.
8. There may be more than one ECoW required depending on the specialist advice required throughout the project.
9. A Pre-Construction Protected Species Survey will be carried out by the ECoW to provide the most up to date ecological information; to update the status of protected species to inform appropriate mitigation measures and the need for derogation licences; and to confirm the continued absence of protected species.

### 3.6 Site Supervisors

Site Supervisors are required to:

1. Promote a Health & Safety culture on site, to read, understand and implement the OCEMP;
2. Know the broad requirements of the relevant law in environmental matters and take whatever action is necessary to achieve compliance;
3. Ensure that environmental matters are taken into account when considering Contractors' construction methods and materials at all stages;
4. Be aware of any potential environmental risks relating to the site, plant or materials to be used on the premises and bring these to the notice of the appropriate management;
5. Ensure plant suggested is environmentally suited to the task in hand;
6. Co-ordinate environmental planning of all construction activities to comply with environmental authorities' requirements and with minimum risk to the environment. Give Contractors precise instructions as to their responsibility to ensure correct working methods where risk of environmental damage exists;
7. Where appropriate, ensure Contractors' method statements include correct waste disposal methods;
8. Be aware of any potential environmental risks relating to the Contractors and bring these to the notice of the appropriate management; and,
9. Ensure materials/waste register is completed as appropriate.

### 3.7 Appointed Contractor's Site Manager & Site Personnel

All Contractors, and other site personnel, on the project will adhere to the following principal duties and responsibilities:

1. To support and promote the Health & Safety culture on site.
2. To co-operate fully with the Appointed Contractor and the Environmental Officer in the implementation and development of the OCEMP at the site;
3. To conduct all their activities in a manner consistent with regulatory and best environmental practice;
4. To participate fully in the environmental training program and provide management with any necessary feedback to ensure effective environmental management at the site; and,
5. Adhere fully to the requirements of the site environmental rules.

### 3.8 Team Structure and Distribution List

All personnel working on the project will be responsible for the environmental control of their own work and will perform their duties in accordance with the requirements of the OCEMP (as may be updated) and in compliance with the controls referenced therein. A distribution list for the OCEMP will be developed when all contact names and companies are known. The purpose of the distribution list is to establish communication channels that will enable more effective control of environmental-related issues.

The distribution list will identify individuals and organizations that have received or will receive a copy of the construction stage OCEMP for implementation. The distribution list will be established prior to commencement of construction by the Appointed Contractor. Prior to commencement of construction, all roles and responsibilities will be confirmed in the OCEMP as updated. **Table 3.1** shows project roles and responsibilities – this table will be updated and distributed to all personnel and can act as a template for the distribution list for the OCEMP.

**Table 3.1: Project Roles and Contact Details<sup>1</sup>**

| Role                      | Company | Named Contact | Contact Details |
|---------------------------|---------|---------------|-----------------|
| Project Manager           | TBA     | TBA           | TBA             |
| Construction Manager      | TBA     | TBA           | TBA             |
| Environmental Manager     | TBA     | TBA           | TBA             |
| Site Supervisors          | TBA     | TBA           | TBA             |
| Site Personnel            | TBA     | TBA           | TBA             |
| Ecological Clerk of Works | TBA     | TBA           | TBA             |

<sup>1</sup> The Principal Contractor's Project Manager will fill this out in its entirety.

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|                                                                                                                                                                                                                                                                                                                                  |     |     |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|
| Appointed Contractor's Site Manager                                                                                                                                                                                                                                                                                              | TBA | TBA | TBA |
| Health & Safety Representative (May be combined with Construction Manager role)                                                                                                                                                                                                                                                  | TBA | TBA | TBA |
| Other Specialists as required (e.g. geotechnical, drainage/civil engineer)                                                                                                                                                                                                                                                       | TBA | TBA | TBA |
| <p style="text-align: center;">NIEA Incident Hotline Number</p> <p style="text-align: center;"><b>0800 80 70 60</b></p> <p style="text-align: center;">Any spillages / pollution incidents should be reported to the NIEA water pollution hotline within 30 minutes of the incident occurring unless it is not safe to do so</p> |     |     |     |

The Environmental Manager will support the Construction Manager in managing the provision of environmental training for project personnel in accordance with ISO 14001 System Training Procedure.

The Appointed Contractor(s) has ultimate responsibility for the successful environmental performance of the Substation phase/section of the Proposed Redevelopment through appointment and management of subcontractors and environmental specialists, as required, as detailed in **Table 3.1**. Specifically, this includes:

1. Ensuring compliance by The Appointed Contractor(s) and all sub-contractors with all relevant environmental legislation when carrying out work on the site;
2. Definition of environmental standards and requirements for the contractors throughout the contract stages;
3. Acting as a point of contact for consultation and feedback with landowners/occupiers, statutory and non-statutory consultees, other interested parties and the public;
4. Auditing of the performance of sub-contractors;
5. Environmental monitoring and reporting (in conjunction with Environmental Officer) Environmental issues relevant to the project will be discussed during weekly Site Progress Meetings attended by the Contractor Construction Manager and Environment Manager. Environmental performance will also be discussed at regular Health, Safety, Environmental and Quality (HSEQ) meetings. This will include dissemination and discussion of the findings of audits, environmental reports, and other inspections where appropriate.

Other responsibilities are as follows:

1. Health and Safety - The site will be managed by a full-time project management team who will be responsible for the Health and Safety of all personnel on site.
2. Site Rules - All personnel must comply with the rules and regulations laid down in the appropriate site rules.

## Outline Construction Management Plan (oCEMP)

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3. Induction and signing in and out - All visitors to the site will be required to sign in and out and all personnel working on the site will be subject to an induction by The Appointed Contractor.
4. Training - All construction staff, including sub-contractors, will receive structured training on the requirements of the OCEMP and the associated environmental control plans, as developed. They will also be required to attend a site induction which will include the key environmental issues identified for the Proposed Redevelopment. The briefing will emphasise the methods and working practices which must be employed to protect the environment, including emergency procedures for reporting, and dealing with environmental incidents. Records of training and those attended will also be retained.
5. Be responsible for providing and recording induction training at the commencement of and throughout the construction phase of the project for the construction workforce.
6. Responsibility for providing ongoing environmental awareness training and 'tailgate/toolbox talks' as appropriate for the work being conducted throughout the project;
7. Maintain a record of all training provided and undertaken by all site staff;
8. Preparation of a project specific booklet containing project environmental rules and bullet points summarising good practice. This booklet will be submitted to the Major Projects Manager for review prior to the commencement of the construction phase and upon acceptance, will be issued to all site staff working on the project; and,
9. Production of a Foreman's (Site Supervisor's) Folder containing site rules, the above-mentioned booklet, environmental tailgate/toolbox talks, key environmental constraints; emergency response and reporting procedures and contact details and waste management procedures. The folder will be provided for all foremen (Site Supervisor's) working across the project as it is understood.

## 4 Communications

Effective communication is essential to ensure the appropriate employment of environmental standards and relaying of information, reports/assessments, and data. It shall be the responsibility of the Appointed Contractor(s) to ensure that effective communication, in relation to this document, is carried out. The following points are some of the key forms of communication required:

1. **Statutory and Non-Statutory Bodies** - During the construction works, communication may be required with external parties such as, statutory authorities, interest groups and the public/business owners. Communication may take the form of scheduled meetings, site visits and written correspondence. As the project progresses, there may be a requirement on the Project Manager, its representatives, and the Contractor to clarify potential issues with relevant statutory bodies – including those with an environmental remit
2. Detailed in **Table 4.1** is a list of statutory bodies with an environmental remit within Northern Ireland and the local authority area who may require consultation – during the construction phase of the project. Also provided is a link to their internet sites from which useful information and contact details of these organisations can be obtained. This list will be reviewed by the Contractor, added to or amended if required.
3. **Public/businesses** - The Appointed Contractor's Site Manager shall ensure that the public/businesses are kept informed of operations that may have an effect upon them. This may involve letter drops and meetings to keep local commercial premises owners up to date with progress with the Proposed Redevelopment and any new operations that are to be carried out. The Site Manager will provide details of contacts within the project team for the public/businesses to contact should any issues arise.
4. **Consents, Licences and Permits** - The provisions for controlling, pumping and discharging water will be agreed with the Northern Ireland Environment Agency (NIEA). The Contractor will ensure that any licences required are in place.
5. **Changes in legislation or guidance** - Legislative changes or proposed improvements to manage processes on site that have a bearing on the commitments given in the supporting environmental documents or other consultations will be communicated by the Site Manager to the Project Manager and;
6. **Meetings & Records** - Environmental issues relevant to the project will be discussed during weekly Site Progress Meetings attended by the Appointed Contractor's Site Manager and Environment Manager. Environmental performance will also be discussed at regular HSEQ meetings. This will include dissemination and discussion of the findings of audits, environmental reports and other inspections where appropriate.

**Table 4.1: List of Statutory Bodies with an Environmental Remit within Northern Ireland**

| Organisation                                                          | Web Link                                                                                                                                                                                |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department of Agriculture, Environment and Rural Affairs (DAERA)      | <a href="https://www.daera-ni.gov.uk/">https://www.daera-ni.gov.uk/</a>                                                                                                                 |
| Northern Ireland Environment Agency (NIEA) – Environmental Protection | <a href="https://www.nidirect.gov.uk/contacts/contacts-az/northern-ireland-environment-agency">https://www.nidirect.gov.uk/contacts/contacts-az/northern-ireland-environment-agency</a> |
| Department for Infrastructure - Planning                              | <a href="https://www.infrastructure-ni.gov.uk/topics/planning">https://www.infrastructure-ni.gov.uk/topics/planning</a>                                                                 |

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|                                                      |                                                                                                                                                                                     |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Department for Infrastructure - Rivers Agency</b> | <a href="http://www.riversagencyni.gov.uk/">http://www.riversagencyni.gov.uk/</a>                                                                                                   |
| <b>DAERA Inland Fisheries</b>                        | <a href="https://www.daera-ni.gov.uk/topics/angling-and-commercial-fishing-inland-fisheries">https://www.daera-ni.gov.uk/topics/angling-and-commercial-fishing-inland-fisheries</a> |
| <b>NI Water</b>                                      | <a href="http://www.niwater.com/">http://www.niwater.com/</a>                                                                                                                       |
| <b>Department for Communities</b>                    | <a href="https://www.communities-ni.gov.uk/">https://www.communities-ni.gov.uk/</a>                                                                                                 |
| <b>Ards and North Down Borough Council</b>           | <a href="https://www.ardsandnorthdown.gov.uk/">https://www.ardsandnorthdown.gov.uk/</a>                                                                                             |

## 5 Construction Programme

### 5.1 Proposed Programme of Works

The construction phase programme has yet to be finalised and will be detailed in the construction stage CEMP. However, the proposed phasing plan located within **Appendix A**, illustrates the four phases for the Proposed Redevelopment including:

- Site Phase 1;
- Site Phase 2;
- Site Phase 3a; and
- Site Phase 3b.

This phasing plan displays the locations and order of buildings that are to be demolished and constructed, alongside site and contractor access points. The project construction duration is expected to be circa 24 months.

The Preliminary Construction Methodology is detailed within **Appendix B**.

### 5.2 Construction Hours

It is proposed that the construction hours will be:

- **08:00 to 17:00 Monday to Friday;**
- **From 08:00 to 13:00 on Saturdays,**
- **No construction works on Sundays and Bank Holidays.**

Working hours outside of this regime will only occur in exceptional circumstances, in which these are known in advance (i.e. not under emergency conditions). Discussions will be held with representative of the Councils environment and planning team to ensure that the works can be completed with minimal impact on sensitive receptors.

### 5.3 General Site Set-Up

The following will be considered during site mobilisation:

#### 5.3.1 Site Construction Compound

A secure temporary construction compound will be used to store materials and ancillary welfare facilities during the construction period. The main site compound will be located within the site adjacent to the site entrance. Exact location will be agreed and set out in the pre-construction information document prepared by the Site Manager. Site office accommodation will be standard high-security portable cabins.

The construction compound will be surrounded by a temporary fence to secure the contents. The construction compound will include an HGV turning area, an area for loading and unloading of plant and materials, materials storage, contractor's plant, staff car parking, offices and staff welfare facilities.

All materials and plant associated with the development process will be stored within the footprint of the Site. A loading and unloading area for plant and materials will be provided within the construction compound. The temporary compound will likely (but not limited to) include:

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- Temporary portable buildings to be used for offices, welfare and toilet facilities;
- Containerised storage areas;
- Parking for construction vehicles and workers vehicles;
- Temporary hardcore/gravel hard standing;
- Temporary gated compound; and,
- Wheel washing facilities.

### 5.3.1.1 Waste Disposal

Toilet facilities on-site during construction will be self-contained to be appropriately disposed of off-site by qualified contractors.

### 5.3.2 Plant and Equipment

It is the responsibility of the Principal Contractor to ensure that all plant and equipment used on site is in good condition. Maintenance shall be carried out in accordance with the manufacturers' recommendations or at a greater frequency as operational experience may deem appropriate. In addition:

- All plant should be maintained and checked on a daily basis;
- Exhausts should not discharge directly at the ground;
- Ensure engines should be switched off when not in use;
- Refuelling areas should be located away from public/residential areas; and
- No machinery should enter waterways at any time.

## 5.4 Construction Traffic

All site traffic will be directed to the site entrance by use of temporary directional signage. The most appropriate routes for construction traffic will be agreed with DfI Roads, the PSNI and the Principal Contractor as part of the pre-construction traffic plan and will consider the following factors:

- Avoidance where possible of sensitive receptors such as residential areas;
- Compliance with statutory limits;
- Avoidance, where possible, of narrow roads; and
- Avoidance of hump-backed bridges and roads with steep gradients.

### 5.4.1 Deliveries

Delivery of equipment and materials will be carefully controlled and managed at the site. Access and egress to the proposed area will be managed by the General Contractor. Delivery times will be planned in advance.

Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).

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It is not currently anticipated that any deliveries will be 'abnormal loads' as defined by the Road Traffic (Northern Ireland) Order 1995.

If it does become necessary to deliver an 'abnormal load' then this will be notified in advance to the relevant authorities in accordance with the requirements of the Road Traffic (Northern Ireland) Order. A survey of the delivery route will be carried out in advance and road junctions measured to ensure safe vehicular access.

Parking will not be permitted on public roads or on verges.

### 5.4.2 Site Access

The site will be accessible from the Seacliff Road, Bangor. The interface between the existing road and the development site will have double gates and be staffed by a traffic marshal at all times during site working hours. Segregated pedestrian access routes will be provided at the site entrance and this will lead directly to the site compound.

### 5.4.3 Construction Access Management Measures

Construction HGVs will be subject to a booking system with fixed arrival times. All arrivals will be known in advance as part of the HGV booking system, and all departing HGV movements will be managed on-site to ensure no departing HGVs meet an arriving HGV through the access junction.

The Principal Contractor will erect temporary signage utilising existing street furniture, at locations to be agreed between the Principal Contractor and Site Manager. Temporary signage will be located in the vicinity of the Site accesses on Seacliff Road, Bangor during the construction period to warn drivers of the Site entrance as shown in [Figure 5.1](#) below.



**Figure 5.1: Temporary Signage at Seacliff Road, Bangor**

Additional signage on Seacliff Road, Bangor will advise motorists of HGVs turning through the Site accesses, as shown in [Figure 5.2](#).



**Figure 5.2: Signage to Warn off HGV's Turning**

The Site Manager for the project will undertake the transport co-ordination role for the site. In this respect, their main responsibilities will include:

- Vehicle scheduling;
- Checking for scheduled road works that could disrupt arrivals;
- Handling any complaints; and,
- Acting as a point of contact for employees, contractors and the general public.

### **5.4.3.1 Wheel Washing Facility**

During construction no vehicles, plant or equipment to be washed with detergents within the site. Provision of wheel washing on all site exits and lorry jet washing facilities to ensure all vehicles leave in a clean and safe condition. Dirty wheel wash water will be removed from site by an approved environmental contractor and disposed of in an environmentally friendly manner.

## **5.5 Services**

Note that in relation to working near services such as electricity, gas, water etc, liaison will take place with the service provider.

**All utility services discovered adjacent to the site will be treated as “live” until proven otherwise and the co-ordination of switchovers and temporary disruptions for new constructions will be undertaken in accordance with the standard procedures of the relevant statutory authorities.**

## **5.6 Construction Site Security**

Security during site working hours will be maintained by the use of a marshal at the site entrance point. Out of hours security will be provided by remotely monitored (web accessible) CCTV system at the early stages. This will be supplemented with the use of onsite security personnel during the construction phase of the project and will deter theft and damage.

The fencing line for the construction phase will be shown on the site layout plan. All boundaries of the development will be closed off using security locked temporary fencing, which will be inspected

## **Outline Construction Management Plan (oCEMP)**

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daily and maintained accordingly. Internal access routes and storage compounds will be segregated utilising secured fencing panels or pedestrian barriers as appropriate.

Fire escape routes, firefighting stations, alarm points, muster points and practice drills within the works area will be developed and detailed in the construction phase plan submitted by the Principal Contractor and agreed with the local fire authority. Site management will be responsible for seeing that all plant and materials are stored safely and securely after the workday ends

## 6 Pollution Prevention

### 6.1 Guidance for Pollution Prevention

Guidance for Pollution Prevention (GPPs) provide environmental good practice guidance for the whole UK, and environmental regulatory guidance directly to Northern Ireland, Scotland and Wales. GPP documents are based on relevant legislation and reflect current good practice. Following this, guidance will help manage the environmental responsibilities to prevent pollution and comply with the law. It is a potential criminal offence to either cause or allow a pollution incident to occur.

Following these guidelines will help reduce the likelihood of an incident. If any pollution incident does occur throughout the construction phase please contact NIEA's Incident Hotline on **0800 80 70 60**. The GPP series have been developed in relation to a variety of activities by the Environment Agency (EA), the Scottish Environmental Protection Agency (SEPA) and the NIEA.

**GPPS are downloadable in full from this link:** <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-pgps-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

The full list of GPPs that are appropriate for the Proposed Redevelopment are as follows:

#### 6.1.1 GPP 01: Understanding your Environmental Responsibilities – Good Environmental Practices (Version 1.2 June 2021)

For Northern Ireland, this document provides guidance on environmental legislation. The basis of any good environmental performance is compliance with environmental regulations. You must be aware of your environmental responsibilities and make sure that you operate in a completely legal way.

Safe storage of fuels, oils, chemicals and other materials can be achieved by planning storage areas, using suitable containers, containing leaks and spills and overseeing deliveries. GPP01 also contains information on waste handling, storage and minimisation as poorly managed wastes, including both direct and indirect waste, can pollute the environment. In this context everyone has a duty of care to ensure waste is produced, stored, transported and disposed of without harming the environment. Hazardous or special waste must be dealt with differently to non-hazardous waste. It also covers how to correctly dispose of your waste and measures that must be taken.

Dealing with pollution incidents starts with preparation, planning and training which is discussed in this guidance. It recommends the implementation of plans, analysing risks such as flood and fire risks and having spill kits and pollution control equipment at the ready to ensure that everybody knows what to do in the case of an emergency. Following the guidance in this GPP can help reduce or eliminate the negative impacts that may arise.

Spill kit must be kept on site with sand, earth or commercial products for the containment of fuel and other material spillages. All staff will receive appropriate training in the use of these kits and are to be made aware of where the kit is stored. In the event of a spillage of oils or chemicals resulting in contamination of water courses or damage to habitats, the following procedure will be adopted:

- The appropriate spill kit is to be deployed immediately and the site manager is to be informed.
- The incident is to be recorded within the site logbook.

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- In the event of contaminants being discharged directly to water courses, or in the event of significant spillage (in excess of 10 litres), the NIEA is to be contacted on **0800 80 70 60**.



**Figure 6.1: Example Spill Kit**

A way of ensuring awareness of impacts is to develop a suitable Environmental Management System (EMS). An EMS is similar to other management systems, such as those that manage quality or safety. It assesses business' strengths and weaknesses and helps identify and manage environmental risks/opportunities. This guidance covers the different types of EMS.

### 6.1.2 GPP 02: Above Ground Oil Storage (Version 1.2 June 2021)

This Guidance for Pollution Prevention is written for anyone who:

- Intends to install or replace above ground oil storage tanks
- Has existing oil storage tanks on their site to help look after their oil safely.

Following this guidance will help look after above ground oil storage tanks safely and minimise the risk of causing pollution.

Oil is one of the most common pollutants in the UK therefore it is important to have adequate insurance cover which should include:

- environmental clean-up for accidental oil loss, or deliberate oil loss through vandalism
- a high enough liability limit to cover you if neighbouring land, premises and/or boreholes are affected
- the costs of cleaning up oil on your own property.

Insurers may not settle a claim if the oil tank and associated pipework which leaked did not comply with the applicable oil storage regulations. In Northern Ireland they apply to above ground storage in containers over 200 litres, private domestic oil tanks over 3,500 litres, waste oil storage, and oil stored in buildings.

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Oil tanks connected to fixed combustion appliances, like central heating boilers and cookers, need to comply with the building regulations that apply in the UK. When deciding where to put the tank, environmental high-risk locations should be avoided and areas at risk from flooding. It is important to check which type of oil storage is best suited, recommendations for which are included within the guidance.

There are manufacturing and quality standards for different types of tanks and your tank manufacturer, supplier or installer should advise you on the minimum design and manufacturing standards under the appropriate accredited quality assurance scheme. It should comply with BS EN ISO 9001. These include single skinned tanks, double skinned tanks and integrally bunded tanks. It may be a legal requirement to have secondary containment or bunds, which must hold at least 110% of the volume of oil the tank is designed to contain.

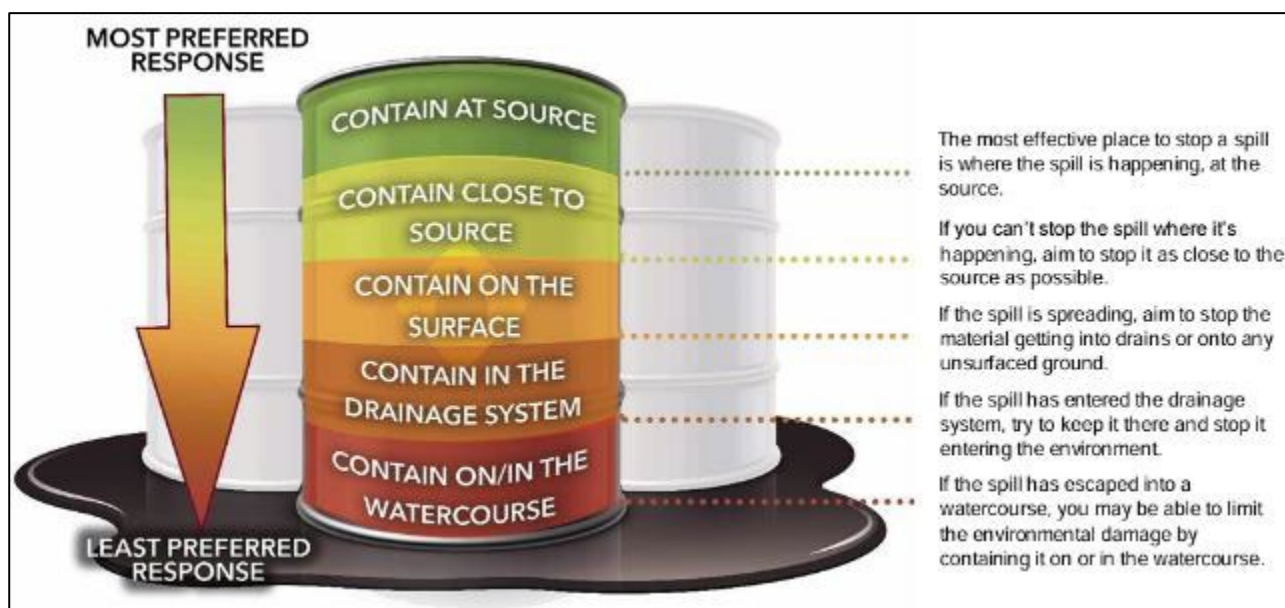
Tanks should be installed by a competent person who is registered with a professional scheme for the type of tank you're having installed.

Valves, filters, sight gauges, vent pipes, or other tank ancillary equipment, not including the fill pipe, draw-off pipe or pumps for oil with a flashpoint less than 32°C, must be within the secondary containment system, so any discharges of oil are retained. In terms of pipework, it is suggested that underground pipework is avoided where possible. All above ground pipework must be protected against corrosion, positioned or protected to minimise the chances of damage by impact or collision and supported so it is secure and can't come loose.

It is essential to ensure safe deliveries to the tank. Tanks should be labelled with the capacity and type of oil they contain. The area around your tank where deliveries are made and, if applicable, oil is dispensed should have an impermeable surface and be isolated from surface water drainage systems.

Oil storage areas should be secured to prevent theft and vandalism. Permanent taps or valves through which oil can be discharged to open areas should be locked when not in use. Display a notice telling users to keep valves, nozzles and trigger guns locked when they're not in use. Pumps should also be protected from unauthorised use. If the Oil Storage Regulations apply, you must ensure you protect the containers and the secondary containment system.

In the event of an oil spill, take immediate action to stop the oil getting into any drains or watercourses or soaking into the ground, as per Figure 6.2. Keep a spill kit with commercial sorbent products, sand or earth close to oil storage areas to deal with spills. All personnel know how to use it safely. If oil soaks into the ground, a professional company should remove the soil soaked in oil, so it doesn't cause long term pollution.



**Figure 6.2: Pollution Control Hierarchy**

### 6.1.3 GPP 03: Use and Design of Oil Separators in Surface Water Drainage Systems (Version 1 March 2022)

Oil separators (also known as oil interceptors) are fitted to surface water drainage systems to prevent pollution from oils and to prevent disruption to sewage treatment works.

In many cases sites change ownership and there is often little information available on the size, type, condition or even existence of separators. New owners or tenants of a site, should establish Baseline Asset information to confirm that any separator/s present on site are fit for purpose and adequately sized and type for the current activities.

Existing sites may move site boundaries, change or move processes on site. Sites should be re-assessed for separator requirement when any significant changes are undertaken to ensure adequate protection is provided.

Separators must have automatic warning devices or alarm systems to provide visual and audible warning (if necessary to a remotely located supervisory point) when the level of oil reaches 90 per cent of the oil storage volume under static liquid level conditions. This automatic warning device tells the operator that the separator is in need of immediate emptying for it to continue to work effectively.

All separators that comply with the European Standard will have been given a nominal size (NS) based on a standard test procedure. The formulae to calculate the nominal size of both a bypass separator and a full retention separator can be found within this guidance as well as the formulae to calculate both the oil storage capacity and silt storage capacity. The minimum working capacity (which excludes any provision for silt deposition) of a separator should be 1,000 litres; though for forecourts, it is likely that risk assessment will indicate the need for a larger separator. For bypass separators, the minimum capacity is defined as the working capacity of the oil separating chamber only.

To prevent pollution and minimise your costs, you need to manage your separator effectively. Every six months, or in accordance with manufacturer's instructions, experienced personnel should:

- Physically inspect the integrity of the separator and all mechanical parts

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- Assess the depth of accumulated oil and silt
- Service all electrical equipment such as alarms and separator management systems
- Check the condition of any coalescing device and replace it if necessary
- Clean the sampling shaft if required.

It covers waste management with reference to the Duty of Care for waste legislation. This section reinstates points from GPP 01 such as dealing with hazardous waste.

### 6.1.4 GPP 05: Works and Maintenance in or Near Water (Version 1.2 February 2018)

This guidance is for anyone carrying out works or activities in or near the water environment. Such activities have the potential to cause pollution, transfer non-native species and can impact on the bed and banks of a watercourse.

Potential environmental risks when working in or near water include:

- Silt
- Cement and concrete
- Chemicals and solvents
- Bridge cleaning debris
- Herbicides
- Invasive Non-Native Species (INNS)
- Waste materials (including hazardous waste or special waste in Scotland)

Even if the works that are carrying out are required because of an emergency, this Guidance for Pollution Prevention should be followed as closely as possible.

Good soil use and management is crucial to preventing silt pollution which is a major cause of environmental incidents. It can harm water quality, damage and kill aquatic life by smothering and suffocation and can cause flooding by blocking culverts and channels.

Activities that cause silt pollution include:

- Run-off from exposed ground/stockpiles
- Plant washing, roads and river crossings
- Dredging
- De-watering/ pumping excavations

Where run off water is contaminated with silt or other pollutants such as oil this water must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment. Discharges to the water environment may require formal approval from the environmental regulator. The choice of method for the treatment and disposal of contaminated water will depend on:

- the volume of water
- the area of land available for storage, treatment or discharge

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- the amount and type of silt
- the presence of other substances in the water
- the conditions of any consent or authorisation.

### Contaminated water treatment and disposal options include:

- Settlement lagoons/tanks

To be effective a settlement lagoon or tank should retain contaminated water long enough for silt to settle out. The length of time will depend on the type of silt

- Filtration

If you do not have the space for lagoons and the water is contaminated with coarse silt only (not fine clay silts), you may be able to use tanks filled with filter material.

- Pump to grassland

This method of disposal is only suitable for water contaminated with silt only and you must have permission from your environmental regulator and landowner.

- Discharge to sewer

Discharges to foul sewer will require the permission of the local water and sewerage provider.

- Tanker off site

If no other disposal routes are available, then contaminated water can be collected by tanker for authorised disposal off-site.

**Concrete, cement and grouts** are very alkaline and corrosive and can cause serious pollution to water. Concrete, cement and grout mixing and washing areas must therefore meet certain requirements which can be found in this guideline. Wash waters from concrete and cement works should never be discharged into the water environment as this could have serious impact on the water quality and ecology.

If it is decided to use a pesticide in or near water, approval is needed from an environmental regulator before use, however it should always be considered alternative ways of controlling pests and weeds in or near water.

This guidance covers INNS and how to eliminate the risk of transferring water and soil potentially containing plant or animal diseases, or invasive non-native species, to or from the development site.

Legal waste storage and disposal are essential for effective pollution prevention. This reinstates what is outlined in other GPPs concerning Duty of Care and storage and disposal of hazardous waste.

### 6.1.5 GPP 06: Working on Construction and Demolition Sites (Version 1. April 2023)

This guidance is for anyone carrying out works or activities on construction or demolition sites. Any building or development works are considered to be construction sites. Such activities have the potential to cause pollution and harm to the environment.

On construction and demolition sites there are forms of pollution that are classed as a statutory nuisance, noise being the largest cause of complaint. Activities that can cause nuisance should be regularly monitored and it should be checked that measures put in place to reduce or eliminate

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nuisance are working. This guidance covers how to minimise nuisance in terms of operating vehicles and machinery and the importance of informing neighbours.

**Section 2 managing water on construction sites** discusses ways in which to minimise 'dirty' water such as: reducing the area of stripped soil, stop water entering working areas, keep nearby roads clean, and protecting watercourses. Water can be treated through on site treatment methods or alternative treatment methods such as Sustainable Drainage Systems, settlement lagoons or tanks, filtration and the use of oil separators. Water can also be recycled through various methods including rainwater harvesting, wheel washing systems and recycling concrete wash down water.

Where run off water is contaminated with silt or other pollutants, such as oil, this water must not be pumped or allowed to flow (directly or indirectly) into the water environment without treatment. There it must be established what the most appropriate method of water disposal is from site. Various methods discussed are as follows:

- pumping to grassland,
- discharging to sewers and
- collection by a tanker for disposal off-site.

Protecting soils is essential for many environmental, social and economic functions. This guidance offers information on how to protect soils and prepare a soil resource plan. Before starting work on a contract, a soil survey should be carried out. It outlines how the criteria to create good stockpiles and how to deal with contaminated land. If unexpected contamination is discovered on site, stop works and seek advice from an environmental regulator or the local district council. At times it may be necessary to import or export soil from sites, under these circumstances refer to this guidance for the measures that should be followed including information on surplus soil for use off-site, topsoil from outside the site and using soils from brownfield or industrial sites.

Other areas such as archaeology, unexplored ordnance, invasive non-native species and pesticides must be considered when working on construction and demolition sites. In terms of the environmental and fire protection, this GPP discusses safe delivery access, maintenance, and security requirements before deciding where to put any permanent or temporary oil storage facilities. Fuel stores should be in dedicated areas specifically designed and constructed to be safe and secure. When using and handling oil and fuel on site, dispensing and refuelling must be taken into account alongside the regular inspection and maintenance of all storage facilities. On construction and demolition sites it is important to be aware of asbestos in terms of waste management, to prevent any adverse health effects.

Cement, concrete, and grouts are highly alkaline and corrosive and can cause serious pollution to the ground and watercourses therefore advice on working with these materials on site and near water courses is provided. All chemicals and hazardous substances should be stored away from watercourses, drains and areas where there is risk of damage from impact or collision.

Pollution incident response plans should be produced to identify the possible pollution incidents and outline the actions necessary to minimise pollution any caused. This is a site-specific document. All environmental incidents should be immediately reported to the relevant environmental regulator.

### 6.1.6 GPP 08: Safe Storage and Disposal Of Used Oils (Version 1.2 June 2021)

This guidance is for anyone who stores and disposes of used oils. The guidance applies to activities ranging from a single engine oil change to those of large industrial users.

Disposing of domestic used oil from households refers to engine oil and used cooking oils and fats. Used oils such as engine or gearbox oil from vehicles or machine maintenance should be taken to specific oil banks to be recycling. Used cooking oils and fats should be allowed to cool before separating them for collection and should not be poured down the sink. They can be recovered in local authority food waste collections or disposed of in the general household waste through being soaked into normal household rubbish or putting them into rigid plastic containers.

Used mineral oil from commercial and industrial sources will be classified as hazardous/special waste. It must be managed in accordance with the relevant regulations which impose legal requirements for its movement, recovery and disposal. Used oil is a useful substance that can be recycled and reused or recovered and used as a fuel to save resources; it should be treated as such. Cooking oils from commercial users can be collected by specialist contractors and recovered by manufacturers of biofuels.

Sites such as garages can generate large quantities of used oil. This oil must be collected by a registered waste carrier. Electrical transformers may use specialist oil. When spent, used transformer oil is always a hazardous/special waste.

In terms of storing waste oil and associated pipework in all cases care must be taken to avoid spillage when transferring waste oil to storage facilities. Any spills should be dealt with using absorbent materials. The environmental regulators recommend that waste oil tanks should be installed and pipework above ground whenever possible. This enables regular maintenance checks to be carried out more easily, allowing leaks to be identified earlier. This document offers guidance on above ground storage, on site storage of waste oils, underground tanks and pipes and the disposal of waste from bunded areas.

Regardless of whether they are covered by specific on-site waste oil storage legislation, all oil storage facilities must be sited on an impervious base within an oil-tight secondary containment system such as a bund. Where oil is stored within a bunded area, rainwater and oil residues can build up. This build-up reduces the storage capacity of the bund and you should remove it regularly by bailing from the sump or using a manually operated pump. This residue is likely to be contaminated with oil and, as such, may be hazardous/special waste.

The storage of used oils below ground poses a potential threat to groundwater. All new tanks must be double skinned with a suitable leak detection device. If you do not have a continuous leak detection system you must test:

- Pipework before use;
- Pipework with mechanical joints every 5 years; and
- All other pipe work at least every ten years.

### 6.1.7 GPP 13: Vehicle Washing and Cleaning (Version 1.2 June 2021)

GPP 13 summarises best practice for preventing pollution from vehicle washing, valeting, steam cleaning and related activities and sets out regulatory responsibilities and practical controls

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developers and operators must follow. The guidance emphasises that wash water can contain silt, hydrocarbons, heavy metals and detergents that will damage aquatic environments if allowed to enter surface water drains, soakaways or groundwater. It states that allowing such pollution is a criminal offence and gives regulator contact details for reporting incidents.

All vehicle washing and cleaning that generates runoff should take place in designated washing bays that are isolated from surface-water drainage and porous ground. A properly designed bay will minimise runoff (for example by roof cover), direct any run-off to silt traps or settlement tanks and either collect water in a sealed system for reuse, discharge to foul sewer only with prior consent, or store it for authorised disposal. Importantly, detergents and emulsifiers must never be discharged via an oil interceptor because they prevent the interceptor from working.

The guidance promotes measures to reduce water use and waste production, including recirculation and effluent recycling systems, while noting these systems require routine off-site removal of accumulated silt and may trigger waste management controls. High pressure washers and steam cleaners are effective but can use large volumes of hot, chemically contaminated water and must therefore be used only in designated, contained bays. Hand washing is acceptable only with strict site management, adequate containment and use of designated bays.

GPP 13 requires operators to implement Pollution Incident Response Plans, provide staff training and maintain control measures such as bunded fuel and chemical storage, spill kits, clearly signed washing areas and, where necessary, fencing to prevent spray drift. Where vehicle depollution, end-of-life vehicle (ELV) work or refuelling/washing activities are proposed, drainage and containment arrangements must be described and, if discharges are to foul sewers or watercourses, appropriate consents obtained.

Good practise measures include:

- Keep a site drainage plan. Know where surface water drains are and where to connect to the foul sewer.
- Colour code your drains. Blue for surface water and red for the foul sewer.
- Have an oil separator installed where runoff is contaminated with oils or fuels. Such as servicing and refuelling areas.
- Make sure wash water from vehicle cleaning does not enter the oil separator (it will stop it working)
- If possible, drain water from vehicles to the foul sewer and get a trade effluent consent from your sewer provider.
- If there is no foul sewer, collect wash water for disposal offsite by a waste company. Alternatively use cleaning methods that do not produce any liquid waste.
- Cover your wash areas to reduce the volume of wastewater you produce and need to deal with.
- Manage all your waste according to your duty of care e.g., empty containers, oily rags or used cleaning cloths.
- Do not let wash water from vehicles enter the surface water drains.
- Never wash vehicles on unmade ground.
- Never discharge wash water to a foul sewer without contacting your sewer provider to get a trade effluent consent.

- Do not use pressure washers, unless you have a designated wash bay.

### 6.1.8 GPP20 Guidance for Pollution Prevention Dewatering Underground Ducts and Chambers (Version 1.2 June 2021)

This guidance is for utilities and contractors who often need to remove a build-up of water from underground ducts and chambers. The volume of water is usually below 5m<sup>3</sup>, but can be contaminated with:

1. Silt
2. Oil
3. Various chemicals

If the water is not dealt with correctly there is a risk of pollution to surface waters and groundwater. Discharge should directly to a watercourse unless this has been agreed with your environmental regulator. If the water or silt is contaminated it could be classed as hazardous/special waste. WM3 can be used to help classify the resulting waste and to determine whether it is hazardous/special waste. Advice from an environmental regulator should be attained if in doubt about the classification of the materials.

There are alternative options that don't involve a discharge to ground or water including design through pumping to a foul sewer or by removal to a waste or treatment facility. If possible, design and construct ducts and chambers that prevent the ingress of water. If water is likely to enter the structure sloped can be used on the base of the chamber and include a sump where water can collect.

Alternatively, any accumulated water should be pumped to a foul sewer if possible. This will ensure that any contamination is treated before it is discharged. If there is no access to a foul sewer, and a sample of the water has either:

- Silt in suspension
- An unusual colour
- An unusual odour

Water should be removed by pumping to suitable containers or to a tanker. This must then be taken to a licensed waste disposal site and transported by a suitably licenced waste carrier.

If contamination is suspected where there is no odour or colour present, for example from metals or organics, samples should be analysed by a lab.

You must comply with the requirements of the Duty of Care Regulations. There is a legal responsibility to produce, store, transport and dispose of controlled waste without harming the environment.

If no foul sewer is available it can be discharged to land or water. Before discharging water from a duct or chamber it is your responsibility to make a thorough check of the quality of the water. If the water is clean accumulated water without silt and if it is possible to remove light contamination, then pumps can go directly to surface waters or to a surface water drain. If possible, water should be pumped across a grassy strip to remove any silt.

### 6.1.9 GPP 21: Pollution Incident Response Planning (Version 1.1 June 2021)

These guidelines set out best practice for producing an incident response plan to deal with an environmental incident on your site. Following such a plan will help you to prevent or reduce environmental damage if such an incident occurs. The guidelines set out:

- why you need a plan
- what information you should include
- who should be involved in its production
- what the plan should look like by providing a template (within Section 12).

It is important to minimise the risk of pollution to protect the environment and human health. If pollution is caused, one can be liable to enforcement action by the local Environmental Regulator.

This guidance is for:

- site operators of industrial and commercial premises to help them produce an incident response plan.
- other organisations, authorities and individuals whose site or operations pose a potential risk to the environment and who should have an incident response plan.
- the Fire and Rescue Service and others who may be involved in the production of, and/or have an interest in such plans, for example the Health and Safety Executive, Maritime and Coastguard Agency, Government Decontamination Service, public health officials and insurers/underwriters.

The guidelines are aimed at sites which are not already required, as a condition of a permit, to prepare pollution incident response plans. If you operate a site that is required to have a pollution incident response plan, then one should speak to their environmental regulator about the specific requirements for site. Contact details are listed at the end of these guidelines.

The Pollution Incident Response Plan could be designed to deal with environmental incidents on site, or it could be part of a more comprehensive incident response plan for the site, for example Control of Major Accident Hazards (COMAH) on-site and off-site plans.

The planning cycle consists of 5 stages:

- Assess the risks on site  
Identify all potential risks to the environment from the materials, processes and activities on your site. Refer to GPP 1: Understanding your environmental responsibilities - good environmental practices and GPP 18: Containing major spillages and firewater at industrial sites.
- Gather information and prepare your plan  
This includes a cover page, external and internal contacts list, site chemical products and waste inventory, pollution prevention equipment inventory, site plan and drainage plan.
- Activate your plan and seek responses  
Once plans have been developed, develop supporting emergency procedures to check the plan works if there's an incident. Make sure all relevant staff and contractors are aware of these procedures and the plan.

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- Test plans and train your staff

Once the plan has been completed test it regularly by carrying out exercises. At some sites, for example COMAH sites, it is a legal requirement.

- Review plans and update it

The plan must remain effective and up to date, so record any lessons learnt from exercises or actual incidents. Use these recommendations, or comments from staff and contractors, to improve any developed plans.

Once any relevant comments have been considered, distribute copies of the completed plan to the relevant organisations.

### 6.1.10 GPP 22: Dealing With Spills (Version 1 October 2018)

GPP 22 sets out clear, practical measures to prevent, contain and remediate spills of oils, chemicals and other polluting substances. The guidance emphasises that effective pollution control begins with planning: sites must identify and assess spill risks, understand local drainage and receptors (including groundwater, abstraction points and high-value ecological sites) and put in place proportionate prevention measures. Common spill causes (overfilling, damaged containers, containment failure, pipework leaks, accidents, flooding and vandalism) are highlighted so that controls can be targeted at realistic, site-specific failure modes.

For a final CEMP, operators are advised to prepare a Pollution Incident Response Plan (PIRP) that becomes part of their environmental management arrangements. The PIRP should list site risks, key internal and external contacts (including the environmental regulator, local authority and fire service), reporting procedures, a site plan showing drainage and storage/refuelling locations, the location of spill equipment and procedures for containment and remediation. GPP 22 directs users to GPP 21 for further detail on preparing a PIRP. An example of what needs to be presented within a Pollution Incident Response Plan is detailed within Section 12.

When a spill occurs the guidance promotes a control hierarchy: stop the release at source where possible, contain the spill as close to source as feasible, prevent material entering drains or watercourses, and then recover and clean up. Containment options include temporary bunding, booms, absorbents and diversion into sacrificial tanks or settlement areas. Mechanical recovery is recommended as the preferred first-line clean-up technique because it minimises additional contamination and waste; sorbents should be used only after bulk recovery.

GPP 22 also covers practical site measures: secure, impermeable storage for chemicals and fuels; appropriate delivery and unloading procedures; provision and maintenance of spill kits with absorbents matched to stored substances; clear labelling and inventory of stored materials; and training of staff and contractors in spill prevention and response. The guidance stresses the importance of knowing the drainage network and not mistaking surface-water drains for foul or combined sewers.

After containment, sites must ensure safe removal, storage and lawful disposal of recovered material. The PIRP should identify who will secure the site post-incident and who is responsible for arranging specialist investigation and remediation where land or groundwater contamination is suspected. Operators are reminded that pollution incidents may constitute criminal offences and that the regulator must be notified immediately via the incident hotline.

### 6.1.11 GPP 26: Safe Storage - Drums And Intermediate Bulk Containers (IBCs) (Version 1.2 June 2021)

This guidance provides practical measures for storing and handling drums up to 205 litres and IBCs up to 1000 litres to reduce the risk of pollution to land, surface waters and groundwater. It is aimed at industrial and commercial site operators and distinguishes legal requirements in Northern Ireland from recommended good practice.

Operators must know what is in store and keep an accurate, current inventory with clear labelling of storage areas, delivery locations and individual containers. Primary containers must be suitable for their contents. Reused containers must be checked for material compatibility and life expectancy, residues managed and containers relabelled to show current contents and hazards.

Secondary containment is essential and is a legal requirement for containers above 200 litres holding oil or oil products. Containment must be impermeable, without drainage, and sized to hold the maximum volume of product likely to be stored and any firefighting media that may be used. Regular checks should confirm location, capacity, design and construction, and additional protection may be necessary in flood risk or sensitive groundwater areas.

Delivery, handling and decanting are high risk activities. Designated, clearly signed areas should be impermeable and isolated from surface water drainage. If isolation is not achievable, use reusable drain covers, ramps, sumps or drainage shut off valves and consider a roof or canopy. A responsible person must supervise deliveries and transfers and be competent in spill kit use.

Inspection and maintenance are required to detect leaks, corrosion and damage. Damaged containers should be repaired or removed from use promptly. Storage layout must avoid stacking that creates undue pressure or risk of containers falling. Keep records of inspections and maintenance.

Prepare for spills through a documented pollution incident response plan that includes a detailed site drainage plan, staff training, appropriate spill kits and personal protective equipment (PPE) and clear procedures for containment, recovery and the safe storage of contaminated sorbents prior to disposal. Do not wash spills into drains or use detergents or dispersants unless planned, the drainage system can contain runoff, and the regulator has been consulted and the action included in the response plan.

Practical equipment recommendations include leak sealing putty, over drums, drain seals, oil and chemical sorbents and appropriate PPE. Vehicles carrying drums and IBCs should carry a suitable spill kit and PPE. For large scale storage seek advice from the local fire and rescue service on spacing, access and fire prevention.

## 6.2 Additional Guidance for Pollution Prevention

The guidance documents below provide environmental good practice guidance and environmental regulatory guidance directly to Northern Ireland.

### 6.2.1 Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011

The purpose of this guidance document is to provide background information to the Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011 (the Regulations) and to

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outline recommended 'best practice' measures that go beyond the regulatory requirements of the legislation. The guidance makes the distinction between the regulatory requirements and those recommendations that go beyond statutory requirements by the use of the words 'must' and 'should' respectively.

The regulations apply to any kind of oil including mineral oils e.g. petrol, diesel, kerosene; heating and lubricating oils; vegetable and plant oils; oil based solvents; waste oils and bio-fuels. This excludes bitumen as this material will solidify in the vicinity of any spillage.

The provisions of the **Waste Management Licensing (Amendment) Regulations (Northern Ireland) 2022** apply to the handling, storage and disposal of waste oil.

The **Controlled Waste and Duty of Care (Amendment) Regulations (Northern Ireland) 2014** relate to the transport of controlled waste

The **Hazardous Waste (Amendment No. 2) Regulations (Northern Ireland) 2015** apply to the movement of oil if it is classified as hazardous.

Reference will also be made to the Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011. The main points are detailed below for convenience:

### **Requirements for oil storage – general:**

Oil must be stored in robust containers designed to prevent leaks or bursts during normal use. These containers should be placed within a secondary containment system that has a capacity of at least 110% of the container's storage capacity or 25% of the total capacity of multiple containers, whichever is greater. The containment system must be positioned to minimise damage risks, be impermeable to liquids, and not have any openings that could allow oil to escape. If a fill pipe is outside the containment system, a drip tray must be used to catch spills.

For fixed tanks, specific requirements include properly supported sight gauges with automatic closing valves, and pipes that minimise impact damage. Above-ground tanks must be adequately supported, while underground tanks should have no mechanical joints except at accessible points, be protected from damage, and have leak detection facilities. Tanks must also include automatic overflow prevention devices if filling is controlled from a distance.

Mobile bowzers must have taps or valves that are locked when not in use and secured sight gauges. Flexible pipes attached to mobile bowzers should have manually operated pumps or automatic closing valves, both of which must be locked when not in use.

Transitional provisions state that storage initiated before 20 March 2011 is exempt from regulations until 31 December 2015, unless located near waterways or wells, in which case regulations apply from 20 March 2013. Storage starting between 20 March 2011 and 20 September 2011 is subject to regulations from 20 September 2011. If a compliance notice is issued and not followed, regulations will apply from the specified date in the notice or any extended compliance period.

## **6.2.2 Reference to DAERA Standing Advice on Pollution Prevention Guidance**

Effective mitigation measures must be in place to protect the water environment and surrounding water bodies from any discharge into them that may damage ecological status and to ensure that the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 objectives for the water body are not compromised nor the objectives in other downstream water bodies in the same and other catchments. It is an offence under the Water (Northern Ireland) Order 1999 to

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discharge or deposit, whether knowingly or otherwise, any poisonous, noxious, or polluting matter so that it enters a waterway or water in any underground strata. Conviction of such an offence may incur a fine of up to £20,000 and / or three months imprisonment.

DAERA states that Pollution Prevention should be a primary consideration during all stages of a development's lifecycle, from planning, construction, operation, and maintenance all the way through to decommissioning or reinstatement of a site, and that good understanding of the pollution risks from your development will help reduce the risk of pollution incidences, impact on the water environment, point source and diffuse pollution, waste and costs, and bad practice.

Required information for developments with potential to impact the water environment:

- **Drainage plans:**

A Detailed site drainage plan for operational phase of the development for certain applications including "commercial, refuelling, vehicle washing, industrial, extractive, energy, and waste management related activities. Any unusual or novel proposal should also be accompanied by a detailed drainage plan."

A drainage plan should clearly show the site's storm drainage, foul sewers, any combined drainage systems, and detail where all drainage discharges to. Silt traps, oil interceptors and any other drainage infrastructure incorporated into the drainage network should also be illustrated.

A formal drainage plan is not required during the construction phase, however surface water run off should be considered at an early stage.

- **Good practice planning and implementation:**

Pollution is most likely to occur during construction and if the development is in proximity to a watercourse then consideration must be given at preliminary planning and design stages to ensure that impact on the receiving water environment during any testing, construction and operational phases are minimised.

The main risks to a waterway during the construction and operational phases are from oil, hydrocarbons, fuel, chemicals, paint, suspended solids, concrete, cement and grout.

*\* The applicant and appointed contractors must identify all the relevant Guidance for Pollution Prevention (GPPs) that relate to their proposal and must adhere to the guidance contained within these*

- **Construction Methods statements:**

Works to be conducted in; near (within 10 metres) or liable to affect any waterway should be undertaken in accordance with a site-specific Construction Method statement (CMS).

Please refer to **Appendix B** Preliminary Construction Methodology for the methodology, controls and responsibilities associated with the Proposed Redevelopment.

### 6.2.3 DAERA Standing Advice on Discharges to the Water Environment

This document lays out guidance for Discharging Potentially polluting effluent safely into the water environment and gives guidance on when consent from DAERA (Discharge Consent issued under

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the Water (Northern Ireland) Order 1999) is required for development in relation to the release, or potential release of potentially polluting discharge into the water environment.

The guidance states “No development should take place on-site until the method of effluent disposal has been agreed in writing with Northern Ireland Water (NIW) or Consent to discharge has been granted.”

Written consent from DAERA is required in the following cases:

- In the case of existing consent “this may need to be reviewed if any aspect of the Consent is altered” (Volume, Location, Or premises ownership change)
- “If there is an intention to discharge any effluent” “Discharge Consent under the terms of the Water (NI) Order 1999 may be required.” (Further info refer to [DAERA Standing Advice - WTR - Pollution Prevention Guidance - Sept 2022 Final.pdf](#))
- Discharge Consent may not be granted depending on site.

Applicants should be aware that it is an offence under the Water (Northern Ireland) Order 1999 to discharge or deposit, whether knowingly or otherwise, any poisonous, noxious or polluting matter so that it enters a waterway or water in any underground strata. Conviction of such an offence may incur a fine of up to £20,000 and / or three months imprisonment.

An application form for Consent to discharge under the Water (NI) Order 1999 can be obtained by contacting NIEA Water Management Unit at: 17 Antrim Road, Tonagh, Lisburn. BT28 3AL

Or by visiting their website: <https://www.daera-ni.gov.uk/articles/regulating-water-discharges>.

### 6.2.4 DAERA Environmental Advice for Planning Standing Advice Commercial or Industrial Developments

DAERA's Standing Advice for commercial and industrial developments provides clear, practical requirements for protecting the water environment from wastewater and rainwater impacts. The guidance applies specifically to wastewater and surface-water management and directs applicants and planning officers to demonstrate that proposed drainage and treatment arrangements are proportionate to the risk posed by the activities on site. It notes that other environmental issues (contaminated land, protected species, etc.) are handled separately through DAERA consultation responses.

A central expectation is submission of a comprehensive Site Drainage Plan. The plan must show all foul sewage, process effluent and surface-water drainage, identify discharge destinations (watercourse, sewer, soakaway or underground strata), and locate any proposed mitigation such as silt traps, settlement tanks and hydrocarbon interceptors. DAERA makes clear that the Water Management Unit (WMU) cannot determine impacts without this level of detail and that disposal of contaminated drainage (suspended solids, hydrocarbons, detergents) to the aquatic environment is likely to require formal discharge consent under the Water (Northern Ireland) Order 1999.

The Standing Advice identifies higher-risk activities that require particular attention and bespoke controls. Examples include on-site depollution or end-of-life vehicle (ELV) work, refuelling, vehicle washing/valeting and storage of crashed or damaged vehicles. If present, these activities must be explicitly addressed in drainage and pollution-prevention measures (e.g. impermeable bunded areas, dedicated containment, separate drainage, and permissioned discharges). DAERA/WMU will request clarification of such activities before completing their assessment.

Compliance with the GPP series is required. GPPs specifically relevant to construction and operations are detailed above. The Standing Advice also reminds applicants of the legal duty not to cause pollution, discharging polluting matter into water is an offence, and advises early engagement with regulators where permissions or consents may be needed.

### **6.2.5 Technical Guidance C532: Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors (CIRIA, 2001).**

This publication provides advice on environmental good practice for the control of water pollution arising from construction activities. It focuses on the potential sources of water pollution from within construction sites and the effective methods of preventing its occurrence. The guide provides information on benefits and obligations, managing water pollution, legislative frameworks, construction contracts, and water management techniques.

There are three main functions, as a user-friendly guide, a reference book and a training aid. It is aimed at project promoters, site managers, foremen and supervisors, site engineers, project managers and contract supervisors/resident engineers.

This document provides practical help for consultants and contractors on how to plan and manage construction projects to control water pollution. It has seven main chapters; benefits and obligations; water pollution from construction; legislative framework; construction contracts; managing water pollution from construction; water management techniques; summary and recommendations.

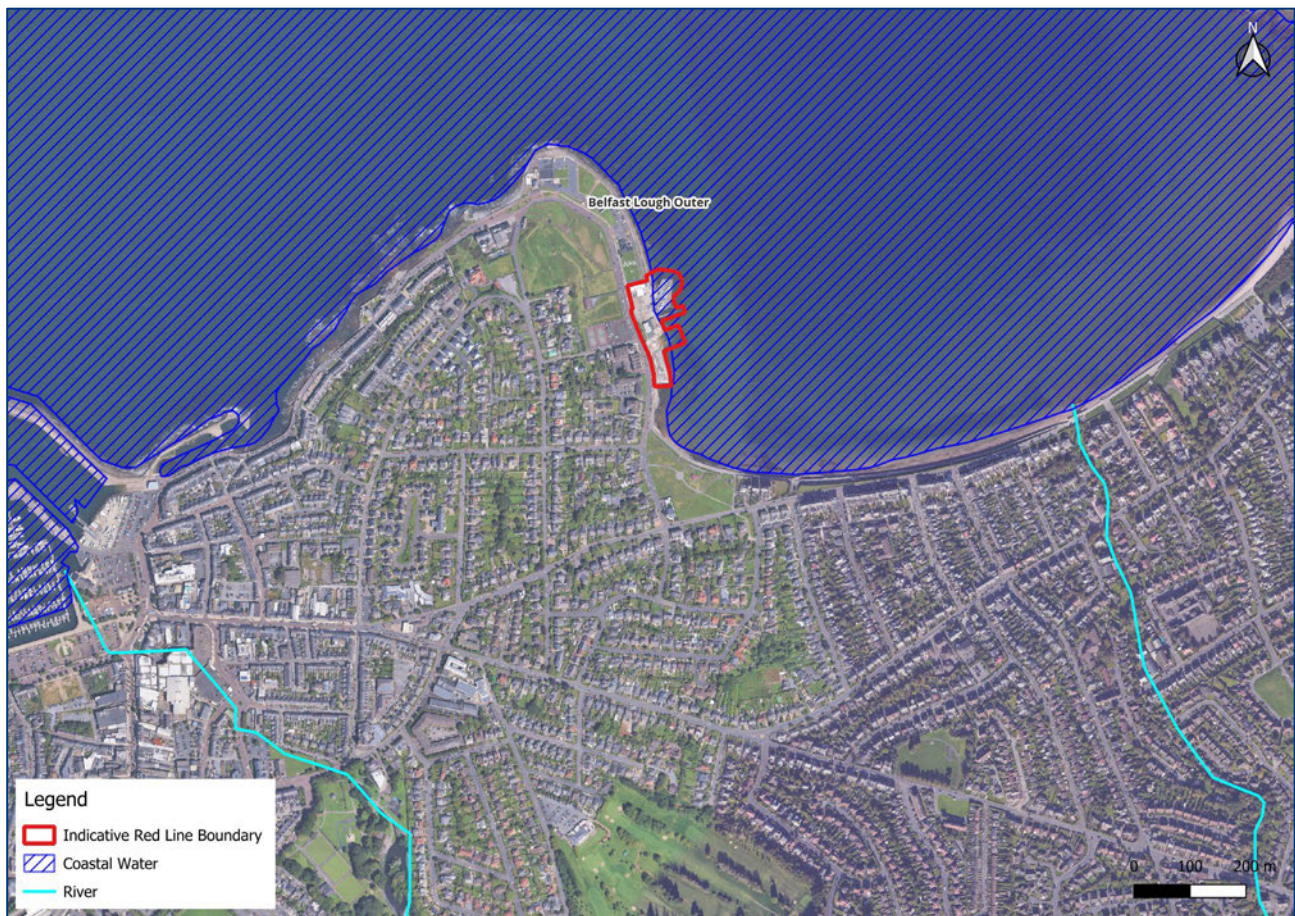
## 7 Pollution Prevention And Water Quality

### 7.1 Introduction to Migration for the Water Environment

Pollution prevention measures are detailed below, which align with the guidance presented within Section 6. These measures will be incorporated during the construction phase to prevent the possibility of any sediments and other pollutants entering any nearby watercourses. With the implementation of water pollution mitigation measures set out below, there will be no effects to nearby watercourses or downstream designated sites.

### 7.2 Existing Hydrological Features

The Proposed Redevelopment is located directly adjacent to Belfast Lough (Outer), as illustrated in **Figure 7.1**. Belfast Lough is a large sea inlet situated at the mouths of the Lagan, Farset and Blackstaff Rivers on the eastern coast of Northern Ireland. Outer Belfast Lough is an exposed area and is located within Northern Ireland's busiest sea-lough. Home to a variety of species, the Outer Lough encompasses a wide range of habitats such as subtidal sand and subtidal mixed sediments, sediment dominated bays and rocky shores. The Marine Conservation Zone (MCZ) has been designated due to the presence of a well-established population of ocean quahog that lives buried in the subtidal (sublittoral) sand habitat. Although distributed throughout Northern Ireland, ocean quahog is present in a dense aggregation in Outer Belfast Lough; it is thought that the species is well conserved here due to continuous recruitment and high population numbers.



**Figure 7.1: Existing Hydrological Features**

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Examination of mapping data sets has concluded that there are no known watercourses within close proximity to the site. A review of DfI Rivers' designated watercourses indicates that the nearest designated feature is the open section of Waverley Stream (U3G058) located approx. 430m south of the site. The designated Cotton Stream (MW3604) is located approx. 711m east of the site. Neither watercourse has potential to cause a flood risk to the site.

### 7.2.1 Water Environment Mitigation Measures

#### 7.2.1.1 Silt Management (Barrier Controls)

The risk of silt pollution to watercourses will be controlled by adopting the following three principles of mitigation:

1. Programme and manage construction activities to prevent sediment generation;
2. Protect water bodies from sediment pollution by preventing silt-laden runoff reaching watercourses; and
3. Propose adequate measures to treat runoff prior to discharge (under consent from NIEA if to watercourse).

Measures will be taken to prevent all potentially contaminated drainage from the working areas and substation from entering watercourses and surface water drains. Following guidance given in CIRIA Document C521 'Sustainable Urban Drainage Systems – Design Manual for Scotland and Northern Ireland,' provisions will be made to collect and treat drainage from the construction site and working areas in order to remove sediments and other contaminants before discharging to surface watercourses, drains or to ground.

Mitigation measures will consist of either silt traps, filter strips, silt fencing and swales and silt mats as appropriate to cover both existing water sources and hardstanding drains, which will be implemented within the planning application boundary indicating the area of construction works.

During the initial site preparation works prior to the start of construction, there will be a requirement for the formation of temporary measures to ensure controlled management of runoff draining from the construction site (referred to as 'barrier controls'). Runoff from the site will be treated and attenuated using measures to filter or settle fine particulates. There are many ways in which this can be achieved, and the guidance documents provide information on these and will be confirmed within the final CEMP.

Options may be relatively simple, such as the use of straw bales and gravel berms (which will be washed prior to arriving on site). The arrangements of such drainage infrastructure will be set out in the detailed design and as appropriate agreed with NIEA prior to construction.

There are many options that can be implemented to control of surface runoff, and highlighted below are measures that will be implemented as appropriate in the Proposed Redevelopment:

1. Construction areas will be demarcated from the rest of the site to minimise the disturbance of land not required for development;
2. Minimising the stockpiling of materials and locating essential stockpiles as far away as possible from watercourses, and with geotextile coverings where possible (seeding not appropriate in the timescales);
3. Implementation of site working practices to minimise the risk of concrete spillages;

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4. Operate machinery from access track wherever possible;
5. All water bodies that occur in areas proposed for site compounds and storage facilities will be fenced off to a minimum distance of 10m;
6. Tool Box talks shall be given by the Environmental Manager nominated under the final CEMP to all contractor's site personnel to inform them of the mitigation measures required to ensure protection and conservation the aquatic environment;
7. Dewatering requirement will be kept to a minimum. Works will not to be carried out following extreme rainfall;
8. During any dewatering activities a water filtration system will be utilised to control the amount of sediment in the pumped water; and,
9. Washed, fines-free stone for access tracks and working areas will be imported rather than quarried on site.

If works are close to a watercourse and the topography is such that there is a risk that contaminated runoff could flow untreated into it, then temporary barriers will be installed during the works. These will also intercept overland flows so they can be contained prior to discharge to soakaway or be treated prior to discharging into the watercourse. These features will be small, in keeping with the area of works, and temporary being removed completely after the works have been completed.

Providing this water remains uncontaminated it will be discharged into nearby waterbodies or allowed to soakaway without the need for treatment or consent from NIEA.

### 7.2.1.2 Concrete and Cement Pollution

The impacts in relation to cement and concrete for the Proposed Redevelopment are, for the most part (but not limited to) the installation of concrete flooring and construction works of buildings. Mitigation measures to prevent cement contamination of water bodies will be carried out in accordance with the outlined recommendations within the OCEMP. The following measures are to be undertaken to mitigate against potential water quality issues:

- **A risk assessment will be carried out to ensure the best location for concrete washout facilities for plant required on site;**
- **If required, washout from mixing works will be undertaken in a contained impermeable area;**
- **Any stockpile storage areas will not be stored within 10m of any watercourses/drains/waterbodies (exclusion zone) (Figure 7.2);**
- **The exclusion zone shall be marked out with tape and cones to prevent provide a visual reminder of the exclusion zone.**

In circumstances where the above mitigation measures are employed during construction operations, the potential magnitude of the impact to receiving water environment will be reduced to negligible thus reducing the significance of environmental effect will be reduced to minor on a temporary basis.

Concrete pouring is classified as a high risk to waterbodies and therefore shall take place a minimum of 10m, where possible, from the edge of any watercourse to mitigate the risk of pollution. Along the low side of any concrete pouring that is to take place near a waterbody, a temporary bund shall be

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installed in the form of sandbags or earthworks etc, which will prevent any concrete spills or run-off from the concrete pour from entering said waterbodies.

The risk of water quality impacts associated with works machinery, infrastructure and on-land operations (for example leakages/spillages of fuels, oils, other chemicals and wastewater) will be controlled through good site management and the adherence to codes and practices which limit the risk to within acceptable levels. The previously discussed exclusion zones are marked out on **Figure 7.2**.



**Figure 7.2: Exclusion Zones**

### 7.2.1.3 Oils and Chemicals

The use of oils and chemicals on-site requires significant care and attention. Fuel and chemical storage will only occur in the site compounds. The following procedures will be followed at the site compounds to reduce the potential risk from the storage of oils and chemicals.

The Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011(see **Section 6.2.1**) create new standards for above ground Oil Storage facilities in industrial, commercial and Institutional sectors. In summary, the Regulations apply to:

- Above ground storage in containers over 2000 litres.
- Private domestic or residential oil tanks over 3,500 litres.
- Industrial, commercial and institutional/residential establishments (e.g., schools, day care centres, hospitals and nursing homes).

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- Waste oil storage and companies who refine or distribute oil.
- Oil stored in buildings.

A key requirement of the Regulations is that oil storage containers covered by the Regulations, fixed or mobile, must have a secondary containment system (of 110% capacity) as defined by the regulations (e.g. a bund, which is an outer wall or enclosure designed to contain the contents of an inner tank, or a drip tray) to ensure that any leaking oil is contained and does not enter the aquatic environment.

All relevant measures outlined in the Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011 guidance will be implemented during the construction and operation of the Proposed Redevelopment.

Fuel, oil and chemical storage will be sited on an impervious base within a bund and secured (locked) to prevent vandalism or theft. All valves and trigger guns will be protected from vandalism and unauthorised interference and will be turned off and securely locked when not in use. Any tanks or drums will be stored in a secure container or compound, which will be kept locked when not in use.

The risk of spilling fuel is at its greatest during refuelling of plant. Refuelling of plant will not occur in the active working areas but rather in the site compounds where it will be undertaken by appropriately trained people. Refuelling in the site compound will be undertaken well away from any drains or watercourses. A spill kit will be available at all times and a bowser with secondary containment will be used. Vehicles will not be left unattended during refuelling nor will a delivery valve be jammed opened. Hoses and valves will be checked daily, before and after use, for wear and turned off and securely locked when not in use.

A contingency plan for the works will also be prepared in accordance with GPP 21 Pollution Incident Response Planning. The Emergency Response Plan should detail actions to be taken in the event of an accidental spillage of fuel, chemicals or other hazardous material. The Plan should also detail the procedures to be followed if there is a breach in any licence conditions or a non-compliance.

It will be important to ensure that the Environmental Manager is notified of all incidents where there has been a breach in agreed environmental management procedures. Suitable training should be provided to relevant personnel detailed within the Emergency Response Plan to ensure that appropriate and timely actions will be taken should an incident occur.

Drip trays will be used for any large plant and vehicles where they are left overnight at an active work location.

### 7.2.1.4 General Construction Works

In circumstances where mitigation measures are employed during construction operations, the potential magnitude of the impact on receiving water environment will be reduced to negligible thus reducing the significance of environmental effect will be reduced to minor on a temporary basis.

**Table 7.1** below gives a summary of mitigation measures.

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**Table 7.1: The Water Environment Mitigation Measures**

| Mitigation Measure                                                                                                                                                                                                                                                                                                                                  | When?                     | By whom?                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------|
| All mitigation measures detailed herein will be subject to periodic inspection and maintenance.                                                                                                                                                                                                                                                     | Before Construction Phase | Principal Contractor to deliver |
| The contractor should adhere to standard requirements for the protection of watercourses adhering to any exclusion zones.                                                                                                                                                                                                                           | Construction Phase        | Principal Contractor to deliver |
| The Principal Contractor will allocate a dedicated area for material deliveries separated a minimum of 10m from adjacent waterbodies, manage the same and make sure that over-ordering and stockpiling is kept to a minimum.                                                                                                                        | Construction Phase        | Principal Contractor to deliver |
| The Principal Contractor will dedicate specific areas for oil storage and refuelling and will use fill point drip trays, bunded pallets and secondary containment units. The site will be enclosed and secured, and fuel storage areas will be secondarily secured.                                                                                 | Construction Phase        | Principal Contractor to deliver |
| Reference and adherence to all the relevant to NIEA pollution prevention measures paying particular attention to where further information can be found regarding oil storage, safe storage - drums and intermediate bulk containers, and the use of oil separators in surface water systems (including the restrictions due to use of detergents). | Construction Phase        | Principal Contractor to deliver |
| Reference and adherence to all the relevant precepts issued from the NIEA.                                                                                                                                                                                                                                                                          | Construction Phase        | Principal Contractor to deliver |
| An Emergency Spill Response Plan, the content of which is included in this OCEMP (Please refer to Section 9), will detail actions to be taken in the event of an accidental spillage of fuel, chemicals or other hazardous material.                                                                                                                | Construction Phase        | Principal Contractor to deliver |
| Suitable training will be provided to relevant personnel detailed within the Emergency Response & Environmental Plan (Please refer to Section ?) to ensure that appropriate and timely actions will be taken should an incident occur.                                                                                                              | Construction Phase        | Principal Contractor to deliver |

## NIEA's Hotline Number

**0800 80 70 60**

It is recommended that in the event of a water pollution incident the NIEA pollution hotline is contacted within 30 minutes unless it is not safe to do so.

### Unexpected Contamination

During construction works, should unexpected contamination be encountered in soils or groundwater with visual or olfactory signs of contamination, samples of the potentially contaminated material should be obtained and sent for chemical analysis. An updated risk assessment should be completed to assess risks to human health and environmental receptors.

Should unacceptable risks be identified then appropriate remedial works will be conducted and agreement sought from the relevant regulatory bodies.

## 7.2.2 Construction Stage Drainage

A detailed drainage design based has been prepared by McCloy Consulting Ltd to demonstrate that safe discharge of surface water from the development is feasible and is presented within **Appendix C**.

Surface water drainage on proposed hardstanding areas shall be by conventional gully-pipe network. New drainage at the site shall not be eligible for adoption and will be privately maintained; therefore, NIW design standards are not applicable. As a minimum, drainage shall comply with the following mandatory standards:

- The drainage network / site layout should ensure containment and control of the 100-year (1% AEP) return period storm within the site to ensure no offsite effect elsewhere.
- The drainage network should also allow for a 20% allowance for climate change at all the above listed return periods.

Surface water from the development will discharge to the coast at Ballyholme Bay via three outfalls. The receiving waters are tidally dominated, and there are no restrictions on discharge rate or requirements for DfI consent, as no inland watercourse or sewer is affected. The development will not increase flood risk to any third party, and outfall arrangements will be subject to Crown Estate approval for any works affecting the foreshore.

Outfalls shall be designed in accordance with good practice for coastal drainage infrastructure, incorporating measures such as non-return flap valves, local scour protection, and setting of invert levels below mean high water springs (MHWS) to ensure reliable operation under tidal conditions.

No discharge consent applies and there is no technical justification for attenuating run-off to a coastal discharge, where the discharge will have no effect on flooding. Crown Estate consent will apply but this relates to the form of the work and not any hydraulic criteria. No limiting discharge rate (other than preventing flooding by exceeding sewer capacity in the existing network) applies. No DfI Rivers / other consent applies as no waterways or other sewerage is affected.

## 8 Construction Noise Management Plan

### 8.1 Construction Mitigation Measures

BS5228 gives recommendations for basic methods of noise and vibration control relating to construction and open sites where work activities/operations generate significant noise levels, including industry-specific guidance.

#### 8.1.1 Construction Noise General Mitigations

In order to ensure that there is no unacceptable noise impact at the nearest noise sensitive receptors during the construction phase, construction phase noise levels should not exceed the appropriate daytime noise threshold limit specified in BS5228:2009+A1:2014 (i.e. 65 dB daytime). It is assumed that there will be no evening or night-time construction phase activities. British Standard *BS5228:2009+A1:2014 – Noise and vibration control on construction and open sites* outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. These measures will be applied by the contractor where appropriate during the construction phase of the Proposed Redevelopment.

Examples of some of the best practice measures included in BS5228 are listed below:

- Ensuring that mechanical plant and equipment used for the purpose of the works are fitted with effective exhaust silencers and are maintained in good working order;
- Careful selection of quiet plant and machinery to undertake the required work where available;
- All major compressors will be 'sound reduced' models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use;
- Any ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;
- Machines in intermittent use will be shut down in the intervening periods between work;
- Ancillary plant such as generators, compressors and pumps will be placed behind existing physical barriers, and the direction of noise emissions from plant including exhausts or engines will be placed away from sensitive locations, in order to cause minimum noise disturbance. Where possible, in potentially sensitive areas, acoustic barriers or enclosures will be utilised around noisy plant and equipment;
- Handling of all materials will take place in a manner which minimises noise emissions; and
- Audible warning systems will be switched to the minimum setting required by the Health & Safety Executive.

In order to minimise the likelihood of complaints, Ards and North Down Borough Council and affected residents must be kept informed of the works to be carried out and of any proposals for work outside normal hours. A complaints procedure must be operated by the Contractor throughout the construction phase. Best practice will therefore be implemented in order to minimise noise and vibration and comply with the contents and recommendations of the BS 5228 "Code of Practice for Noise Control on Construction and Open sites".

### 8.1.2 Execution of Works

All available techniques should be used to minimise, as far as is appropriate, the level of noise to which receptors in the neighbourhood of site operations will be exposed.

Measures which will be taken include the following.

- Hours of work will be restricted to 08:00 – 17:00 (Monday - Friday) and 08:00 – 13:00 (Saturday);
- Where reasonably practicable, quiet working methods will be employed, including use of the most suitable plant, and economy and speed of operations.
- Haulage vehicles will not arrive at or leave the site between 19:00 and 07:00 hrs.
- Noise will be controlled at source, and the spread of noise should be limited (see Section 8.1.3)

### 8.1.3 Control of Noise at Source

Measures for the control of noise at source are detailed below, in accordance with BS5228-1. These noise control measures will be implemented as appropriate.

#### 8.1.3.1 Reversing Alarms

The use of conventional audible reversing alarms can be a noise nuisance issue on some sites, the reversing alarms used on the proposed site will be of a type which, whilst ensuring that they give proper warning, has a minimum noise impact on persons outside the proposed site. Where practicable, alternative reversing alarm systems will be employed to reduce the impact of noise outside of construction sites.

#### 8.1.3.2 Equipment Selection and Modification

Prior to the construction phase, the contractor will review the specification for all plant and equipment to be employed on-site to ensure that the quietest plant/equipment available is to be used. Modifications to plant and equipment to improve sound reduction will be implemented if required, but any alterations shall be conducted in consultation with the plant manufacturer.

#### 8.1.3.3 Enclosures

As far as reasonably practicable, sources of significant noise will be enclosed. The extent to which this can be done depends on the nature of the machine or process to be enclosed and their ventilation requirements.

#### 8.1.3.4 Silencers

For steady state continuous noise, it may be possible to reduce noise by fitting a more effective silencer system or by an acoustic canopy to replace the normal engine cover, if the item of plant is in a stationary position. On-site generators supplying electricity for electric motors will be suitably enclosed and appropriately located.

#### 8.1.3.5 Stiffness and Damping

Noise caused by resonance of body panels and cover plates will be reduced, where practicable, by stiffening with additional ribs or by increasing the damping effect with a surface coating of special

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resonance damping material. Rattling noises will be controlled by tightening loose parts and fixing resilient materials between surfaces in contact.

### 8.1.3.6 Use and Siting of Equipment

Care will be taken to site equipment away from noise sensitive areas. Where possible, loading and unloading will also be carried out away from such areas. Machines will not be left running unnecessarily. Plant from which the noise generated is known to be particularly directional should, wherever practicable, be orientated so that the noise is directed away from noise sensitive areas.

Materials shall be lowered whenever practicable and shall not be dropped. The surfaces on to which the materials are being moved will be covered by resilient material.

### 8.1.3.7 Maintenance

Regular and effective maintenance by trained personnel is essential and will do much to reduce noise from plant and machinery. Increases in plant noise are often indicative of future mechanical failure.

Noise caused by vibrating machinery having rotating parts can be reduced by attention to proper balancing. Where relevant and practicable, frictional noise from the cutting action of tools and saws will be reduced if the tools are kept sharp. Noises caused by friction in conveyor rollers, trolleys and other machines will be reduced by proper lubrication where necessary.

## 8.1.4 Controlling the Spread of Noise

### 8.1.4.1 Distance

Increasing the distance from noise-sensitive receptors is often the most effective method of controlling noise. Where possible, stationary plant such as compressors and generators will be located away from any noise-sensitive area.

## 8.1.5 Noise Thresholds

Noise thresholds represent the lowest thresholds (category A) as per the ABC method within BS5228-1. The thresholds corresponding to the relevant category are shown in **Table 8.1**.

**Table 8.1: Construction Noise Threshold Values**

| Assessment category and threshold value period    | Threshold value, in decibels (dB) |            |                          |
|---------------------------------------------------|-----------------------------------|------------|--------------------------|
| ( $L_{Aeq}$ )                                     | Category A                        | Category B | Category C <sup>C)</sup> |
| Night-time (23.00–07.00)                          | 45                                | 50         | 55                       |
| Evenings and weekends <sup>D)</sup>               | 55                                | 60         | 65                       |
| Daytime (07.00–19.00) and Saturdays (07.00–13.00) | 65                                | 70         | 75                       |

*A significant effect has been deemed to occur if the total  $L_{Aeq}$  noise level, including construction, exceeds the threshold level for the relevant category.*

### 8.1.6 Communication

In order to minimise the likelihood of complaints, ANDBC and affected residents will be kept informed of the works to be carried out and of any proposals for work outside normal hours.

## 9 Ecological Mitigation Measures

### 9.1 Pollution Prevention

Mitigation and control measures to address the potential for pollution associated with construction activities included in this OCEMP have been informed by these guidance documents and will follow good work practices and sound design principles and best practice where relevant, including the following current series of guidance documents:

- **GPP1: Understanding your environmental responsibilities - good environmental practices;**
- **GPP2: Above ground oil storage;**
- **GPP5: Works and maintenance in or near water;**
- **GPP6: Working at construction and demolition sites;**
- **GPP8: Safe storage and disposal of used oils;**
- **GPP13: Vehicle washing and cleaning;**
- **GPP18: Containing major spillages and firewater at industrial sites;**
- **GPP21: Pollution incident response planning;**
- **GPP 22: Dealing with spills; and,**
- **GPP26: Storage and handling of drums & intermediate bulk containers.**

Within these guidance documents a range of measures are applicable. Those relating specifically to the issues raised are highlighted in this statement. In addition, best practice provided by CIRIA in their series of guidance documents will also be applied where relevant.

### 9.2 Designated Sites

The boundary of the project is located within the boundary of Outer Ards Area of Special Scientific Interest (ASSI)/ Special Protected Area (SPA) and Ramsar.

The boundary of this designated sites in relation the project is illustrated in **Figure 9.1**.



**Figure 9.1: Designated Sites in Relation the Project**

### 9.2.1 Outer Ards Area of Special Scientific Interest

The Outer Ards Peninsula is notable for the structural geology, palaeontology and stratigraphy observable at Orlock Bridge, Coalpit Bay and Kearney Point. Ballymacormick Point's shoreline comprises multiple Ordovician rock ridges aligned parallel to the waterline.

The coastal habitat resource includes dune and maritime grassland, maritime heath and cliff-ledge vegetation, together with saltmarshes, tidal and non-tidal fens and wet flushes. While many vegetation types do not form extensive stands, their widespread occurrence gives the coastline a high overall vegetation cover.

Several notable maritime vegetation communities are present and seventeen rare plant species have been recorded. The coastline also holds international importance for the wintering populations of three waterfowl species.

The Department of the Environment for Northern Ireland have set out a list of operations and activities likely to damage the flora, fauna, geological and physiographical features of the area, which includes:

- Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations.

### 9.2.2 Outer Ards Special Protected Area

The Outer Ards site stretches from Grey Point on the north Down coast to Ballyquintin Point in the south. It primarily comprises inter-tidal habitats with some adjacent notable habitats, including sand- and mud-dominated shores, cobble and boulder beaches and rocky foreshore, together with offshore islands. Neighbouring habitats include maritime grassland and heath.

Outer Ards qualifies under Article 4.1 of Directive 79/409/EEC by supporting nationally important populations of Arctic tern and golden plover. The site's principal interests are the breeding colony of Arctic tern and the wintering populations of light-bellied Brent goose, golden plover, turnstone and ringed plover. The Special Protection Area boundary coincides entirely with the Outer Ards Area of Special Scientific Interest and the Ballymacormick Point Area of Special Scientific Interest, and it also incorporates the adjacent open marine area shown on the site map.

The Conservation Objectives for this site is to maintain each feature in favourable condition.

### 9.2.3 Outer Ards Ramsar

The Outer Ards site extends from Grey Point on the north Down coast to Ballyquintin Point in the south. It principally comprises intertidal habitats, with additional adjoining areas of notable habitat such as sand- and mud-dominated shores, cobble and boulder beaches, rocky foreshore and offshore islands.

Adjacent habitats include dune and maritime grassland, maritime heath and cliff ledge vegetation, saltmarsh, tidal and non-tidal fens and wet flushes. Several locations retain the natural transition from maritime to terrestrial vegetation, supporting a range of notable communities; at least 17 rare or locally important plant species have been recorded across the site.

The Ramsar boundary coincides entirely with the Outer Ards Area of Special Scientific Interest and the Ballymacormick Point ASSI. The site was designated as a Ramsar wetland because of its significant breeding and wintering waterfowl populations, principally the wintering light-bellied brent goose, golden plover, turnstone and ringed plover. Outer Ards meets Criterion 6 as a Wetland of International Importance by regularly supporting at least 1% of the individuals in a population of one waterbird species or subspecies in any season.

## 9.3 Mitigation Measures

### 9.3.1 Ornithological Mitigation

The main issue is the potential for disturbance to roosting or feeding Ringed plover and Turnstone, both SCI species of Outer Ards SPA, during the winter season. Disturbance to both species is likely to come from noise and visual disturbance, due to rock-breaking and excavation of the existing seabed for revetement construction, partial demolition of the existing jetty and slipway for reconstruction and partial demolition and construction of building foundations.

The timetable for the construction works is scheduled to commence in March 2027 and conclude in April 2028 with overall completion scheduled for April 2029.

This schedule will not avoid the key period when non-breeding shorebirds are present at the Outer Ards SPA and RAMSAR site. Non-breeding Ringed plover and Turnstone start to arrive on the shores of Belfast Lough in late Autumn, the peak numbers of both species in the most recent survey report (winter 2025-2026) have occurred in mid-winter. Therefore, if construction works are

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completed within the breeding season (March – August), the number of birds potentially affected by construction disturbance is likely to be extremely minimal.

The site supports a number of red and amber-listed Birds of Conservation Concern in Ireland (BoCCI) including Ringed plover (Gilbert *et al.* 2021), as well as a range of specially protected species. Under Northern Irish legislation; all wild birds, their eggs, young and nests are protected from intentional or reckless disturbance or destruction.

Therefore, the following mitigation measures are recommended:

- Site construction works will take place outside the non-breeding season which extends between 1<sup>st</sup> September and 31<sup>st</sup> March inclusive to ensure that specially protected overwintering species are protected from disturbance and harm.
- A mitigation strategy to address potential losses of wintering roosting areas for the range of recorded species is likely to be required.
- The retention of as much new/ mature vegetation, including hedgerows and treelines.

### 9.3.2 Sedimentation and Containment Runoff

Preventing run-off is an effective method of preventing sediment pollution in the water environment. The adoption of appropriate sediment controls during construction is essential to prevent sediment pollution. The contractor will ensure that mitigation measures are carried out in accordance with the Construction Environmental Management Plan (CEMP). Treatment facilities for contaminated water, such as sediment traps and settlement lagoons will be used appropriately, prior to discharge. Any discharge from the construction site to water bodies during the construction phase, e.g. from these treatment facilities, will require a temporary discharge consent under the Water (Northern Ireland) Order 1999. The mitigation measures are to include:

- A clearly defined Soil Resource Plan implemented to sustainably utilise the soil materials;
- The location of stockpile storage areas will be carefully chosen, clearly identified and planned to ensure the best location to reduce material movements and minimal possibility of erosion, flooding and cross contamination;
- Protection of stockpiles from rain, contamination and erosion;
- Soil handling and storage information;
- Stockpile height, in line with soil consistency and moisture content;
- Locate stockpiles out of the wind or provide wind breaks to minimise dust generation;
- Keep stockpiles to minimum practicable height and use gentle slopes;
- Minimise the storage time of materials on site;
- Store materials away from the site boundary;
- Minimise the height of fall of all materials;
- Avoid spillage, and clean any spill up as soon as possible;
- Good soil handling and storage methods including protection of stockpiles with geotextiles;
- Minimising the amount of time stripped ground and soil stockpiles are exposed;

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- Only removing the vegetation from the area that needs to be exposed in the near future;
- Using geotextile silt fencing at the toe of any slopes and around the perimeter of the water edge, to reduce the movement of silt; this should be installed before soil stripping has begun and vehicles start tracking over the site;
- Divert clean water away from the area of construction work in order to minimise the volume of contaminated water;
- Brushing or scraping roads to reduce dust and mud deposits, appropriately disposing of material collected and;
- Putting small dams or silt fencing in artificial roadside ditches to retain silt.
- Spill kits will be located within working areas at all times. All spills will be cleaned up and will be packaged in sealed bags or containers and disposed off-site in a landfill.

In circumstances where the above mitigation measures are employed during construction operations, the potential impact to receiving water environment will be reduced to negligible thus reducing the significance of environmental impact will be reduced to minor on a temporary basis, i.e. for the duration of the works.

### 9.3.3 Concrete, Cement and Grout Pollution

The impacts in relation to cement and concrete for the project are, for the most part (but not limited to) the installation of the concrete areas, bunding (to be poured in-situ) and construction works of buildings. These measures shall include concrete washout from concrete lorries, on-site batching, concrete placement and concrete wash water treatment. The following mitigation measures are recommended:

- A risk assessment will be carried out to ensure the best location for concrete washout facilities for plant required on site;
- On site batching locations will be determined to choose the appropriate locations to allow for adequate protection of watercourses and drains during mixing activities, spillage, and storage of cement materials. Washout from mixing works will be undertaken in a contained impermeable area;
- Concrete placement and routes throughout the site will be arranged prior to deliveries with suppliers before works begin, as well as wash out areas, emergency procedures and contingency plans;
- Effluent from wheel wash and plant washing facilities will be contained in a holding tank with an impermeable sheet for efficient treatment and disposal. A concrete washout risk assessment will be completed to assess the risk to receptors based upon site location and volume of concrete generated from washout.
- Ensure that concrete pours are contained within the working area and do not enter any watercourses or surface water drains;
- When mixing grout on site, construct a suitable barrier around mixing areas, supply lines and around working areas to prevent its escape;
- Trucks, hoppers, mixers and concrete pumps that have contained concrete must be washed out in a contained area;

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- All concrete pours will be carried out under supervision;
- Pours will be properly prepared to avoid run off (shuttering, mud mats, membranes used) and waste;
- Pouring of concrete should not take place when heavy rain is imminent;
- Be sited on an impermeable designated area at least 10 m from any watercourse, surface drain, rock outcrop or karstic sinkhole
- Have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage
- Have a contained area for washing out and cleaning of concrete batching plant or ready mix lorries;
- Collect wash waters that cannot be reused and, where necessary, discharge to the foul sewer, or contain wash water for authorised disposal off site.

In circumstances where the above mitigation measures are employed during construction operations, the potential impact to receiving water environment will be reduced to negligible thus reducing the significance of environmental effect will be reduced to minor on a temporary basis, i.e. for the duration of the works.

## 10 Contaminated Land and Waste Mitigation Measures

### 10.1 Overview

A Preliminary Risk Assessment (PRA) was conducted for the Proposed Redevelopment by Pentland Macdonald Ltd.

Geological Survey Of Northern Ireland (GSNI) GeoIndex shows the site is underlain by Ordovician greywacke and mudstone of the Leadhills Supergroup. Surrounding geological mapping indicates bedrock is commonly overlain by glacial till (a red-brown gravelly clay with cobbles and boulders deposited during the last glaciation) with blown sand or marine beach deposits (sand and gravel) occurring locally. Published data, however, suggest that bedrock may outcrop or lie close to the surface across parts of the site. The developed nature of the location means made ground is also likely in places.

The bedrock is classified by GSNI as aquifer category BI(f), which is an aquifer of limited productivity where groundwater flow is largely fracture-controlled. Glacial till, if present, is unlikely to host significant groundwater, although sandy horizons or interfaces at rockhead can yield low to moderate volumes. The blown sands mapped to the south and southeast are treated as a potential superficial aquifer and depending on lithology and saturated thickness, may store and transmit appreciable groundwater. Perched groundwater may also occur within made ground deposits. Groundwater vulnerability across the site is rated as '2' on a 1–5 scale (1 least vulnerable, 5 most vulnerable), indicating generally low susceptibility to contamination.

A desk study and initial reconnaissance identified several on-site and nearby potential contamination sources: made ground of unknown quality; minor maintenance activities within a rescue shed; a former above-ground heating oil tank and boiler; storage of small quantities of petrol; a former underground diesel tank and dispensing pump; and a nearby former boat-building yard. These features could present slight, but unacceptable without mitigation, risks to future site users and construction workers, to marine surface waters and to on-site buildings or enclosed spaces. Nevertheless, given the geological setting and the nature and scale of the identified sources, the overall risk is considered relatively low.

Taking account of the local hydrogeological and environmental context, the site is not judged to pose an unacceptable risk to off-site receptors or to regional groundwater resources.

### 10.2 Specific Mitigation Measures

Although the risk of significant land contamination is considered to be low, it is recommended that prior to construction, it would be prudent to undertake targeted site investigation and obtain quantitative data on the ground conditions, followed by quantitative assessment of the collated data, to confirm (or otherwise) that the identified potential sources of contamination have not resulted in any reduction in land quality at the site.

### 10.3 Disposal of Waste Arising

The fractured rock resulting from the process can be utilised in compliance with recommended practices for repurposing concrete waste. It is essential to adhere to producers' guidelines, ensuring that the lime concrete component does not surpass 10% of the total mass of the fractured rock.

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It is envisaged that any waste soil material from rock excavation works will be disposed off-site to an appropriately licensed landfill. If any waste pile arisings are to be temporarily stored on site prior to transport and disposal off site, the waste soils will be stored upon a HDPE liner surrounded by a clay bund. The material will be covered with a plastic liner to minimise precipitation infiltration.

All waste generated on site will be dealt with in accordance with the appropriate current legislation; The Waste Management Licensing (Amendment) Regulations (Northern Ireland) 2022 and The Hazardous Waste (Amendment No. 2) Regulations (Northern Ireland) 2015.

Waste classification will be undertaken in accordance with the WM3 Technical Guidance (Guidance on the Classification and Assessment of Waste, NIEA, 1<sup>st</sup> Edition V1.1 NI, January 2021).

Waste characterisation (Waste Acceptance Criteria) testing will be carried out as per BS 12457/2.

A full record of waste transfer consignment notes will be kept on site of all material that is removed off-site for disposal to a licensed landfill. A copy of the consignment notes will be included within the Verification Report.

Under Article 5 of The Waste and Contaminated Land Order Northern Ireland (1997) all those responsible for producing or handling wastes have legal requirements placed upon them for the safe keeping, transport and subsequent recovery or disposal. Consequently, at the basic minimum, the Contractor shall ensure that all waste leaving site must have a Waste Transfer Note.

The Waste Transfer Note as a minimum shall include detail on:

- **Type of Waste and its 6 digit European Waste Code;**
- **What sort of container it is in;**
- **Time, date, and place the waste was transferred to;**
- **The names and addresses of both persons involved in the transfer;**
- **Details of which category of authorised person each one is (i.e. producer, waste license holder, registered waste carrier);**
- **Certificate number of registered waste carrier;**
- **Waste management license number of waste facility;**
- **The name and addresses of any broker involved in the transfer; and**
- **Signatures of both parties.**

All Waste Transfer Notes shall be kept for a minimum of three years.

All construction works will be carried out in accordance with DAERA Pollution Prevention Guidance (DAERA, 2025) to ensure safeguarding of the water environment.

## 11 Air Quality & Dust Pollution Prevention

### 11.1 Overview

During construction, the potential will exist for adverse effects on air quality, primarily due to the generation and dispersion of dust and also due to additional emissions from construction vehicles and plant. Effects on air quality from construction activities and vehicles are considered to be non-significant.

### 11.2 Mitigation Measures Air Quality

To ensure best practice with regard to construction dust and construction emissions a series of mitigation measures have been set out below

1. Dust and dirt – HGVs have the potential to distribute dust and dirt from the construction site onto the local road network. These effects would be most pronounced in the immediate vicinity of the site entrances. The potential for road soiling will be controlled by appropriate measures such as wheel cleaning and road sweeping.
2. Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary, and the regional office contact information.
3. Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
4. Make the complaints log available to relevant authorities on request.
5. Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in a site log book.
6. No burning of materials or otherwise on site is permitted.
7. Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby to monitor dust and record inspection results.
8. Carry out regular site inspections to monitor compliance with the OCEMP and record inspection results.
9. Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
10. Plan site layout so that machinery and dust causing activities should be located away from receptors as far as is possible.
11. Erect solid screens or barriers around high dust activities
12. Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
13. Avoid site runoff of water or mud.
14. Keep site fencing, barriers and scaffolding clean using wet methods.
15. Remove materials that have a potential to produce dust from site as soon as possible.
16. Ensure all vehicles switch off engines when stationary with no idling vehicles.

## Outline Construction Management Plan (oCEMP)

---

17. Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
18. Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas.
19. Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.
20. Ensure an adequate water supply on the site for effective dust suppression.
21. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
22. Ensure effective water suppression is used during demolition operations.
23. Bag and remove any biological debris or damp down such material before demolition.
24. Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
25. Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
26. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
27. For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.
28. Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
29. Avoid dry sweeping of large areas.
30. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
31. Record all inspections of haul routes and any subsequent action in a site logbook.

### 11.3 Conclusion

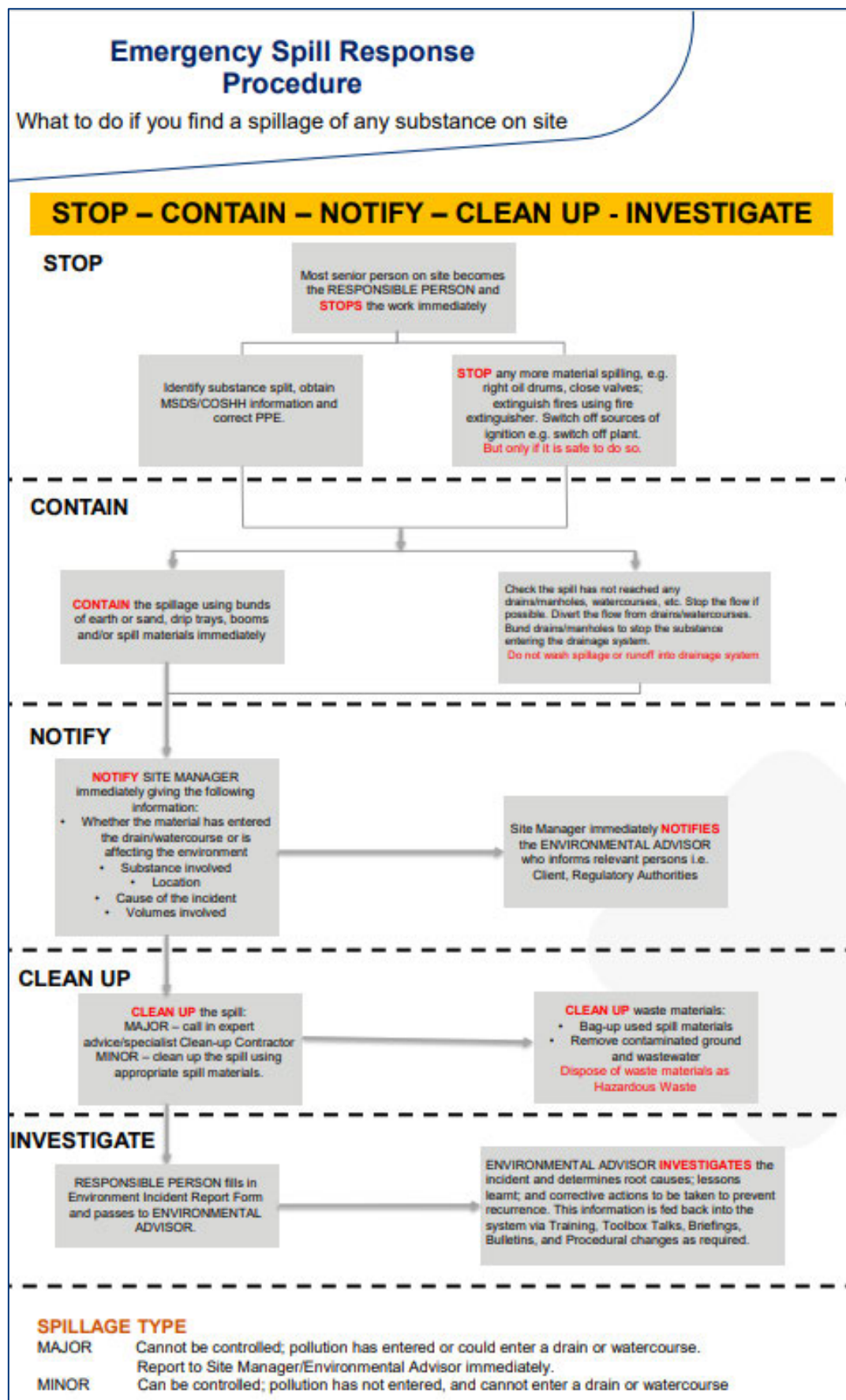
The mitigation measures are those specified in the IAQM guidance (IAQM 2024) and are suitable to mitigate dust emissions generated by the proposed scheme. Measures such as those specified in the guidance will normally be sufficient to reduce construction dust nuisance, risk to human health or effects on ecological sites to a 'not significant' effect.

## 12 Environmental Emergency Management Plan

### 12.1 Key Points

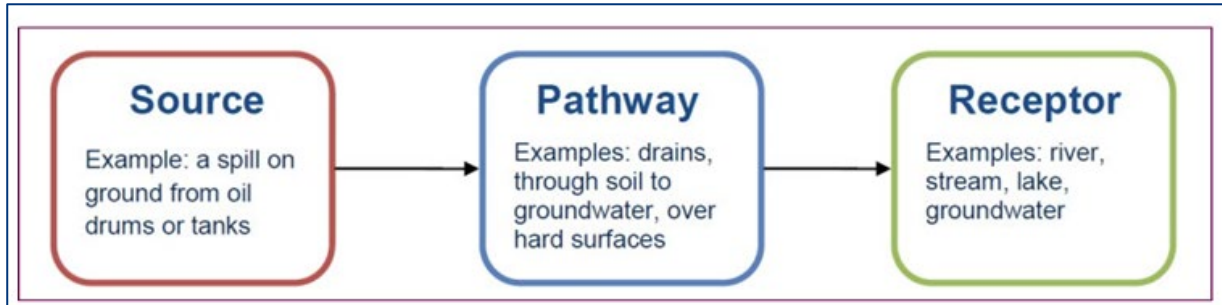
- Training will be given to all site personnel by the Site Supervisor, in the actions to take in the event of a spillage of potential contaminants. Emergency procedures to be implemented in the event of a spillage or leakage of any polluting material such as fuel, oil, or silt-laden drainage, will be in place on-site and incorporated into the OCEMP. Provision for containment and clean-up of the material will be made. The procedure will follow the recommendations contained within GPP21 'Pollution Incident Response Planning.' Any oil or similar material will be cleaned away immediately using an absorbent material (sand, absorbent pads or other purpose made products) to prevent it entering any watercourse. Spill kits will be provided and training on their use given to all site personnel.
- Plant will be refuelled from a double skinned bowser controlled by a specially trained operator. Refuelling will take place where possible on areas of hard standing and before plant access fields where towers are proposed. No refuelling of plant will be permitted in close proximity to any watercourse, ditch (i.e., within 30 m) or on steep sloping ground. Spill kits will be carried by the bowser and the plant being refuelled.
- Chemicals, fuels and oils will be stored in secure and designated storage areas at existing locations. These substances will be stored in accordance with the appropriate regulatory requirements, including COSHH Regulations 1994 (updated 1999). Storage areas will all be located on hard standing areas to prevent the possible infiltration of contaminants into the soil. Stockpiles of dry materials will be stored in locations that prevent contamination of surface waters and materials will not be stockpiled without appropriate safety and mitigation systems in place.
- In order to prevent materials leaking from static plant, such as pumps and generators, contaminating the ground and being washed into the drainage system, static plant will be placed on drip trays and will be located only within area shown to be included in the planning application boundary. Plant will be washed by hose at a location as far from any nearby watercourses as is practically possible and no runoff will be allowed to drain into a watercourse without prior treatment (to filter fine particulates). If wash water is contaminated with oil, it will be isolated and pumped into a bowser for disposal offsite. Discharges to any watercourse will only be permitted in accordance with water activity permits from NIEA. Any waste material or washings will be treated and disposed of offsite at a suitable treatment facility.
- Wet concrete waste in the bucket from dumper trucks will be emptied onto containers where it will be allowed to dry before being removed from the site for disposal at a landfill. If the bucket of dumper trucks needs to be washed out, this will take place at a suitable hard standing location where the wash water can be contained so that it can be pumped into a bowser for offsite disposal at a licensed landfill.

## 12.2 Emergency Spill Response Procedure



## 12.3 Guidance for Pollution Prevention (GPP): Pollution incident response planning: GPP21

### 12.3.1 Source – Pathway – Receptor



The contractor should understand the site and how their activities could affect the environment and cause pollution. Think about what pollution linkages you have (see above graphic). The pollution linkages include a source i.e., where the pollution can come from.

### 12.3.2 Spillage Response Procedure

The Contractor will be responsible for the preparation and implementation of the spillage response procedure. The key issues to consider for the spillage response procedure include:

- The Contractor already has a standard spill response procedure in operation then this should be amended to reflect the local conditions on site.
- It will be important to ensure that the Environmental Manager is notified of all incidents where there has been a breach in agreed environmental management procedures.
- The following principles should apply in the event of an environmental emergency:
  - IF SAFE, stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers. Inform Engineer immediately.
  - IF SAFE (USE PPE), contain the spill using the absorbent spill material provided. Do not spread or flush away the spill. Cover or bund off any vulnerable areas where appropriate.
  - IF POSSIBLE, clean up as much as possible using the absorbent spills materials. Do not hose the spillage down or use any detergents.
  - Contain any used absorbent material so that future contamination is limited.
  - Notify the Construction Project Manager and environmental officer so that used absorbent material can be disposed of using a specialist contractor.
- The Construction Manager, in conjunction with the Contractors environmental manager, will develop and test, through exercises, the Emergency Spillage Procedure to ensure that appropriate measures to prevent and mitigate damage due to accidents and spillages are in place.
- Testing of the Emergency Spillage Procedure shall be recorded on the relevant environmental control form.

## Outline Construction Management Plan (oCEMP)

- Inform all personnel about the spill response procedure through toolbox talks and/or induction training. Consider the need for refresher training.
- Use reminder posters, identifying the key essential elements of the spill response procedure, located in appropriate areas such as fuel storage areas, mess cabins, security points or on the back of toilet doors.
- Example control containment measures for different pollutants are given here within **Table 12.1:**

**Table 12.1: Control/Containment Measure**

| <b>Spill on ground</b>                                                                                     | <b>Concrete/cement</b> | <b>Paints</b> | <b>Oils</b> | <b>Silt</b> | <b>Detergents</b> |
|------------------------------------------------------------------------------------------------------------|------------------------|---------------|-------------|-------------|-------------------|
| Sand                                                                                                       | ✓                      | ✓             | ✓           | X           | ✓                 |
| Straw bales                                                                                                | X                      | X             | ✓           | ✓           | X                 |
| Absorbent granules                                                                                         | X                      | X             | ✓           | X           | X                 |
| Geotextiles fence                                                                                          | ✓                      | X             | X           | ✓           | X                 |
| Drip trays                                                                                                 |                        | ✓             | ✓           | X           | X                 |
| Pad/ rolls                                                                                                 |                        |               | ✓           | X           | X                 |
| Drain seal                                                                                                 | ✓                      | ✓             | ✓           | ✓           | ✓                 |
| Earth bunds                                                                                                | ✓                      | ✓             | ✓           | ✓           | ✓                 |
| <b>Spill in water</b>                                                                                      |                        |               |             |             |                   |
| Straw bales                                                                                                | X                      | X             | ✓           | ✓           | X                 |
| Pads/ rolls                                                                                                | X                      | X             | ✓           | X           | X                 |
| Booms                                                                                                      | X                      | X             | ✓           | X           | X                 |
| Stop further spill contain and inform appropriate personnel immediately                                    | ✓                      | ✓             | ✓           | ✓           | ✓                 |
| <p>In the event of a significant spill contact the</p> <p><b>NIEA Incident Hotline (0800 80 70 60)</b></p> |                        |               |             |             |                   |

It will be important to incorporate the names and telephone numbers of others you need to inform (includes alerting people out of hours) and who should contact them within the spillage response plan. Further issues that are considered key in the response procedure are:

- Details of a professional 24-hour call-out clean-up service
- Ensure sufficient types and quantities of spill response equipment are available on site. Keep spill kits where spills may occur, e.g. at refuelling points or on plant working near a watercourse.
- Material safety data sheets and COSHH assessments will assist in identifying appropriate spill measures for dealing with hazardous materials.

## Outline Construction Management Plan (oCEMP)

- Dispose of used spill response material appropriately, e.g. oily granules or pads should be bagged up and placed in the designated waste skip.

**Table 12.2: Important Telephone Numbers**

| Emergency Contact Details                                                                |                                                                                         |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Emergency Services                                                                       | 999                                                                                     |
| Ulster Hospital Emergency Room<br>Upper Newtownards Road,<br>Dundonald, Belfast BT16 1RH | Phone<br>02890484511<br>Opening hours<br>Emergency Department - open 24 hours every day |
| NIEA Incident Hotline                                                                    | 0800 80 70 60 (Free 24 hr Emergency Hotline)                                            |
| Contractors Contact: (Out of Hours)                                                      |                                                                                         |
| Major Projects Manager                                                                   | TBA                                                                                     |
| Construction Manager                                                                     | TBA                                                                                     |
| Environmental Manager                                                                    | TBA                                                                                     |

From: Guidance for Pollution Prevention Dealing with spills: GPP 22 October 2018 (Version 1)

# Spill Response Procedure

If the spill cannot be safely contained or if the spill is causing a threat to life, evacuate the area and call **999** from a safe location

IF SAFE TO DO SO

**STOP > CONTAIN > NOTIFY > CLEAN-UP**

## STOP

- Stop work immediately
- Stop the leak or eliminate the source of the spill
- Eliminate ignition sources and provide natural ventilation

## CONTAIN

- Use pollution control equipment (e.g. spill kits, drip trays, bunds of earth and sand) to contain the spill
- Check the spill has not reached any drains, water courses or other sensitive areas
- Cover all drains / manholes to prevent the spill from entering the drainage system

## NOTIFY

- Once the spill has been contained notify your emergency contact. Details at the bottom of the page.

## CLEAN-UP

- Attempt to soak up the spill using absorbent material
- Always follow your Duty of Care for waste when disposing of contaminated materials including spill kit/equipment.

### EMERGENCY CONTACT DETAILS (Complete with your business details)

| NAME | TELEPHONE | NEAREST SPILL KIT |
|------|-----------|-------------------|
|      |           |                   |

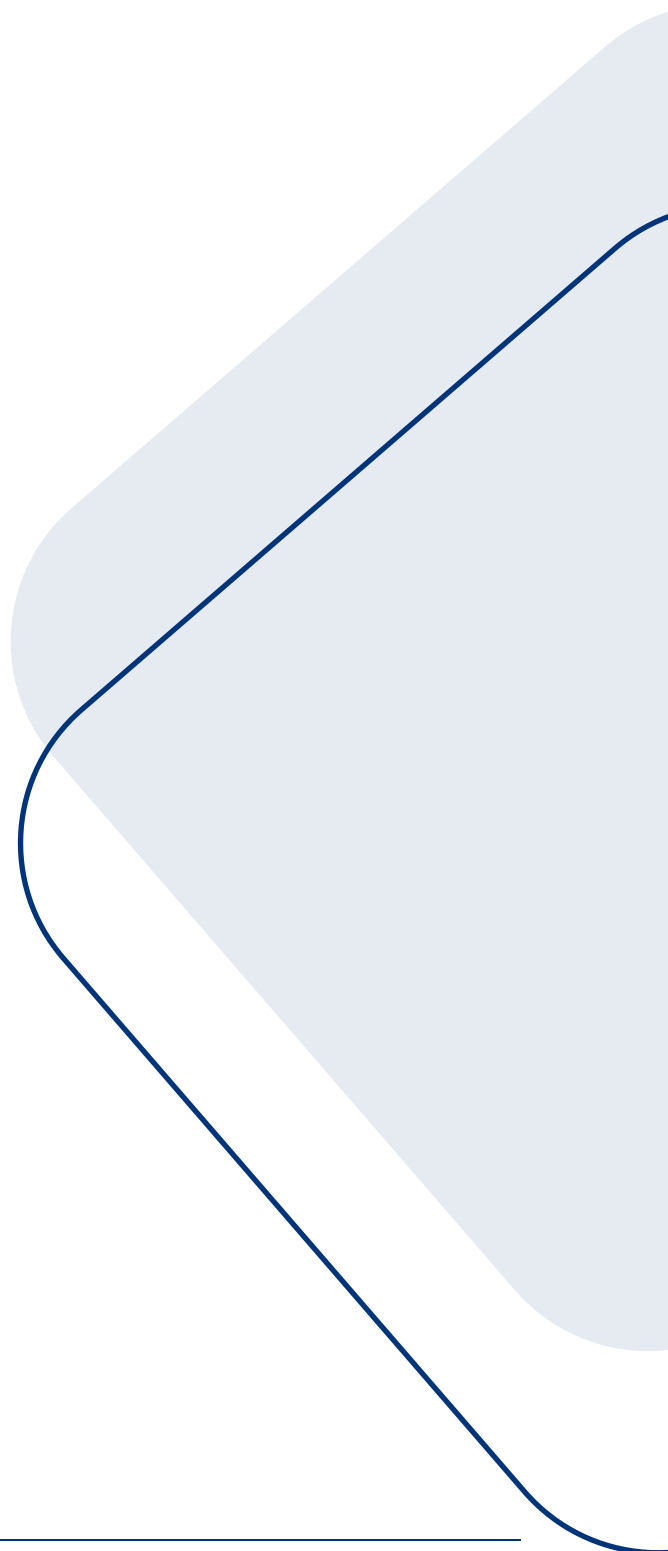
**PRINT OUT AND DISPLAY SIGN (To be located throughout site)**

**NIEA Incident Hotline Number**

**0800 80 70 60**

## Appendix A

### Proposed Redevelopment Plans





- NOTES
- BYC Site Boundary
  - Neighbouring Land Controlled by ANDBC
  - Existing Buildings to be Demolished as Part of the Project

| REVISIONS: |             |           |                  |
|------------|-------------|-----------|------------------|
| Rev. No.   | Description | Rev. Date | Drawn    Checked |

ISSUED FOR: PLANNING

**KENNEDY FITZGERALD**  
ARCHITECTS LLP  
4a Dill House  
Castlerough Business Park  
478 Castlerough Road  
Belfast BT5 6BQ  
[T] 028 9066 1632  
[E] info@kennedyfitzgerald.com [W] www.kennedyfitzgerald.com

|                     |                                                  |
|---------------------|--------------------------------------------------|
| PROJECT NO:<br>4183 | PROJECT TITLE:<br>Project: Ballyholme Yacht Club |
|---------------------|--------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                 |                        |                    |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------|----------|
| DRAW NO TITLE:<br>Site Location Plan                                                                                                                                                                                                                                                                            |                        |                    |          |
| DATE: 25/03/2026                                                                                                                                                                                                                                                                                                |                        | CL. ENT: ANDBC     |          |
| DRAWN BY: [Redacted]                                                                                                                                                                                                                                                                                            | CHECKED BY: [Redacted] | SALES As indicated | SIZE: A1 |
| <div> All rights reserved. All drawings and written material herein constitute original and unpublished work of the architect and may not be duplicated, used or disclosed without written consent of the architect.</div> |                        |                    |          |
| DRAWING NUMBER:<br>BYC- KFA- ZZ- ZZ- DR- A- 00050 (P)                                                                                                                                                                                                                                                           |                        |                    | REV NO:  |

Site Location Plan  
1 : 1250



NOTES

Widen finger jetty from 2028mm to 3000mm.

Boat parking Maximised

Large Boat spaces 4800mm 2200mm = 77

Small Boat spaces 3600mm 1800mm = 215

Total Boat spaces = 292

Boat parking Reduced to allow for access as noted on auto tracking (red dashed X denotes minimum amount of spaces that need to be moved).

Large Boat spaces 4800mm 2200mm = 68

Small Boat spaces 3600mm 1800mm = 206

Total Boat spaces = 274

REVISIONS

ISSUED FOR: PLANNING

**KENNEDY FITZGERALD**  
ARCHITECTS LLP

48 Dill House  
Castlemore Business Park  
478 Castlemore Road  
Dublin D15 6B2  
(T) 028 9006 1632  
(E) info@kennedyfitzgerald.com

Project: Ballyholme Yacht Club

DATE: 25/03/2026

DRAWN BY: [initials]

PROJECT NO: 4183

CLIENT: ANDBC

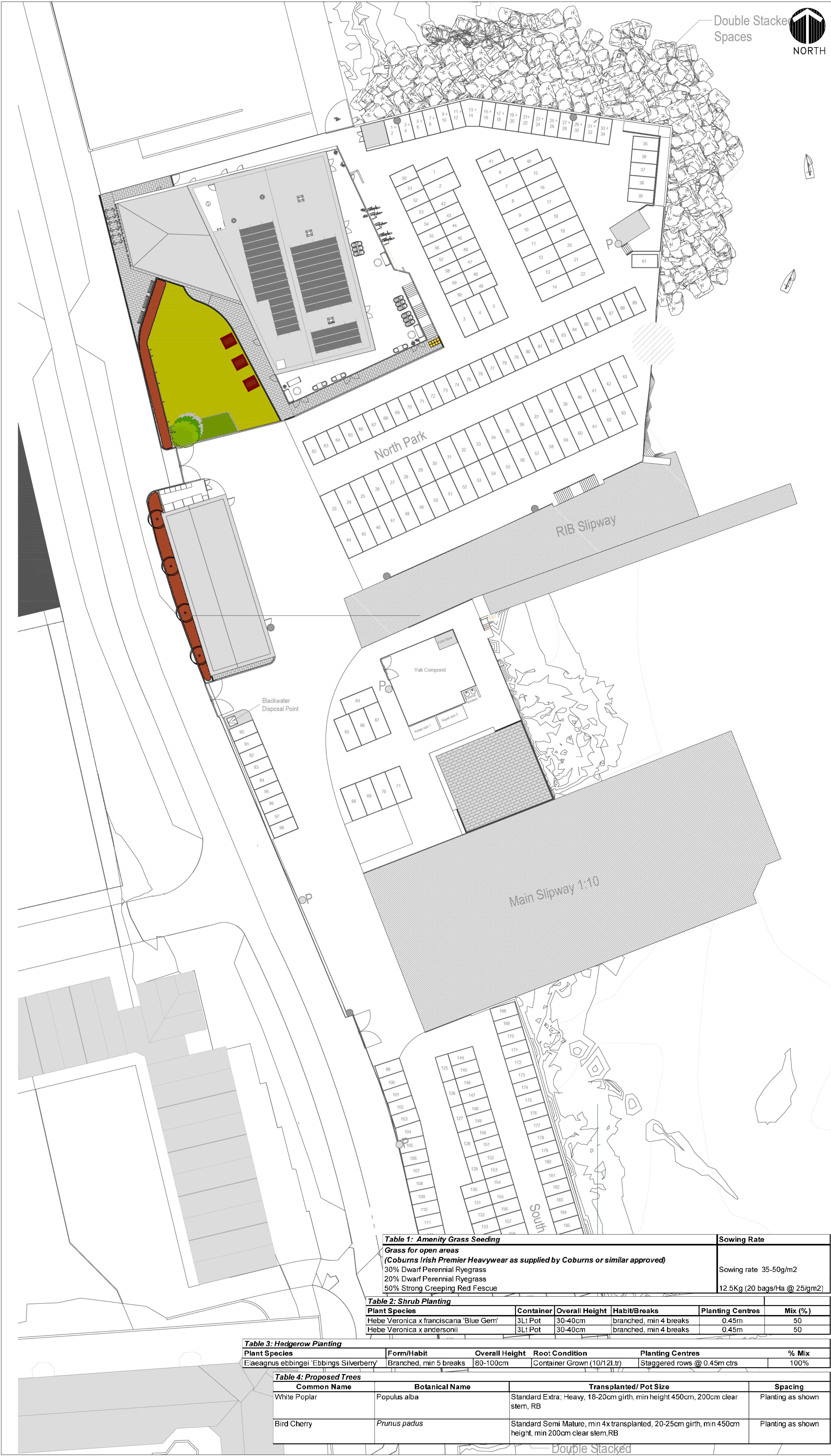
CHECKED BY: [initials]

PROJECT TITLE: Proposed Site Plan

SCALE: 1 : 200

SIZE: A0

BYC- KFA- ZZ- ZZ- DR- A- 00052 (P)



Double Stacked  
Spaces



NOTES

1. Verifying Dimensions.  
The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.
2. Existing Services.  
Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.
3. Issue of Drawings.  
Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg, dxf etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipient's own risk. RPSITL will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipient's drawing production, or setting out on site.

LEGEND

- Paving: Concrete/Granite Aggregate Paving Units (Large/Medium Sizes) Fusion paving blocks; colour varies (Graphite/Mid Grey) as supplied by Tobermore, or equal approved.
- Concrete/Granite Aggregate kerbs in 'raised' position (Min 125mm kerb show) 145mm width Fusion Kerb as supplied by Tobermore, or equal approved.
- Concrete/Granite Aggregate kerbs in 'dropped' position (Max 6mm kerb show) 145mm width Fusion Kerb as supplied by Tobermore, or equal approved.
- Grass Seeding: Amenity grass seeded area (Refer to Table 1)
- Shrub Planting: (Refer to Table 2 & dwg 00884.4.01 Detail A)
- Hedgerow Planting: Elaeagnus ebbingei 'Ebbings Silverberry' planted in staggered rows @ 450mm spacings (Refer to Table 3 & dwg 00884.4.01 Detail B)
- 1No. Prunus padus 'Bird Cherry'; Semi Mature, 20-25cm girth, min height 450cm, min 200cm clear stem, RB (Refer to Table 4 & dwg 00884.4.01 Detail C)
- 3No. Populus alba 'White Poplar'; Standard Extra Heavy, 18-20cm girth, min height 450cm, min 200cm clear stem, RB (Refer to Table 4 & dwg 00884.4.01 Detail C)
- Tactile Paving: 400 x 400 x 60mm 'Ribbed' Warning tactile paving; Colour: Buff.
- Bench Seating, with backs & arms (Refer to Architects Specification)
- External Seating (Table & Chairs) (Refer to Architects Specification)
- External Seating (Table & Chairs) (Refer to Architects Specification)
- Picnic Tables (Wheelchair accessible) (Refer to Architects Specification)
- Cycle Stands (Refer to Architects Specification)

|     |            |       |      |
|-----|------------|-------|------|
| rev | amendments | check | date |
|-----|------------|-------|------|



TETRA TECH

Elmwood House  
74 Boucher Road  
Belfast  
BT12 6RZ

T +44 (0) 28 90 667914  
F +44 (0) 28 90 668286  
W www.rpsgroup.com/ireland  
E ireland@rps.tetratech.com

Client

Ards and North Down Borough Council

Project

Ballyholme Yacht Club

Title

General Arrangement  
(Landscape)

|                  |            |               |
|------------------|------------|---------------|
| Project Number   | Sheet Size | Drawing Scale |
| 794-NI-POR-00884 | A1         | 1:250         |

Drawing Number

00884.1.01

|          |          |          |
|----------|----------|----------|
| Drawn By | Status   | Revision |
|          | Planning | -        |

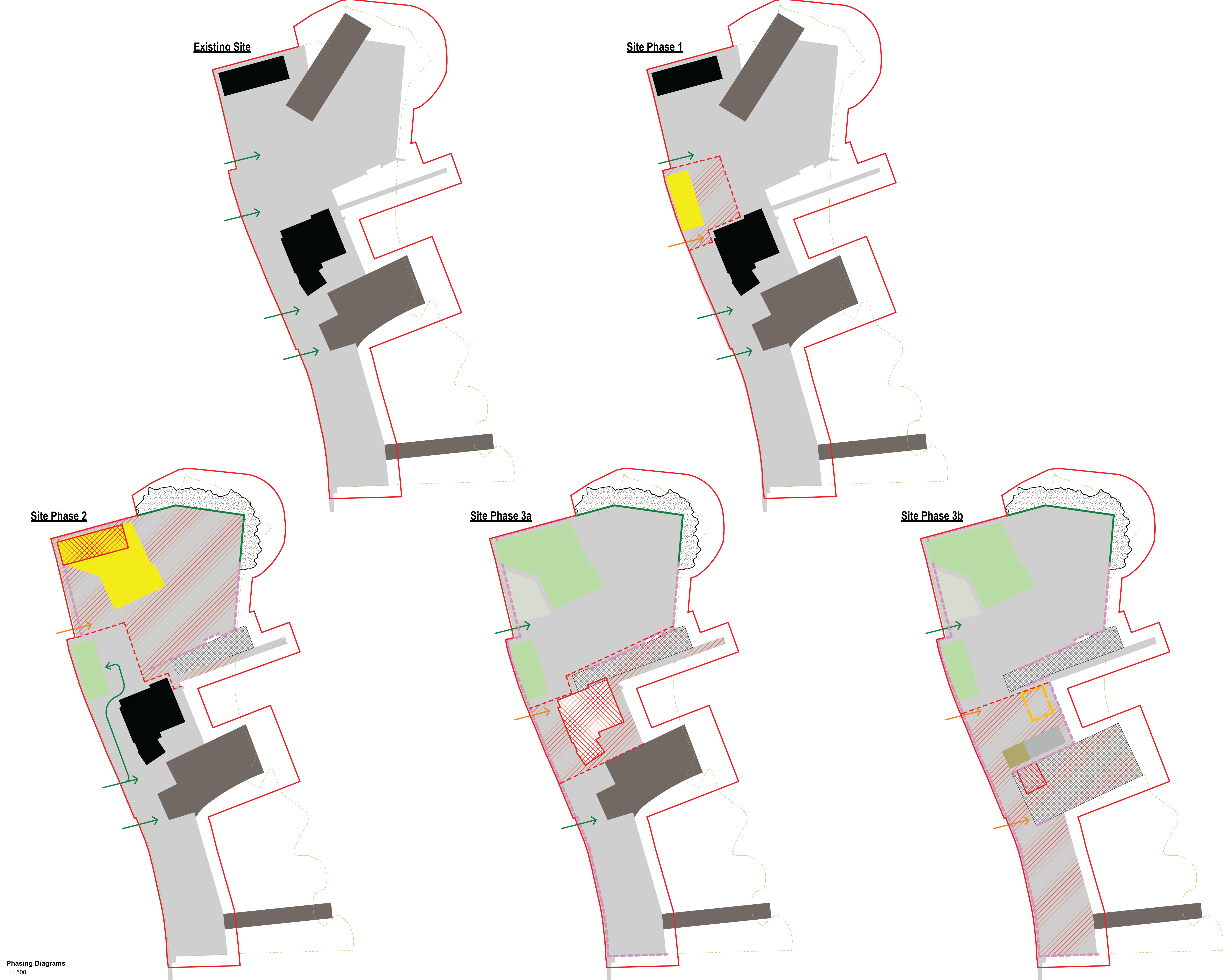
|            |             |            |
|------------|-------------|------------|
| Checked By | Approved By | Date       |
|            |             | 09/04/2026 |

| Table 1: Amenity Grass Seeding                                                                                                                                                                         | Sowing Rate                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Grass for open areas<br>(Coburns Irish Premier Heavywear as supplied by Coburns or similar approved)<br>30% Dwarf Perennial Ryegrass<br>20% Dwarf Perennial Ryegrass<br>50% Strong Creeping Red Fescue | Sowing rate 35-50g/m2<br>12.5Kg (20 bags/Ha @ 25/gm2) |

| Table 2: Shrub Planting                | Container | Overall Height | Habit/Breaks           | Planting Centres | Mix (%) |
|----------------------------------------|-----------|----------------|------------------------|------------------|---------|
| Hebe Veronica x franciscana 'Blue Gem' | 3Lt Pot   | 30-40cm        | branched, min 4 breaks | 0.45m            | 50      |
| Hebe Veronica x andersonii             | 3Lt Pot   | 30-40cm        | branched, min 4 breaks | 0.45m            | 50      |

| Table 3: Hedgerow Planting               | Form/Habit             | Overall Height | Root Condition              | Planting Centres            | % Mix |
|------------------------------------------|------------------------|----------------|-----------------------------|-----------------------------|-------|
| Elaeagnus ebbingei 'Ebbings Silverberry' | Branched, min 5 breaks | 80-100cm       | Container Grown (10/12L tr) | Staggered rows @ 0.45m ctrs | 100%  |

| Table 4: Proposed Trees |              |                                                                                                     |                        |         |
|-------------------------|--------------|-----------------------------------------------------------------------------------------------------|------------------------|---------|
| Common Name             |              | Botanical Name                                                                                      | Transplanted/ Pot Size | Spacing |
| White Poplar            | Populus alba | Standard Extra; Heavy, 18-20cm girth, min height 450cm, 200cm clear stem, RB                        | Planting as shown      |         |
| Bird Cherry             | Prunus padus | Standard Semi Mature, min 4x transplanted, 20-25cm girth, min 450cm height, min 200cm clear stem,RB | Planting as shown      |         |



Phasing Diagrams  
1 : 500

Do not scale from drawings. All discrepancies to be reported to the architect immediately. All dimensions to be verified by contractor on site prior to any works.

NOTES

- Existing Building (Active)
- Area of Contractor Possession
- Demolished Building
- Building Under Construction
- Complete Building
- BYC Lease Boundary
- BYC Site Boundary
- 1.4m Wave Wall
- 2.4m Fencing
- 1.2m Fencing
- Contractor Entrance
- Site Entrance

REVISIONS:

| Rev. No. | Description | Rev. Date | Drawn | Checked |
|----------|-------------|-----------|-------|---------|
| 1        | Revision 1  | Date 1    | XXX   | XXX     |

ISSUED FOR: Stage 2

**KENNEDY FITZGERALD**  
ARCHITECTS LLP

[E] info@kennedyfitzgerald.com  
[W] www.kennedyfitzgerald.com

As Dill House  
Castlemore Business Park  
478 Castlemore Road  
Belfast BT5 1EG  
[T] 028 9066 1632

PROJECT NO  
4183

PROJECT TITLE  
Project: Ballyholme Yacht Club

DRAWING TITLE  
Phasing Site Plan

| DATE       | DRAWN BY | CHECKED BY | CLIENT | SCALE        | NOTE |
|------------|----------|------------|--------|--------------|------|
| 08/07/2024 |          |            | ANDBC  | As indicated | A0   |

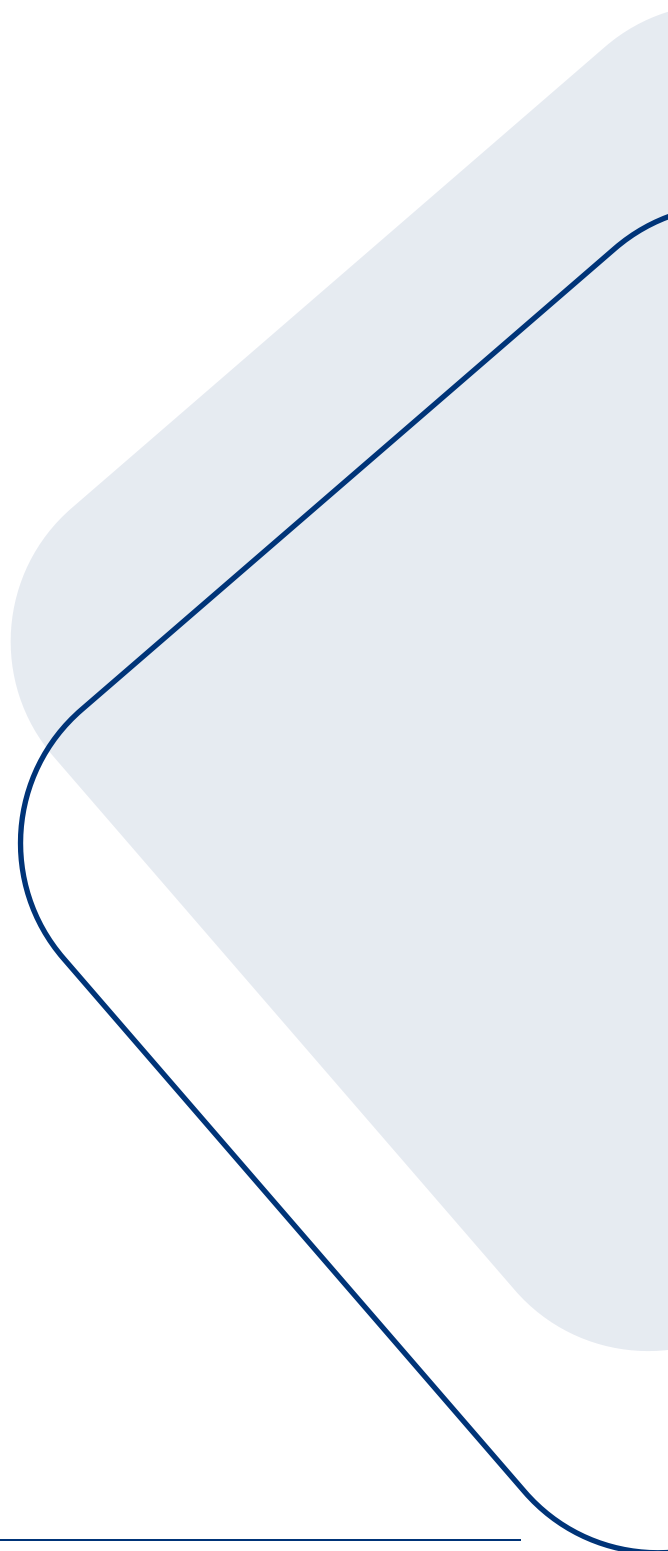
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DRAWING NO: BYC-KFA-ZZ-ZZ-DR-A-00001

REV NO: 1

## Appendix B

### Preliminary Construction Methodology



### Preliminary Construction Methodology

This document provides a description of the preliminary construction methodology for the redevelopment of Ballyholme Yacht Club. There will be terrestrial elements of the work for which planning permission is being sought from Ards & North Down Borough Council and marine elements for which a Marine Construction Licence is being sought from the Department of Agriculture, Environmental and Rural Affairs (DAERA) Marine & Fisheries Division (MFD).

The following sections set out the various aspects of the proposed works. This Preliminary Construction Method Statement should also be read in conjunction with the outline Construction Environmental Management Plan (CEMP) which supports the planning application. It is likely that final versions of these documents will be conditioned with any approvals, to be provided for agreement, prior to construction and on appointment of a Contractor, during detailed design stage..

### Demolition of Existing Buildings and Clubhouse

- Removal and disposal of all asbestos containing materials from the existing Main Clubhouse building and rescue (boat maintenance) shed. Works will be carried out by a Licensed Asbestos Removals Contractor.
- Disconnection/de-energisation of the existing utility supplies to both existing buildings (including mains gas, water, electric and telecoms).
- Soft strip and internal clearance works (both buildings).
- Demolition of both buildings in strict accordance with the agreed plan of work (top-down method will be stipulated, based on each building's location).
- Segregation and removal (for off-site crushing and screening) of demolition arisings, to contribute to BREEAM 95% waste reuse/recycling target.

### Existing North Slipway Closure & Infilling

- Breaking out and partial demolition of the existing concrete slipway to facilitate construction of the new seawall foundation and disposal of arisings. Excavation arisings to be disposed of on land at an appropriate offsite facility.
- Placement and compaction of sub-base material to create a formation layer for foundations.
- Construction and installation of temporary works, specifically concrete formwork to cast the new length of reinforced concrete seawall to close the existing slipway.
- Post-fixing of new steel reinforcement into the existing seawall to provide structural continuity with the new length of seawall.
- Positioning of steel reinforcement within formwork and placement of concrete.
- Infilling to the rear of the new length of seawall, within the existing North Slipway with clean imported granular fill material.

### New Rock Armour Revetment Construction

- Rock breaking and excavation of existing seabed (bedrock, boulders, cobbles, gravel) within the footprint of the rock armour revetment toe to form a toe trench. Excavation arisings to be disposed of on land at an appropriate offsite facility
- Construction of revetment core behind toe trench at a 1:1.5 gradient, filling to the North Boat Park seawall including infilling of the existing North Slipway.
- Construction of revetment toe, with placement of rock armour stones keyed into existing bedrock within the toe trench.
- Placement of graded rock armour underlayer, secondary and primary rock armour stones onto the revetment core at 1:1.5 gradient.
- Placement of revetment toe armour, to overlies those keyed into the existing bedrock toe trench.

### New Reinforced Concrete RIB Slipway Construction

- Rock breaking and excavation of existing seabed (bedrock, boulders, cobbles, gravel) within the footprint of the new RIB Slipway at a 1:10 gradient and disposal of arisings. Excavation arisings to be disposed of on land at an appropriate offsite facility.
- Locally deepened rock breaking and excavation will be required along the toe and edge of the proposed RIB Slipway to facilitate the construction of an integral reinforced toe and edge beam.
- Construction and installation of temporary works, specifically concrete shutters for the casting of the new reinforced concrete slipway.
- Placement and compaction of sub-base material to create a formation layer for slipway construction.
- Positioning of steel reinforcement within formwork and placement of concrete.

### Demolition of Existing and construction of a new Finger Jetty

- Demolition of the existing concrete jetty (deck structure and pillars) and disposal of arisings. Excavation arisings to be disposed of on land at an appropriate offsite facility.
- Construction and installation of temporary works, specifically concrete shutters for the casting of the new concrete infilled finger jetty.
- Positioning of steel reinforcement within formwork and placement of concrete to reconstruct the finger jetty at a 1:10 gradient to match the new RIB Slipway.
- Installation of fendering to the berthing faces of the new finger jetty with bolted connections.

### Reconstruction & Extension of Existing Main Slipway

- Rock breaking and excavation of existing seabed (bedrock, boulders, cobbles, gravel) within the footprint of the new Main Slipway at a 1:10 gradient and disposal of arisings. Excavation arisings to be disposed of on land at an appropriate offsite facility.
- Locally deepened rock breaking and excavation will be required along the toe and edge of the proposed RIB Slipway to facilitate the construction of an integral reinforced toe and edge beam.

## Outline Construction Management Plan (oCEMP)

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- Demolition of the existing concrete slipway within the footprint of the new Main Slipway at a 1:10 gradient and disposal of arisings.
- Construction and installation of temporary works, specifically concrete shutters for the casting of the new reinforced concrete slipway.
- Placement and compaction of sub-base material to create a formation layer for slipway construction.
- Positioning of steel reinforcement within formwork and placement of concrete.

## Clubhouse Construction (Terrestrial Works)

- Break out existing concrete surfacing slab.
- Excavate trenches to rock stratum for pad and strip foundations.
- Provide trench infill as required to rock stratum.
- Construct reinforced concrete pad and strip foundations.
- Construct reinforced concrete columns and lift/stair core walls from top of foundations to underside of first floor.
- Construct reinforced concrete first floor slab and beams.
- Construct reinforced concrete lift core wall to roof level.
- Erect main first floor steel structure supported of the first-floor concrete slab and beams.
- Erect ground floor steel structure to café / entrance area.
- Encase steel columns below ground.
- Build substructure walls to ground floor level.
- Place well compacted engineered fill to underside of ground floor structure.
- Pour ground floor reinforced concrete suspended slab / ground bearing slab.
- Build ground floor to first floor façade.
- Install metal decking roof panels to support built up roof system as specified by architect.
- Build first floor to roof façade.

## Boathouse Construction (Terrestrial Works)

- Break out existing concrete surfacing slab
- Excavate trenches to rock stratum for pad and strip foundations
- Provide trench infill as required to rock stratum
- Construct reinforced concrete pad and strip foundations
- Erect single storey steel structure
- Install metal decking roof panels to support built up roof system as specified by architect
- Build substructure walls and ground floor to roof block walls

## Outline Construction Management Plan (oCEMP)

---

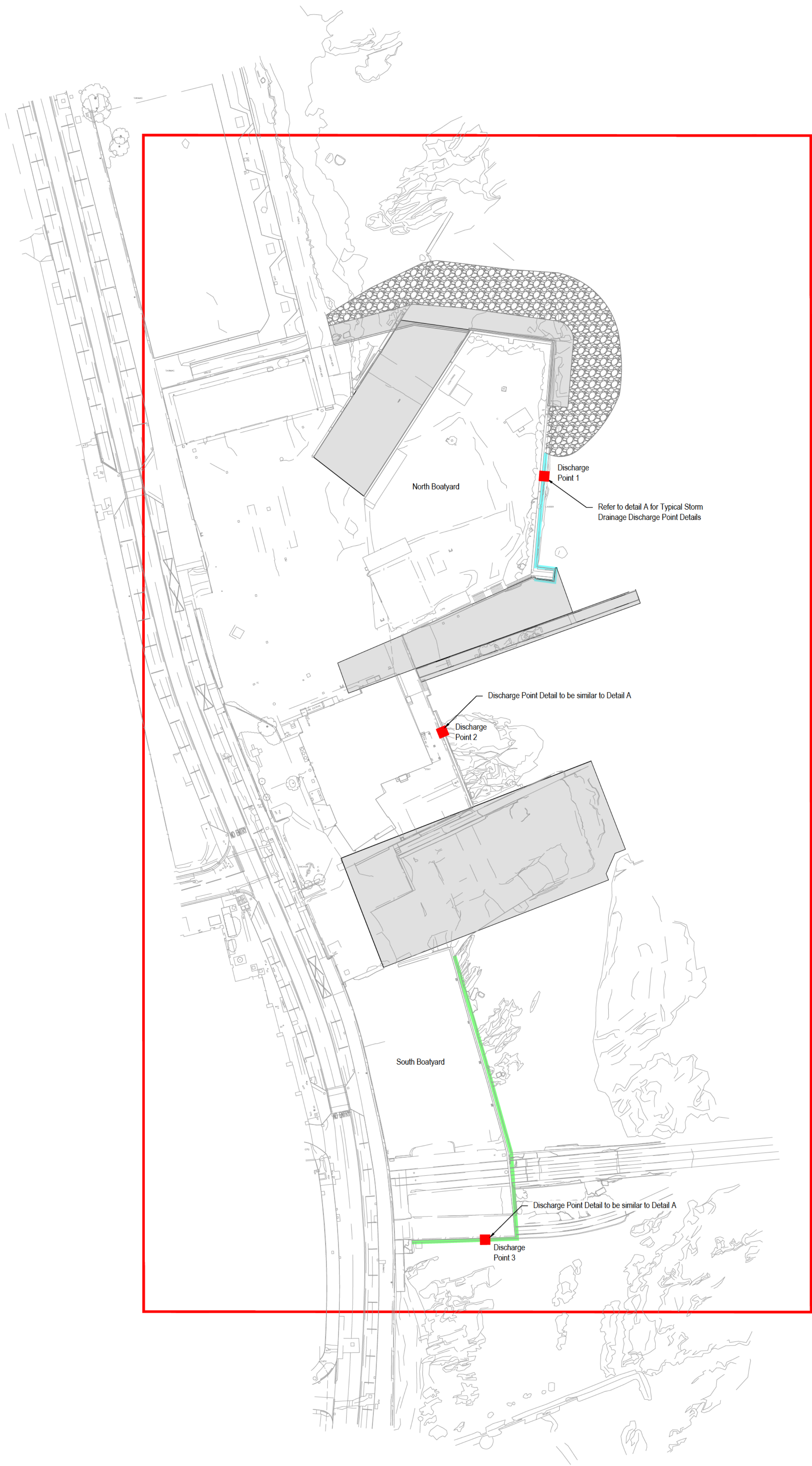
- Pour reinforced concrete ground bearing floor slab.

### Surfacing & Drainage

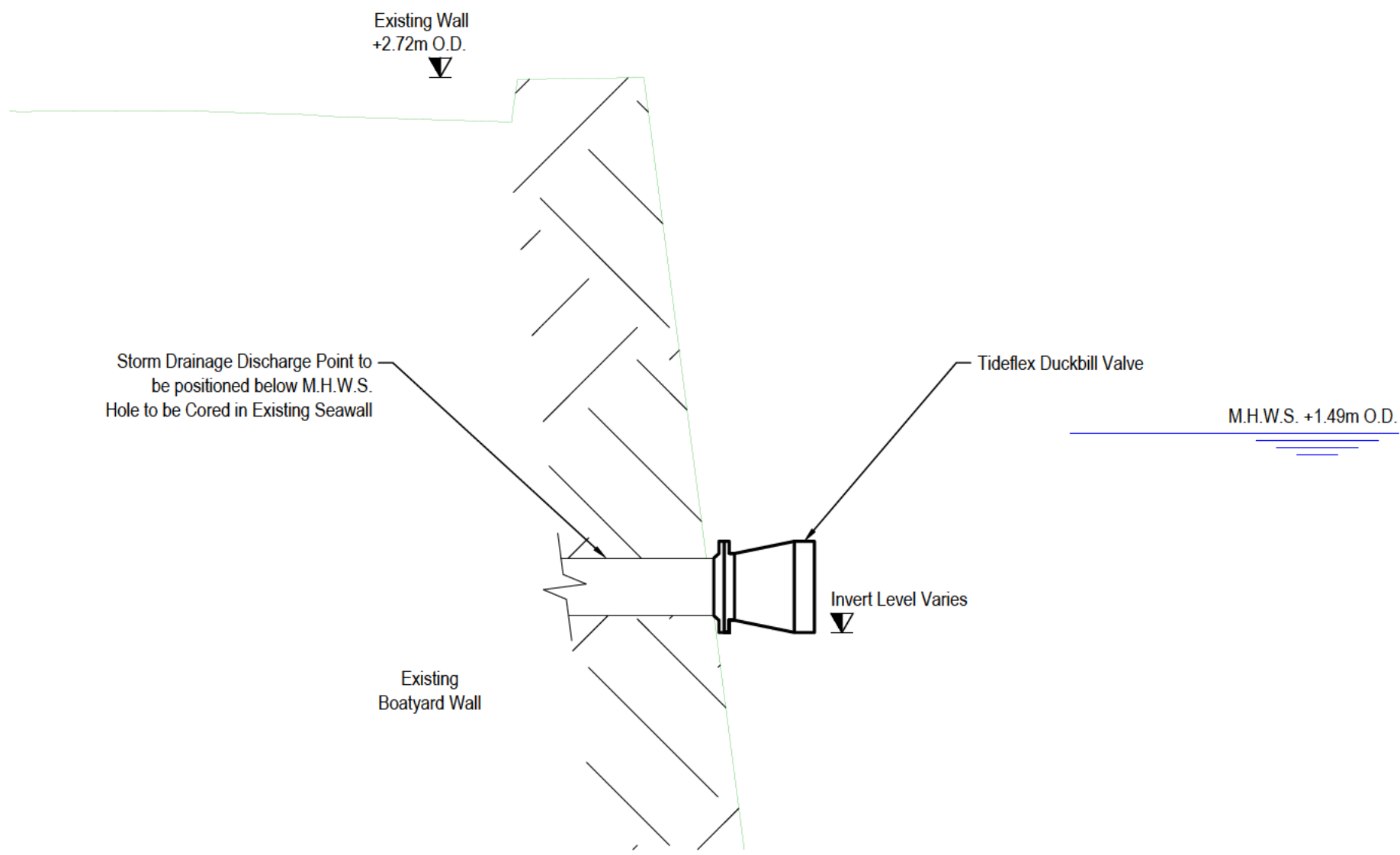
- Breaking out and partial demolition of the existing concrete surfacing slab and excavation of subgrade material to form trenches, facilitate installation of the new surface water drainage network (including full retention bypass interceptor) and disposal of arisings.
- Placement and compaction of sub-base material for drainage run bedding material.
- Placement of uPVC and concrete surface water drainage network and infilling trenches to surround.
- Placement and compaction of sub-base material for blacktop and heavy-duty surfacing up to the formation level required for surfacing.
- Placement blacktop and heavy-duty surfacing onto compacted sub-base material.
- Installation of surface water discharge points through existing seawalls (including duckbill valves to prevent backwash) below MHWS.

## Appendix C

### Proposed Drainage Plans



Storm Drainage Discharge Points General Arrangement [1:500]



Detail A - Typical Storm Drainage Discharge Details [1:20]

15/04/2025

|     |                                      |            |
|-----|--------------------------------------|------------|
| C01 | Issue for Marine Licence Application | 15/04/25   |
| rev | amendments                           | check date |

  
**TETRA TECH**  
A TETRA TECH COMPANY

  
**RPS**  
A TETRA TECH COMPANY

Elmwood House  
74 Boucher Road  
Belfast  
BT12 6RZ

T +44 (0) 28 90 667914  
F +44 (0) 28 90 668286  
W [www.rpsgroup.com/ireland](http://www.rpsgroup.com/ireland)  
E [ireland@rps.tetratech.com](mailto:ireland@rps.tetratech.com)

|                                        |             |               |
|----------------------------------------|-------------|---------------|
| Client                                 |             |               |
| Ards and North Down Borough Council    |             |               |
| Project                                |             |               |
| Ballyholme Yacht Club                  |             |               |
| Title                                  |             |               |
| Storm Drainage Discharge Point Details |             |               |
| Project Number                         | Sheet Size  | Drawing Scale |
| POR-0884                               | A1          | As Shown      |
| Drawing Number                         |             |               |
| POR00884-RPS-ML-ZZ-DR-C-0227           |             |               |
| Drawn By                               | Status      | Revision      |
|                                        | A1          | C01           |
| Checked By                             | Approved By | Date          |
|                                        |             | 15/04/2026    |