Appendix A
Outline Construction Environmental Management Plan
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Alexion
Proposed Manufacturing Facility
IE0311488-22-RP-0005, Issue: A

Issue date: 5 May 2015
Document Sign Off

Outline Construction Environmental Management Plan

Alexion
Proposed Manufacturing Facility
IE0311488-22-RP-0005, Issue A

File No: IE0311488.22.080

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1 Introduction

This outline Construction Environmental Management Plan (CEMP) defines the project specific environmental measures that are to be put in place and procedures to be followed for the scope of construction works, both permanent and temporary, for the Alexion Manufacturing Facility project.

Please note this outline CEMP is produced as part of the planning application. It is intended that this will be updated to include more site specific information once the Construction Management Team is appointed. The project is:

Proposed Manufacturing Facility,
Phase 2 of New Biopharmaceutical Campus,
College Business & Technology Park,
Blanchardstown Road North,
Blanchardstown,
Dublin 15

The CEMP is an integral part of the site health, safety, environmental and quality management system and constitutes a component of the Construction Health and Safety Plan documentation. The CEMP is also subject to the requirements of the site quality management system with respect to documentation control, records control and other relevant measures.

The primary distribution list for this document will include the following personnel:

- Construction Director
- Construction Manager
- Construction Management Team (CMT)
- Environmental Officer
- Environmental Consultant
- Site Supervisors
- Other Relevant Personnel

1.1 Objective/Purpose

The objective/purpose of this document is to communicate key environmental obligations that apply to all contractor organisations, their sub-contractors and employees while carrying out any form of construction activity on the Alexion Manufacturing Facility Construction Project.

1.2 Scope

The CEMP defines the approach to environmental management at the site during the construction phase. **Compliance with the CEMP, the procedures, work practices and controls will be mandatory and must be adhered to by all personnel and contractors employed on the construction phase of the project.**

This CEMP seeks to:

i. Provide a basis for achieving and implementing the construction related mitigation measures identified in the Environmental Impact Statement (EIS).

ii. Comply with all relevant conditions attached to the Fingal County Council Planning Permission

iii. Promote best environmental on-site practices for the duration of the construction phase.
1.3 Project Description

The site is 16.8ha site within the IDA Ireland College Business & Technology Park at Blanchardstown, Dublin 15. According to the Fingal County Development Plan 2011-2017 it is zoned as HT – office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.

Figure 1.1 Site Location

The townland is called Buzzardstown. The site is located at the south western edge of the Business & Technology Park, which is characterised by significant office, research and technology developments of varying scale. The R121 regional road runs along the northern boundary of the site. Much of the land within College Park remains undeveloped and the site is bounded to the east and west by large undeveloped sites. The Blanchardstown Institute of Technology is located to the south and southeast of the development site. There are buildings (one and two storeys in height) associated with College Park site services (water and power) located a short distance to the northeast of the site. College Park is located at the northernmost edge of Blanchardstown, approximately 2.5 km from its centre. The wider local area is characterised by major commercial and enterprise development, to the east and northeast, and by suburban housing to the south and northwest. Lady’s Well Park and Mulhuddart Cemetery are located a short distance to the west of the site.

The proposed development will comprise of the construction of the following building and facilities as an extension to the Phase 1 development;
- New Bulk Drug Substance (BDS) Building: 4 storey building with intermediate level mezzanines
- New 2 storey Central Utilities Building (CUB)
- New single storey BDS Warehouse with internal mezzanine (extension to Phase 1 warehouse)
- New Waste Water Treatment area, including control building
- New External Utilities yard, including process water pump house and chemical storage building
- Extension of the spine corridor and new elevated utility rack
- Additional Car Parking and Cycle Parking to facilitate Phase 2
- Additional site roads, paving and underground services
- Extension to Phase 1 surface water attenuation pond

Figure 2.2 shows the site layout and the extent of both Phase 1 and Phase 2.

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**Figure 1.2** Proposed Site Layout

1.4 ‘Live Document’

The CEMP is considered a ‘live’ document and as such will be reviewed on a regular basis. Updates to the CEMP may be necessary due to any changes in environmental management practices and/or contractors. As explained in more detail in the later sections, the procedures agreed in this CEMP will be audited regularly throughout the construction phase to ensure compliance.
2 Construction Schedule

It is proposed that construction will commence once planning permission has been received (ca. August 2015). The proposed construction programme is 24 months.

2.1 Site Construction Compound

All construction support activities will be controlled within the site construction compound including office facilities, toilets, canteen etc. Materials and waste handling and storage will be within the confines of the site.

Adequate warning signs will be on display to illustrate the required PPE and risks associated when entering the construction site.

3 Project Roles & Responsibilities

The assigned environmental roles and responsibilities for the relevant project personnel are detailed below:

3.1 Construction Director

The Construction Director 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:

- Overall responsibility for the development and implementation of the CEMP;
- Allocating resources to ensure the implementation of the CEMP;
- Participates in the management review of the CEMP for suitability, adequateness and effectiveness; and
- Sets the focus of environmental policy, objectives and targets for the Contractor.

3.2 Construction Manager

The Construction Manager is directly responsible to the Construction Director for the successful execution of the project. The principal duties and responsibilities of this position will include:

- To report to the Construction Director on the on-going performance of the CEMP;
- To discharge his/her responsibilities as outlined in the CEMP; and
- To support and augment the CMT and the Environmental Officer through the provision of adequate resources and facilities in the implementation of the CEMP.

3.3 Environmental Officer

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

- Ensuring that the requirements of the CEMP are developed and environmental system elements (including procedures, method statements and work instructions) are implemented and adhered to with respect to environmental requirements;
- Reviewing the Environmental responsibilities of other managed Contractors in scoping their work and during Contract execution;
- To ensure that advice, guidance and instruction on all CEMP matters are provided to all their managers, employees, construction contractors and visitors on site;
- Report to the Construction Manager on the environmental performance of Line Management, Supervisory Staff, Employees and Contractors; and
- Advise site management (including, but not limited to, the site Construction/Commissioning Manager) on environmental matters.

3.4 Project Environmental Consultant
The Project Environmental Consultant will be responsible for, but not limited to, the following activities:
- Preparation of the CEMP, environmental control plans, supporting procedures;
- Advise site management (including, but not limited to, the site Construction/Commissioning Manager) on environmental matters;
- Carry out environmental surveys (data logging (noise, water, dust, etc.)) where necessary;
- Generate reports as required to show environmental data trends and incidents;
- Ensure adherence to the specific measures listed in the Planning Conditions and in the Environmental Impacts Statement (EIS) Mitigation Measures;
- Advise upon the production of written method statements and site environmental rules and on the arrangements to bring these to the attention of the workforce;
- Investigate incidents of significant, potential or actual environmental damage, ensure corrective actions are carried out and recommend means to prevent recurrence; and
- Be responsible for maintaining all environmental related documentation.

3.5 Project Archaeologist
The Project Archaeologist will report to the Environmental Officer and is responsible for advising on all archaeological monitoring activities, conducting watching briefs and distributing information relevant to monitoring. The responsibilities and duties of the Project Archaeologist will include the following;
- Monitor all ground disturbance works associated with the construction of the development;
- Ensure the appropriate course of action is taken in the event that archaeological material is discovered during the works;
- Liaison with the CMT throughout the construction phase of the project; and
- Liaison with the Department Applications Unit, National Monuments Service, Department of Arts, Heritage and Gaeltacht and the Fingal County Council archaeologist as required.

3.6 Project Ecologist
The Project Ecologist will report to the Environmental Officer and is responsible for the protection of sensitive habitats and species encountered during the construction phase of the project. The responsibilities and duties of the Project Ecologist will include the following;
- Provision of specialist input and supervision, where necessary, of construction activities in relation to habitats and species;
- Provision of specialist advice on ecological monitoring, and conduct surveys, monitoring and site inspections as set out in the Environmental Impact Statement and Fingal County Council Planning Conditions; and
- Liaison with the National Parks and Wildlife Service (NPWS) as required.

3.7 Project Communications Officer
The Project Communications Officer is responsible for conducting all public liaison associated with the construction phase of the project. The responsibilities and duties of the Project Communications Officer include the following;
Responding to any concerns or complaints raised by the public in relation to the construction phase of the project;

- To liaise with the Environmental Officer on community concerns relating to the environment;
- Ensure the Environmental Officer is informed of any complaints relating to the environment; and
- Keep the public informed of project progress and any construction activities that may cause inconvenience to the local community.

3.8 Site Supervisors

CMT Site Supervisors are required to:

- Read, understand and implement the CEMP;
- Know the broad requirements of the relevant law in environmental matters and take whatever action is necessary to achieve compliance. Where necessary seek the advice of the CMT Environmental Officer;
- Ensure that environmental matters are taken into account when considering Contractors' construction methods and materials at all stages;
- 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;
- Ensure plant suggested is environmentally suited to the task in hand;
- Co-ordinate environmental planning of CMT 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;
- Where appropriate, ensure Contractors method statements include correct waste disposal methods;
- Be aware of any potential environmental risks relating to the Contractors and bring these to the notice of the appropriate management; and
- Ensure materials/waste register is completed.

3.9 Site Personnel

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

- To co-operate fully with the CMT and the Environmental Officer in the implementation and development of the CEMP at the site;
- To conduct all their activities in a manner consistent with regulatory and best environmental practice;
- To participate fully in the environmental training programme and provide management with any necessary feedback to ensure effective environmental management at the site; and
- Adhere fully to the requirements of the site environmental rules.

4 Project Environmental Policy

The Client, Alexion recognises and seeks to minimise the impacts of its business on the environment. The appointed contractor will be is committed to:

- Carrying out the Project in full compliance with all applicable environmental regulations and to other requirements to which we subscribe.
- Implementing good environmental practice as part of designs, e.g. carry out design reviews, risk assessments, etc. on all relevant projects.
- Preventing pollution from activities through a system of operational controls that include written instructions and staff training appropriate to the environmental requirements of their work.
- Continually improving Project environmental performance by setting objectives and targets and implementing them through an environmental programme.
- Informing all project employees about Environmental Policy and explaining what they should do to protect the environment.
- Implementing this Policy through the successful operation of the CEMP.

This policy will be reviewed periodically, taking into account current and potential future business issues.

5 Site Environmental Awareness

The following general site Environmental Rules will apply. These general rules will be communicated to all site personnel via the site induction training and they will be posted across the site at strategic locations, such as the site entrance, canteen and near the entrances to buildings.

**GENERAL SITE ENVIRONMENTAL RULES**

**DO**  Report any signs of pollution or environmental damage to the manager no matter how small;

**DO**  Report any spills, incidents or near misses that occur on site immediately to the site foreman;

**DO**  Refuel only in designated areas with spill kits available;

**DO NOT**  Dispose of anything into a drain or onto land. All waste must be sent to the designated site waste management areas;

**DO NOT**  Throw litter, all waste must be sent to site waste management contractor;

**DO NOT**  Drive plant or machinery outside the authorised working boundaries of the site.

**IF IN DOUBT, ASK THE CMT SITE SUPERVISOR AND/OR ENVIRONMENTAL OFFICER FOR FURTHER INFORMATION.**

The CMT will develop Environmental Procedures to control the potential impacts from the construction phase of the development. These procedures together with the site Environmental Policy are to be made available in the main offices and in the main EHS information points at the site.

The training of the site construction staff is the responsibility of the CMT. An environmental training programme will be organised for onsite personal to outline the CEMP and to detail the site environmental policy.

A brief outline of this CEMP will be incorporated into the site induction course.

Contractors shall verify the competency of their drivers and sub-contractor drivers. Where practical, employers are encouraged to identify a pool of drivers who would regularly be used to service the project.
There will be regular audits and monitoring of the CEMP through an Environmental Auditing and Inspection programme, which is to be developed in conjunction with the CMT.

5.1 Communication & Consultation
The Project Communications Officer (Section 3.7) will undertake any required 3rd party communication and liaise directly with landowners/local authorities/members of the public, etc. for access, scheduling of works, accommodation works etc.

6 Environmental Conditions, Potential Impacts and Controls

6.1 Planning Conditions
It is normal practice for the local authority (in this case Fingal County Council) to include a number of specific environmental conditions as part of their planning consent for the development. The compliance with the environmental conditions and the proposed control / mitigation measures will be included in the next version of the CEMP once these planning conditions are known.

6.2 EIS Mitigation Measures
The Environmental Impact Statement (EIS), accompanying the planning application for the proposed development, identifies a series of mitigation measures to eliminate or minimise the environmental impact of the development.

The proposed mitigation measures to be implemented during the construction phase will be included in the next version of the CEMP once the EIS has been finalised.

The EIS has also identified mitigation measures for the operational phase of the development. These measures are outside the scope of the CEMP. It will be the responsibility of the CMT to ensure full implementation of all EIS mitigation measures identified.

6.3 Implementation of Controls
The CMT, the respective Construction Manager and all contractors shall be responsible for the implementation of control measures as identified in Section 6.6.

Contractors will comply with the requirements of the CMT to document and seek approval for Method Statements, Permits and other site-generated documentation as requested.

This CEMP will form part of tender and contract documentation for each works contract. Requirements and responsibilities will be reviewed with each Contractor at site kick-off meetings and at weekly progress meetings.

Any contractor submitting a tender for the project must inform the CMT of any legal proceedings with a regulatory authority, including the Irish EPA or environmental agencies of other jurisdictions.

Contractors shall ensure that any sub-contractors working under their remit are supplied with a copy of the CEMP, receive sufficient environmental training and are aware of their environmental obligations on the project.

Environmental requirements identified will be controlled as follows:
- Procedures and control measures as set out in this CEMP;
- Approved Method Statements and Risk Assessments from Contractors which shall address all potential environmental impacts for the specific task;
- Detailed contractor plans for specific environmental aspects;
- Emergency response plans;
- Specific induction training before commencing work.
In summary, it is expected that all contractors will follow good environmental practice throughout all activities.

6.3.1 Communication & Training - Construction Personnel
In addition to contractor site induction provided by the CMT, contractors are obliged to conduct safety meetings / toolbox talks on relevant EHS topics for all employees in their care on a weekly basis. Details of all safety meetings / toolbox talks, including topics and attendees must be submitted to the CMT.

6.3.2 Keeping Of Records
The Construction Manager will ensure that fully detailed records are maintained of any ‘incident / event’ likely to cause non-compliance and / or harm to the environment. Environmental Incidents/Near Miss Reports are reported and recorded.

Complaints and Follow up Actions on the construction site will be managed by the CMT and contractors will ensure that all complaints are recorded according to CMT requirements.

Each contractor will be responsible for ensuring that a full record and copy of all Safety Data Sheets (SDS) pertaining to their works is kept on file and up to date in their site offices.

The CMT will be responsible for monitoring the movement and treatment of all waste during the construction phase of the project. Monitoring will be carried out by the CMT who will record the nature, quantities and off-site destination of wastes.

6.4 Monitoring, Audits and Inspections
Periodic inspections by the CMT will address environmental issues including dust, litter, noise, traffic, surface water, waste management and general housekeeping.

An EHS Inspection Audit of the construction site will be carried out by an appointed contractor. Environmental aspects of this audit will be documented. The frequency of these audits (weekly / monthly / other) will be based on the nature of contractor activity.

6.5 Non Conformance and Corrective and Preventative Action
Corrective Action Requests (CARs) will be issued to ensure that prompt action is agreed and committed to, with a view to the effective resolution of any deviations from the CEMP requirements or any environmental issues.

CARs may be raised as a result of:
- An internal or external communication;
- An internal audit;
- A regulatory audit or inspection;
- A suggestion for improvement;
- An incident or potential incident.

All corrective action requests will be numbered and logged.

6.6 Operational Controls
The proposed environmental control measures are described in the following sections.

6.6.1 Dust Minimisation Plan
A Dust Minimisation Plan for the project will be included in the CEMP pre commencement of construction activities.
6.6.2 Construction & Demolition Waste Management Plan
The Construction & Demolition Waste Management Plan will be included in the CEMP pre commencement of construction activities.

6.6.3 Control Of Noise
Environmental noise arising from activities on the construction site shall be controlled in accordance with the requirements of BS 5228\(^1\).

**Community Relations**
Any concerns and queries will be facilitated via the Project Communications Officer (Section 3.7).

**Training**
All construction personnel will be required to complete contractor induction and be certified with FÁS SafePass or equivalent. It is also required that non-specialist contractor personnel are Construction Industry Federation registered.

**Control of Noise Generation**
The following noise control measures shall be implemented by all contractors:
- The hours of construction will be limited in accordance with Section 2.1 and night-time works will require prior agreement with Fingal County Council.
- All contractors will ensure that the plant and construction methods employed are the quietest available for the required purpose insofar as practicable.
- All contractor vehicles will use existing site access roads, contractor car park and construction compound area (surfaces of hard standing).
- Site roads will be maintained in a clean condition and the site speed limit of 15 km/hr will be strictly adhered to.
- Engines, vehicles and equipment will be switched off when not in use.
- Significant sources of noise will be enclosed.
- Plant will be used and serviced regularly in accordance with manufacturer’s instructions.
- Cranes will be shut down during work periods / throttled to minimum when not in use.
- Machinery having rotating parts will be serviced according to supplier recommendations to prevent friction induced sound.
- Materials should be lowered, not dropped, insofar as practicable and safe.
- All contractors will notify the CMT in advance of any critical periods arising for noisy activities.

**Control of Spread of Noise**
Temporary acoustic screening will be employed by the contractor where excessive noise is foreseen over extended durations.

**Noise Monitoring**
Noise monitoring will be undertaken during critical periods of construction works, including rock breaking, should it arise, during foundation excavation. The noise levels will be compiled in a technical report available for inspection, along with comment on applicable noise limits. Where necessary, measures for the reduction of construction noise levels will be defined by the CMT and contractors working on-site.

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\(^1\) BS 5228-1:2009 Code of practice for noise and vibration control on construction and open sites – Part 1 Noise.
6.6.4 Archaeology

All ground disturbing works including stripping of topsoil, bulk excavation and excavation for services or foundations must be carried out under the supervision of an archaeologist licensed by the National Monuments Service, Department of the Arts, Heritage and The Gaeltacht (DoAHG) and approved by the National Museum of Ireland (NMI).

If any archaeological materials are uncovered during monitoring, the monitoring archaeologist will cordon off the area in which the archaeological material has been uncovered. No further construction work can take place within the cordoned area until a mitigation strategy agreed with the DoAHG has been implemented.

The mitigation strategy may include hand recording and excavation of the archaeological material by the archaeologist. This must be carried out under licence to the DoAHG and the archaeologist will need to prepare paperwork to be forwarded to the DoAHG with details of the archaeological material to be excavated and for the necessary licence to be issued by the DoAHG.

Following completion of monitoring on site, a report detailing the results of monitoring must be prepared and submitted to the DoAHG and Fingal County Council.

6.6.5 Flora & Fauna

There shall be on-going monitoring of wildlife in the vicinity of the construction site and any unusual species, dead species or damaged habitats should be reported immediately to the Construction Manager and/or Environmental Officer.

Where unexpected ecological habitats are uncovered the habitats protection protocol will be adhered to by site contractors.

6.6.5.1 Protection Protocol

This protocol is designed to ensure that ALL persons working on the construction site are fully aware of their legal obligations under the Wildlife Act 1976, as amended.

This Act affords protection to a range of wildlife in Ireland including wild birds, animals and plants. Whilst the project has received permission from the Government to proceed, this does not override certain laws that prevent wilful harm to protected species.

What is protected that may be found in the Project Area??

- All wild birds and their eggs, nests and young, with the exception of certain species, are protected under the Wildlife Acts.
- Certain animals including all bat species.
- Surveys of the area have already been carried out to locate where protected species may be living.
- Bats Surveys did not reveal bat roosts at the site. Contractors may discover bat roosts and if any bats are found, the Construction Manager and/or Environmental Officer is to be contacted immediately.

6.6.5.2 Procedure for Protection of Potential Bat Roosts

Whilst no bat roosts were found, there is a chance that bats could occupy roosts prior to the commencement of works. If bats are found during site clearance, works will cease and the National Parks and Wildlife Service (NPWS) will be contacted to avoid an offence being committed by disturbing a bat roost. Works will be suspended if bats are found to avoid further risk of direct harm to bats.

6.6.5.3 Liaison with NPWS Conservation Officer

The primary contact in the event of any damage to setts or injury or death of any protected species for that area is the District Conservation Officer for the Eastern Region (Dublin, Louth and Meath).
Contact Details:
Eastern Division Divisional Manager: (076) 100 2591
Eastern Division Ecologist: (076) 100 2622
District Conservation Officer (Dublin, Louth & Meath): (076) 100 2634

6.6.6 Landscaping
Landscaping works shall be undertaken to the satisfaction of Fingal County Council no later than the first planting season following commissioning of development. Any plant failures through disease, weather exposure, neglect or damage shall be replaced with equivalent species within one year of such failure, all to the satisfaction of Fingal County Council.

6.6.7 Surface Water
An Environmental Procedure will be developed prior to commencement of the construction phase considering requirements for drainage.

6.6.8 Protection of Soil & Groundwater
Material storage and handling measures will be implemented to contain potential sources of soil/groundwater pollution. Contractors will ensure that spill kits will be accessible to construction personnel at all times and all spills will be reported to the CMT.

All contractors shall be responsible for ensuring the following measures are implemented:
- All liquids, solids and powder containers will be clearly labelled and stored in sealable containers.
- All liquid and hazardous materials will be stored in a designated and temporarily bunded area with appropriate signage. This area should be within the construction compound or at an alternative location agreed with the CMT.
- Bunding must have a minimum capacity of 110% of the volume of the largest tank or 25% of the total storage capacity, whichever is the greater. Bunding shall be impermeable to the substance that is being stored in the tank.
- Where a contractor is responsible for materials stored in a bunded area, that contractor shall implement measures for the regular inspection of bunds and emptying of rainwater (when uncontaminated).
- Material storage areas will be at a safe distance from live construction activities.
- Spill kits will be provided at in areas where liquids are stored and refuelling areas.
- Chemicals / fuels / materials brought on-site must be accompanied by a Safety Data Sheet (SDS). A copy of the SDS should be provided to the CMT.
- Materials will be stored in accordance with any specific requirements of the SDS.
- A complete register of all SDSs in use on-site will be maintained and retain copies of all SDS on-site.
- Careful ordering of materials to minimise quantities present on-site
- Excess materials will not be stored on-site for extended periods.
- Contractors will be responsible for ensuring the regular maintenance of construction plant and equipment, to prevent leaks.

6.6.9 Refuelling
Where contractors are required to refuel vehicles on-site, this will be carried out at a central refuelling location. The contractor will be required to make the necessary arrangements with CMT.
access to and purchase of fuel oil from a central supply. All refuelling areas will be on areas of hard standing at designated areas agreed with the CMT. Open valves will not be left unattended.

6.6.10 Site Tidiness & Housekeeping

Contractors are required to meet current Good Manufacturing Practice (cGMP) standards. These standards ensure that products manufactured on-site are made in such a way that the CMT can guarantee they are safe, pure and effective. Accordingly, a high standard of housekeeping is expected on all areas of site, including those areas outside of manufacturing. All contractors will be required to operate on-site using good housekeeping practices. Work areas shall be left in a clean state by construction personnel. The CMT contractor induction communicates the requirement for site housekeeping and tidiness.

Further to measures described in the previous sections, the following measures shall be implemented to maintain site tidiness.

- Construction works will be carried out according to a defined schedule agreed with CMT, with regard to the hours of work outlined in Section 2.1. Any delays or extensions required will be notified at the earliest opportunity to CMT.
- Contractors will ensure that road edges and footpaths are swept on a regular basis.
- All contractors shall be responsible for the clearance of their plant, equipment and any temporary buildings upon completion of construction. The site will be left in a safe condition.

7 Emergency Planning & Response

A PSCS will be appointed for the project and will ensure that installation works are carried out consistent with all existing emergency response plans and procedures.

The emergency management procedure ensures that emergencies such as fires, explosions, accidents, leaks, sabotage or emergencies caused by force majeure occur as little as possible; if they do, however, occur, it ensures that all countermeasures proceed in a controlled manner so that greater damages are avoided and the possible effects upon persons, the environment and property are avoided or limited.

7.1 Emergency Contact Details

Emergency contact details are included in Table 7.1 and these numbers will be posted at suitable noticeboards/welfare facilities.
### Table 7.1: Local Emergency Contact Details

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<td>Fingal County Council Environment Section</td>
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| EPA                               | Regional Inspectorate, Clonskeagh, Dublin - (01) 8842693  
                                        Regional Inspectorate, Inniscarra, Cork - (021) 487 5540 |
| HSE - Dublin North Specialist Section | (01) 8976140 |
| Inland Fisheries Ireland          | (01) 8842693 |
| ESB Emergency                     | 1850 372 999 |
| BGE Emergency                     | 1850 20 50 50 |
| First Aid Officer                 | TBA |
| National Monuments Service, Department of the Arts, Heritage and the Gaeltacht | (01) 888 2000 |
| National Parks & Wildlife Service | Eastern Division Divisional Manager: (076) 100 2591  
                                         Eastern Division Ecologist: (076) 100 2622  
                                         District Conservation Officer(Dublin, Louth & Meath): (076) 100 2634 |
| Health and Safety Authority       | 1890 289 389 |
| Connolly Hospital Blanchardstown, Mill Road, Blanchardstown, Dublin 15 | (01) 646 5000 |
| Blanchardstown Garda Station, Dublin 15 | (01) 6667000 |

#### 7.2 Environmental Emergency

In the event of an environmental emergency, a procedure for Environmental Emergency Preparedness and Response will be developed prior to commencement of construction and can be implemented by the CMT in order to ensure to minimise environmental impacts. An environmental emergency at the site may include:
- Discovery of a fire within the site boundary
- Uncontained spillage / leakage / loss of containment action
- Discharge concentration of potential pollutants in excess of environmental trigger levels

The general required emergency response actions will be posted at strategic locations, such as the site entrance, canteen and near the entrances to buildings.

As an example of emergency response actions required, in the event of a spillage, the following procedure shall be followed:

1. **IF SAFE (USE PPE)**, stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers.

2. **IF SAFE (USE PPE)**, contain the spill using the absorbent spills material provided. Do not spread or flush away the spill.

3. Cover or bund off any vulnerable areas where appropriate.

4. If possible, clean up as much as possible using the absorbent spills materials.

5. Do not hose the spillage down or use any detergents.

6. Contain any used absorbent material so that further contamination is limited.

7. Notify the Environmental Officer so that used absorbent material can be disposed of using a licensed waste contractor.

8. An accident investigation should be performed in accordance with procedures and the report sent to the Environmental Officer.

### 8 Environmental Regulatory Requirements

A register of regulatory, legal and other requirements will be developed by the CMT. This will be a summary list of the major environmental legislation and other requirements to which the project must subscribe.

A typical register of environmental legislation is divided into a number of categories, which include:

- General Environmental Legislation
- Flora & Fauna
- Emissions to Air
- Emissions to Water & Groundwater
- Waste Management
- Noise & Vibration

For each piece of legislation the following information is provided:

- Index Number
- Title of Legislation
- Summary of Legislation
- Relevance

All legislation included in this Register can be readily accessed on [http://www.irishstatutebook.ie/](http://www.irishstatutebook.ie/) or will be available through the construction manager’s office.

The Register of Legislation will be reviewed and updated on a minimum six monthly basis. This is a controlled document and as such will comply with all the requirements of the Contractor document control procedures.
Appendix B
Zone of Visual Influence Map
Proposed Alexion Phase 2 Development at IDA College Business & Technology Park, Blanchardstown

Predicted Zones of Visibility • Initial Assessment

This assessment is not exhaustive

March 2015

Weight and solidity of strokes indicate extent of potential visibility
Landscape Plan
Appendix C
Site Investigation: Soils Analytical Results
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>TP-1</th>
<th>TP-2</th>
<th>TP-3</th>
<th>TP-4</th>
<th>SGV&lt;sup&gt;*&lt;/sup&gt;</th>
<th>EPA Range</th>
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<td></td>
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<td>0-0.5m</td>
<td>0-0.5m</td>
<td>0.5-1.5m</td>
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<td>0.5-1.5m</td>
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<td>NAD</td>
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<td>ND</td>
<td>ND</td>
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<td>&lt;0.03</td>
<td>&lt;0.03</td>
<td>&lt;0.03</td>
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<td>&lt;0.04</td>
<td>&lt;0.04</td>
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<td>&lt;0.03</td>
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<td>&lt;0.03</td>
<td>&lt;0.03</td>
<td>&lt;0.03</td>
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<td>&lt;0.03</td>
<td>&lt;0.03</td>
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<td>Benzo(a)anthracene</td>
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<td>&lt;0.06</td>
<td>&lt;0.06</td>
<td>&lt;0.06</td>
<td>&lt;0.06</td>
<td>&lt;0.06</td>
</tr>
<tr>
<td>Chrysene</td>
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<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
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<tr>
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<td>&lt;0.07</td>
<td>&lt;0.07</td>
<td>&lt;0.07</td>
<td>&lt;0.07</td>
<td>&lt;0.07</td>
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<tr>
<td>Benzo(a)pyrene</td>
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<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
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<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
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<tr>
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<td>&lt;0.04</td>
</tr>
<tr>
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<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
<td>&lt;0.04</td>
</tr>
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<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
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<td>Benzo(k)fluoranthene</td>
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<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>EPH &gt;C8-C10&lt;sup&gt;◊&lt;/sup&gt;</td>
<td>mg/kg</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>-</td>
</tr>
<tr>
<td>EPH &gt;C10-C20&lt;sup&gt;◊&lt;/sup&gt;</td>
<td>mg/kg</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>-</td>
</tr>
<tr>
<td>EPH &gt;C20-C30&lt;sup&gt;◊&lt;/sup&gt;</td>
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<td>&lt;10</td>
<td>&lt;10</td>
<td>67</td>
<td>&lt;10</td>
<td>-</td>
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<tr>
<td>EPH &gt;C30-C40&lt;sup&gt;◊&lt;/sup&gt;</td>
<td>mg/kg</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>307</td>
<td>&lt;10</td>
<td>-</td>
</tr>
</tbody>
</table>

* SGV: Soluble Sulphate Equivalents

<sup>*</sup> Units are in mg/kg or µg/kg, except for pH, which is in pH units.

Note: All concentrations are maximum levels for regulatory purposes. Concentrations are reported as the average of multiple samples.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>TP-1 0-0.5m</th>
<th>TP-1 0.5-1.5m</th>
<th>TP-2 0-0.5m</th>
<th>TP-2 0.5-1.5m</th>
<th>TP-3 0.0-0.5m</th>
<th>TP-3 0.5-1.5m</th>
<th>TP-4 0.0-0.5m</th>
<th>TP-4 0.5-1.5m</th>
<th>SGV#</th>
<th>Commerci</th>
<th>EPA Range</th>
</tr>
</thead>
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<td>EPH &gt;C8-C40 #</td>
<td>mg/kg</td>
<td>&lt;35</td>
<td>&lt;35</td>
<td>&lt;35</td>
<td>374</td>
<td>&lt;35</td>
<td>&lt;35</td>
<td>&lt;35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

*UK Environment Agency (UK EA) Soil Guideline Values (SGV)
ND - denotes parameters not present at concentrations above the detection limit
NA - standard not available
NAD - No asbestos detected
Trace- indicates not quantifiable
Groundwater Vulnerability Mapping Guidelines
### Hydrogeological Conditions

<table>
<thead>
<tr>
<th>Vulnerability Rating</th>
<th>Subsoil Permeability (Type) and Thickness</th>
<th>Unsaturated Zone</th>
<th>Karst Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Permeability (sand/gravel)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extreme (E)</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
</tr>
<tr>
<td>High (H)</td>
<td>&gt;3.0m</td>
<td>3.0 – 10.0m</td>
<td>&gt;3.0m</td>
</tr>
<tr>
<td>Moderate (M)</td>
<td>N/A</td>
<td>5.0 – 10.0m</td>
<td>N/A</td>
</tr>
<tr>
<td>Low (L)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate Permeability (e.g. sandy subsoil)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High (H)</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
</tr>
<tr>
<td>Moderate (M)</td>
<td>3.0 – 10.0m</td>
<td>3.0 – 5.0m</td>
<td>&gt;3.0m</td>
</tr>
<tr>
<td>Low (L)</td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Low Permeability (e.g. clayey subsoil, clay and peat)</td>
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<tr>
<td>High (H)</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
<td>0 – 3.0m</td>
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<tr>
<td>Moderate (M)</td>
<td>3.0 – 5.0m</td>
<td>3.0 – 5.0m</td>
<td>&gt;3.0m</td>
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<tr>
<td>Low (L)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Sand/gravel aquifers only)</td>
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</tr>
<tr>
<td>High (H)</td>
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<td>N/A</td>
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<tr>
<td>Moderate (M)</td>
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<td>N/A</td>
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<tr>
<td>Low (L)</td>
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</tr>
<tr>
<td></td>
<td>(&lt;30m radius)</td>
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Notes:
1. N/A = not applicable
2. Precise permeability values cannot be given at present
3. Release point of contaminants is assumed to be 1-2m below ground surface.
Site Investigation: Groundwater Analytical Results
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<thead>
<tr>
<th>Sample I.D.</th>
<th>Units</th>
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<th>08/08/2013</th>
<th>IGV*</th>
<th>GTV*</th>
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<td>ND</td>
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<td>µg/l</td>
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<td>0.030</td>
<td>&lt;0.013</td>
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<td>-</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>µg/l</td>
<td>0.050</td>
<td>0.100</td>
<td>&lt;0.013</td>
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<td>-</td>
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<tr>
<td>Fluorene</td>
<td>µg/l</td>
<td>0.020</td>
<td>0.030</td>
<td>&lt;0.014</td>
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<td>-</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>µg/l</td>
<td>0.030</td>
<td>0.030</td>
<td>&lt;0.011</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Anthracene</td>
<td>µg/l</td>
<td>&lt;0.013</td>
<td>&lt;0.013</td>
<td>&lt;0.013</td>
<td>10000</td>
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<tr>
<td>Fluoranthene</td>
<td>µg/l</td>
<td>&lt;0.012</td>
<td>&lt;0.012</td>
<td>&lt;0.012</td>
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<tr>
<td>Pyrene</td>
<td>µg/l</td>
<td>&lt;0.013</td>
<td>&lt;0.013</td>
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</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>µg/l</td>
<td>&lt;0.015</td>
<td>&lt;0.015</td>
<td>&lt;0.015</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Chrysoene</td>
<td>µg/l</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
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<td>-</td>
</tr>
<tr>
<td>Benzo(bk)fluoranthene</td>
<td>µg/l</td>
<td>&lt;0.018</td>
<td>&lt;0.018</td>
<td>&lt;0.018</td>
<td>0.5</td>
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<tr>
<td>Benzo(a)pyrene</td>
<td>µg/l</td>
<td>&lt;0.016</td>
<td>&lt;0.016</td>
<td>&lt;0.016</td>
<td>0.01</td>
<td>0.0075</td>
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<tr>
<td>Indeno(123cd)pyrene</td>
<td>µg/l</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
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<tr>
<td>Dibenzo(ah)anthracene</td>
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<td>&lt;0.01</td>
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<tr>
<td>Benzo(ghi)perylen</td>
<td>µg/l</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
<td>&lt;0.011</td>
<td>0.05</td>
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</tr>
<tr>
<td>PAH 16 Total</td>
<td>µg/l</td>
<td>&lt;0.195</td>
<td>&lt;0.195</td>
<td>&lt;0.195</td>
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<tr>
<td>EPH &gt;C8-C10</td>
<td>µg/l</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>10</td>
<td>-</td>
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<tr>
<td>EPH &gt;C10-C20</td>
<td>µg/l</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>10</td>
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<tr>
<td>EPH &gt;C20-C30</td>
<td>µg/l</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
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<td>-</td>
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<tr>
<td>EPH &gt;C30-C40</td>
<td>µg/l</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>EPH &gt;C8-C40</td>
<td>µg/l</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>10</td>
<td>-</td>
</tr>
</tbody>
</table>

*Interim Guideline Values (IGV) published by the EPA. *Groundwater Threshold Values (GTV) set out in the European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010). ND - indicates not detected at a level greater than the limit of detection.
Appendix D
Criteria for Ecological Evaluation
### Ecological Valuation Criteria

#### International Importance:
- ‘European Site’ including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation.
- Proposed Special Protection Area (pSPA).
- Site that fulfils the criteria for designation as a ‘European Site’ (see Annex III of the Habitats Directive, as amended).
- Features essential to maintaining the coherence of the Natura 2000 Network.\(^1\)
- Site containing ‘best examples’ of the habitat types listed in Annex I of the Habitats Directive.
- Resident or regularly occurring populations (assessed to be important at the national level)\(^2\) of the following:
  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and / or
  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
- Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971).
- Biosphere Reserve (UNESCO Man & The Biosphere Programme).
- Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979).
- Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979).
- Biogenetic Reserve under the Council of Europe.
- European Diploma Site under the Council of Europe.
- Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).\(^3\)

#### National Importance:
- Site designated or proposed as a Natural Heritage Area (NHA).
- Statutory Nature Reserve.
- Refuge for Fauna and Flora protected under the Wildlife Acts.
- National Park.
- Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park.
- Resident or regularly occurring populations (assessed to be important at the national level)\(^4\) of the following:
  - Species protected under the Wildlife Acts; and/or
  - Species listed on the relevant Red Data list.
- Site containing ‘viable areas’\(^5\) of the habitat types listed in Annex I of the Habitats Directive.

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1. See Articles 3 and 10 of the Habitats Directive.
2. It is suggested that, in general, 1% of the national population of such species qualifies as an internationally important population. However, a smaller population may qualify as internationally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.
3. Note that such waters are designated based on these waters’ capabilities of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*).
4. It is suggested that, in general, 1% of the national population of such species qualifies as a nationally important population. However, a smaller population may qualify as nationally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.
5. A ‘viable area’ is defined as an area of a habitat that, given the particular characteristics of that habitat, was of a sufficient size and shape, such that its integrity (in terms of species composition, and ecological processes and function) would be maintained in the face of stochastic change (for example, as a result of climatic variation).
### Ecological Valuation Criteria

#### County Importance:
- Area of Special Amenity.
- Area subject to a Tree Preservation Order.
- Area of High Amenity, or equivalent, designated under the County Development Plan.
- Resident or regularly occurring populations (assessed to be important at the County level) of the following:
  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
  - Species protected under the Wildlife Acts; and/or
  - Species listed on the relevant Red Data list.
- Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance.
- County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local Biodiversity Action Plan (BAP) if this has been prepared.
- Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.
- Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

#### Local Importance (higher value):
- Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;
- Resident or regularly occurring populations (assessed to be important at the Local level) of the following:
  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
  - Species protected under the Wildlife Acts; and/or
  - Species listed on the relevant Red Data list.
- Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;
- Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

#### Local Importance (lower value):
- Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;
- Sites or features containing non-native species that are of some importance in maintaining habitat links.

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6 It should be noted that whilst areas such as Areas of Special Amenity, areas subject to a Tree Preservation Order and Areas of High Amenity are often designated on the basis of their ecological value, they may also be designated for other reasons, such as their amenity or recreational value. Therefore, it should not be automatically assumed that such sites are of County importance from an ecological perspective.

7 It is suggested that, in general, 1% of the County population of such species qualifies as a County important population. However, a smaller population may qualify as County importance where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.

8 It is suggested that, in general, 1% of the local population of such species qualifies as a locally important population. However, a smaller population may qualify as locally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.