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Donegal County Council

Stranorlar Multi-Use Sports Facility Improvement Project

Construction & Environmental Management Plan



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REPORT NAME: Construction & Environmental Management Plan

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Table of Contents

1.0 INTRODUCTION 3

2.0 CONSTRUCTION PROGRAMME & PHASING..... 5

3.0 SITE ENABLING WORKS..... 6

3.1 Indicative Enabling Works Methodology6

3.2 Infrastructure Works6

3.3 Road Infrastructure7

4.0 CONSTRUCTION TRAFFIC AND SITE ACCESS..... 7

4.1 Construction Route and Access7

4.2 Off Loading and Storage Areas.....8

4.3 Personnel and Vehicle Segregation.....8

4.4 Temporary Road Closures.....8

5.0 SITE LOGISTICS 8

5.1 Site Logistics Map9

5.2 Site Establishment and Security9

5.3 Consent and Licenses9

5.4 Access and Egress.....10

5.5 Material Storage and Handling.....10

5.6 Site Accommodation.....10

5.7 Visitor Management.....10

6.0 DESCRIPTION OF WORKS AND INDICATIVE CONSTRUCTION METHODS..... 10

6.1 Construction Sequence10

6.2 Enabling Works.....10

6.3 Ground Works11

6.4 Finishes11

7.0 SAFETY, HEALTH AND ENVIRONMENTAL..... 11

7.1 General Health, Safety and Environmental Consideration.....11

7.2 Control of Substances Hazardous to Health.....12

7.3 Air Quality12

7.4 Construction Plant13

7.5 Vehicle Movements13

7.6	Public Roads	13
7.7	Noise and Vibration	14
7.8	Soils and Contamination.....	16
7.9	Transport	17
7.10	Waste.....	18
7.11	Waste Management Plan	19
8.0	WORK FORCE	19
8.1	Employment and Management of Workforce.....	19
8.2	Temporary Site Accommodation.....	20
8.3	Site Security	20
9.0	ENVIRONMENTAL MANAGEMENT	20
9.1	Construction Phase Measures - Pollution Prevention	20
9.2	Environmental, Emergency and Accident Procedure	22
9.3	Dust	23
9.4	Ecology.....	23
	<i>9.4.1 Appointment of Environmental / Ecological Clerk of Works.....</i>	<i>23</i>
	<i>9.4.2 River Finn SAC.....</i>	<i>23</i>
	<i>9.4.3 Vegetation Clearance.....</i>	<i>23</i>
	<i>9.4.4 Re-Planting of Vegetation</i>	<i>24</i>
	<i>9.4.5 Birds.....</i>	<i>24</i>
	<i>9.4.6 Otter.....</i>	<i>24</i>
	<i>9.4.7 Frogs.....</i>	<i>24</i>
	<i>9.4.8 Invasive Species and Pathogens.....</i>	<i>24</i>
	<i>9.4.9 Lighting.....</i>	<i>25</i>
	<i>9.4.10 Management of Rubber Crumb during the Operational Phase.....</i>	<i>25</i>
9.5	Water Resource.....	26
10.0	Conclusion	27

1.0 INTRODUCTION

TOBIN Consulting Engineers have been engaged by Donegal County Council (DCC) to lead the upgrade of an existing grass pitch to a multi-use sports facility improvement project and associated works at, Millbrae Stranorlar, Co. Donegal. This report has been prepared to detail the Planning and Civil Engineering Works element of the planning submission for the proposed development and should be read in conjunction with the associated drawings.

The proposed multi-use sports facility improvement development site is bound by Millbrae to the east, the Finn Valley AC athletics track to the north and the proposed Finn Harps Stadium site to the west as shown in Figure 1-1 below. The River Finn is approximately 65m to the south of the proposed pitch location.



Figure 1-1 Site Location Map

The proposed development site measures approximately 3.55Ha, the majority of which is currently used as a rugby pitch. The development site boundary also incorporates lands used for agriculture (livestock grazing), visitor parking for the Finn Valley Leisure Centre.

The proposed development will include the upgrading of an existing conventional grass pitch and soccer pitch multi-use sports facility improvement development. The proposed synthetic all-weather pitch surface will be approximately 150m X 106m in area and will be surrounded by a raised embankment with a grassed walking/running track on top, vehicular access with a demountable flood barrier, associated pitch perimeter fencing and ballstop netting, site boundary fencing to the south and west and flood-lighting.

The proposed site layout plan is shown in Figure 1-2 below.

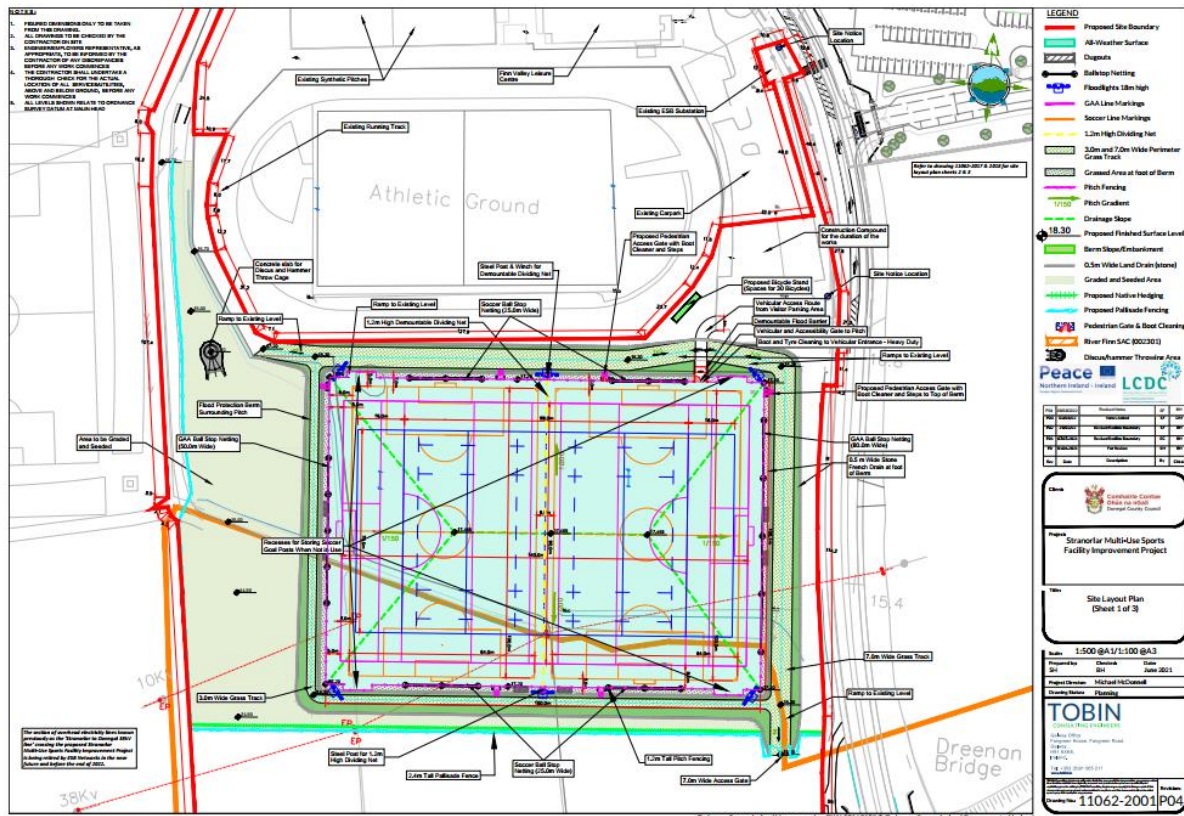


Figure 1-2 Proposed Site Layout Plan

This Construction and Environmental Management Plan (CEMP) describes the anticipated construction programme and the nature of the activities to be undertaken. It identifies the environmental considerations associated with these activities and outlines appropriate measures that might be implemented for their mitigation.

The purpose of the CEMP is to outline the details in relation to the environmental measures to be implemented on site, to prevent any adverse impacts on the surrounding environment. Accordingly, this CEMP identifies the main objectives for the managed procedures which are required to ensure the construction related activities on the site are executed in a safe and controlled manner and to minimise disruption and impacts on the amenities in the area.

The objective of this CEMP is therefore to identify the potential issues which are relevant to the project, to address these issues and to provide solutions which are satisfactory to all concerned.

Planning for the construction works is necessarily broad at this stage and will be subject to modification during the subsequent application, the CEMP is therefore indicative as part of the planning application.

This assessment has been made using the experience of the Applicant and their professional advisors based on the typical construction methods and strategies that can be reasonably anticipated at this stage of the process.

As noted above, the proposed development site measures approximately 3.55Ha, the majority of which is currently used as a playing pitch. The development site boundary also incorporates lands used for agriculture (livestock grazing), visitor parking for the Finn Valley Leisure Centre.

The proposed development will consist of the construction of a synthetic all-weather multi-sport pitch and associated works including floodlighting, fencing, landscaping and the formation of a flood protection berm surrounding the pitch area.

The target date assumed for this CEMP for commencement of the works on site is Quarter 1, 2023.

Construction management and planning, with the adoption of environmental best practices, good neighbourhood policies and community engagements, will contribute to mitigation of adverse environmental effects and ensuring good construction, environmental, health and safety practices.

The issues that have been considered in this document are as follows:

- Construction programme and phasing:
- Enabling works.
- Infrastructure works.
- Description of works.
- Site logistics.
- Indicative construction methods.
- Safety, health and environmental provision.

2.0 CONSTRUCTION PROGRAMME & PHASING

It is anticipated that the programme of works will broadly be in line with the below key dates:

- - Q1 2023 - Commencement of onsite activities.
- - Q3/Q4 2024- Conclusion of site works.

At each stage of the Development some or all of the following activities will be required.

- Geotechnical Investigation.
- Service infrastructure works.
- Site clearance and enabling works.

- Ground works
- Fencing works and finishes.

3.0 SITE ENABLING WORKS

Site enabling works will include but will not be confined to the following

- Securing of site boundary and erecting of fencing or hoarding as required.
- Service terminations and positive identification of any services on the site by the utility providers.
- Provision of temporary power, lighting and water services.
- Set up of site accommodation and welfare facilities.
- Identification of stockpiling and storage areas

3.1 Indicative Enabling Works Methodology

The methodology for the completion of the enabling works will be finalised during the tender and appointment stage. The outline of methodology is as follows:

Temporary power and water services will be arranged for the site accommodation and welfare facilities. The site accommodation and welfare facilities will be set up in a location as not to be in the way of the construction, and at a point close to the site entrance.

Noise levels will be controlled and works undertaken in such a way as to minimise the detrimental impact on adjoining property and local residents.

3.2 Infrastructure Works

The site infrastructure works include the re-routing of existing drainage infrastructure and installation of new drainage infrastructure in addition to the provision of all the utilities and services required for the site.

3.2.1 Utility Infrastructure

Provision of the permanent infrastructure to the site will be carried out as early as possible in the programmed works as to possibly incorporate the temporary site requirements with the permanent requirements.

Engagement with the service and utility providers will be entered into early in the design stage to allow for adequate planning of utility infrastructure.

It is the aspiration of the applicant to minimise disruption of existing services and public roads and pathways in the provision of services to the site, this will be done in consultation with the service providers.

Prior to any works on site or on the boundaries to connect services, a desktop study followed by a physical survey will be carried out to identify all existing services. As part of the physical survey, trial holes, slit trenching and CAT scans may be required.

3.3 Road Infrastructure

No addition or changes to the existing Finn Valley Centre car park or car park entrance are being considered by this development. It is proposed that both construction traffic and future users of the multi-use sports facility improvement development access the area via the existing Finn Valley Centre car park.

A 3.0m – 7.0m wide perimeter running/walking track is proposed to be installed as part of the works for pedestrian access.

4.0 CONSTRUCTION TRAFFIC AND SITE ACCESS

4.1 Construction Route and Access

Routes for construction traffic involved in the delivery of goods to and from the site will be agreed with site management prior to deliveries happening. As part of the Construction Stage Safety Plan for the works, a Traffic Management Plan (TMP) will be prepared for the site activities and for any works required on the public road.

The contractor will provide information on the requirements of the site traffic access rules, which will include the following:

- Access routes from the entrance to the compound.
- It is envisaged that working hours will be 08:00 to 18:00 Monday to Friday and 0800 to 1400 on Saturday.
- No parking will be permitted on any access road to the site.
- No construction traffic is permitted via any developed/occupied phases.
- No vehicle may park on or around any footpaths in the adjoining areas.
- Caution must be exercised entering and leaving the site.
- All vehicles must stop at the security barrier.
- All instructions from the developer or development staff must be obeyed.
- Vehicles leaving the site must do so only at an appropriate break in the traffic and must not force their way into traffic.
- Only vehicles with specific business on the site can enter the site, once permission has been granted by the contractor and / or their staff.
- Heavy vehicle drivers must check their tyres for lodged stones and remove them prior to returning to the public roads.

It is proposed that construction vehicle movements would be restricted to the main arterial routes and not pass through predominantly residential areas. There will be no vehicle movement within 50m of the River Finn.

The number of Heavy Goods Vehicles (HGV) required to service the site during the duration of the construction has been calculated and the peaks occur at the early and mid-stages of the project.

Movements of large or abnormal loads will be addressed in advance with the relevant authorities. Certain trades will require parking on site for vehicles due to transportation of specialist equipment/plant requirements. Site access gate will be established, as well as a dedicated pedestrian access route.

Provision of wheel wash facilities will be made available on-site where it is deemed necessary or if space constraints do not permit this, the provision of power washing facilities for lorry wheels prior to egress off the site onto the public road in order to maintain the road in a clean condition. A road sweeper will also be utilised as required on the public road at vehicular access / egress points.

4.2 Off Loading and Storage Areas

Vehicles will be directed to the delivery points for holding/off-loading/storage, these deliveries will be controlled by a dedicated person allocated to overseeing all deliveries and controlling the entrance.

All deliveries will be notified to the site management team at least 24 hours in advance. No large deliveries will be allowed to the site during peak traffic times for the area.

4.3 Personnel and Vehicle Segregation

All pedestrian routes will be adequately segregated from vehicular routes across the site. All vehicle crossing points will have appropriate signage to alert pedestrians of vehicle crossing points. All site operatives will be given a specific site induction, giving information on the pedestrian access routes.

4.4 Temporary Road Closures

Road closures are not anticipated, however if they are required for the delivery of large items of plant or materials then such temporary road closures will be planned and approved by the Local Authority and relevant authorities.

5.0 SITE LOGISTICS

General Principles

Vehicular access to the site will be via the existing Finn Valley Centre car park as shown on Figure 5.1 below.

5.1 Site Logistics Map



Figure 5.1 – Site Location & Existing Infrastructure

5.2 Site Establishment and Security

- At site set up stage, the site will be made secure and the general public will be separated from the site by means of fencing and hoarding.
- All site facilities will be contained within the site area.
- The main entrance gate will be controlled by site personnel (gate-man) for deliveries.
- Lighting and a camera security systems may be used to secure the site in out of hour times.
- Site lighting will be set up as required without nuisance for adjoining properties.

5.3 Consent and Licenses

All statutory consents and licences required to commence an onsite activity will be obtained ahead of work commencing and giving the appropriate notice periods. These will include:

- Construction notices

- Connections to existing utilities and main sewers
- Licence to discharge from the site to public systems

5.4 Access and Egress

- Access to the site will be via the existing Finn Valley Centre car park
- Access will be strictly controlled via security personnel at the access point to the site.

5.5 Material Storage and Handling

- Materials will be stored on site as to minimise the risk of damage.
- A teleporter will be used for general unloading during the works. Unloading over the public roadway and path will be avoided.

5.6 Site Accommodation

- It is the intention to provide a main site accommodation and welfare facility on site. The location of these facilities will be in the site compound as marked on site logistics map.
- The principal contractor will be responsible for providing canteen and welfare facilities for the on-site operatives.
- These facilities will be maintained by the main contractor.

5.7 Visitor Management

- Visitors will only be allowed to enter the site via designated vehicular / pedestrian access gates and must report to the site security office to sign-in and for obtaining any additional PPE required.
- Visitors will be expected to attend a specific site safety briefing and be accompanied by a member of the site team at all times.

6.0 DESCRIPTION OF WORKS AND INDICATIVE CONSTRUCTION METHODS

6.1 Construction Sequence

The construction sequence is outlined below. Details may change subject to the detailed design development of the proposed construction.

6.2 Enabling Works

- Secure site and set up contractor welfare facilities and site accommodation.
- Install silt fences where required;

- Locate and terminate existing live services where required;
- Excavate and remove material to the required formation. This will require a bulk excavation and material storage onsite;
- Maintain existing entrances;
- Make good and install any finished boundary treatments that can be installed at this stage

6.3 Ground Works

- Excavate, lay and test proposed underground drainage;
- Decommission and remove existing drainage;
- Construct proposed pitch build-up, berm and walking track;
- Excavate fencing, floodlight, goal post and ball stop foundations;
- Coordinate and install all incoming services.

6.4 Finishes

- Install goalposts, floodlighting, fencing and ball stops;
- Install Concrete slab for Hammer Throw Cage
- Install flood barrier

7.0 SAFETY, HEALTH AND ENVIRONMENTAL

7.1 General Health, Safety and Environmental Consideration

Construction and demolition works will be carried out in such a way as to limit, as far as practicable, adverse environmental impacts.

Works will be carried out in accordance with the following general provisions:

- Planning approvals and/or consent
- Requirements of the approvals and/or consents

In accordance with the HSA requirements, a Project Supervisor Construction Stage (PSCS) will be appointed for the construction.

As part of the Construction Method Statement, the process will ensure that construction techniques and materials used are a fundamental consideration of the design and intended long-term use, the aim below is achieved:

- Design for durability and low maintenance.
- Design for flexibility and adaptability.
- Use of materials from sustainable sources.
- Use of local materials where possible.

Safety, health and environmental issues on the development are a primary consideration in the construction methods adopted. The construction team will develop detailed health and safety

plans, specific environmental, fire and accident procedures to suit the construction sequence of the Development.

Contractors involved in the Development will ensure that all non-English speaking employees are provided with relevant Health and Safety information in their national language.

All contractors will be required to adopt the relevant skills certification required for that element of the works.

A site-specific Safety Statement and a detailed Construction Stage Safety & Health Plan will be compiled prior to any works on site and will be in accordance with the Health & Safety Authority and Local Authority guidelines.

7.2 Control of Substances Hazardous to Health

The strategy for controlling all substances and all work processes that may generate hazardous substances will have to be addresses and control measures put in place.

Some of the control measures to be employed include the following:

- All fuel and chemicals to be stored in designated areas, with deliveries of hazardous materials supervised.
- Storage tanks and container facilities will be appropriately bunded.
- In the case of spills or discharges, remedial action will be taken as soon as possible in accordance with company procedures. Spill-kits and hydrocarbon absorbent packs will be stored in the cabin of all construction vehicles.
- Personal protective equipment (PPE) suitable to the pertaining conditions will be used by all site personnel.

7.3 Air Quality

General Provisions

Construction works will be carried out in such a way as to limit the emission to air of pollutants, employing best practices.

- The site will be managed in accordance with the CEMP to minimise potential effects on air quality from construction.
- Air monitoring will be undertaken throughout the construction period as may be deemed necessary.
- The storage and handling of construction materials can be significant dust emission source. The appropriate dust control measures will greatly reduce dust emissions from these sources and ensure that the adverse effect will be reduced or eliminated. These include covering waste skips, use of water to suppress dust, provision of hard stand access for truck and vehicles.
- Handling and storage areas will be sited as far away as is reasonably and practically possible from public/residential areas. Prolonged storage of materials

will be avoided where possible. Transportation of materials that may be dusty will be sheeted down to prevent any escape of materials.

- The burning of materials is prohibited.

7.4 Construction Plant

Construction plant can be a significant source of emission although control measures can be implemented to minimise any adverse impacts. The following measures will be employed:

- Site plant and equipment will be serviced regularly and maintained in good condition and in accordance with the manufacture's specifications. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for dust and emissions.
- Plant will not be left running when not in use.
- Plant with dust suppression equipment will be used where practicable.

7.5 Vehicle Movements

Vehicle movement may result in dust emissions and exhaust emissions. However, a number of control measures can be adopted to eliminate or minimise such emissions:

- Damping down the site haul roads during prolonged dry periods.
- Regular cleaning of hard surfaces at the site entrance.
- Ensuring that materials are transported appropriately (sheeting used over dusty materials)
- Confinement of plant and machinery to designated haul routes on site
- Speed restrictions on site will be enforced (15 km/h).
- Hoarding to site boundaries where practical which will aid in the reduction of windblown dust-off site.

7.6 Public Roads

The following measures will be taken to ensure that the site surroundings are kept clean and tidy;

- A regular programmed of site tidying to be established to ensure a safe and orderly site;
- Mud spillages on roads and footpaths outside the site to be cleaned regularly and will not be allowed to accumulate;
- Wheel-wash facilities or similar will be provided for vehicles exiting the site if deemed appropriate or when significant vehicle movements are planned (eg disposal of topsoil from site);
- Dedicated road sweeper will be put in place if site conditions require.

7.7 Noise and Vibration

General Provision

Noise arising from the construction phase will be limited principally to plant operations and traffic movements to and from the site.

During the construction works the Contactor shall comply with:

- BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Part 1, and Part 2.
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRS, Revision 1, 2004)
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

The noise limits to be applied for the duration of the works are those specified in the B Category of BS 5228. These limits are summarized below and will be applied at the nearest sensitive receptors to the works.

- Night (23:00-07:00) = 50dB
- Evening (19:00-23:00) = 60dB
- Day (07:00-19:00) = 70dB

The total noise (LAeq) which should not be exceeded during daytime is therefore 70dB.

Vibration limits to be applied for the works are those specified in the NRA document Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRA, Revision 1, 2004). These limits are outlined below:

Allowable Vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of:

<u>Less than 11Hz</u>	<u>11 to 50 Hz</u>	<u>50 to 110 Hz (and above)</u>
3mm/s	3 to 8mm/s	8 to 11mm/s

In general, the contractor shall implement the following mitigation measures during the proposed works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Keep internal haul roads well maintained and avoid steep gradients.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together
- All vehicles and mechanical plant used for the Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order. In addition, all diesel engine powered plant shall be fitted with effective air intake silencers. All compressors shall be “sound reduced” models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools shall be fitted with mufflers or silences of the type recommended by the manufacturers, and where commercially available, dampened tools and accessories shall be used.
- All ancillary plant, such as generators and pumps, shall be positioned to ensure minimum noise disturbance. If operating outside the normal working week, acoustic enclosures shall be provided.

More specifically the Contractor shall ensure that:

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Where required, improved sound reduction methods are used e.g. enclosures.
- Site equipment is located away from noise sensitive areas, as much as physically possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.
- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out.

A site representative responsible for matters relating to noise and vibration will be appointed as part of the Construction & Environmental Management Plan (construction stage).

A noise and vibration monitoring specialist will be appointed to periodically carry out independent monitoring of noise and vibration during random intervals and at sensitive locations for comparison with limits and background levels. It is proposed that noise and vibration levels be maintained below those outlined above as part of these infrastructure works.

7.8 Soils and Contamination

Existing Conditions

The ground conditions has be ascertained by means of a site investigation. Refer to report 21-0243 from Causeway Geotech, dated April 2021. and is included as Appendix F to the Planning Engineering and Environmental Considerations report, which is submitted as part of this planning application.

In summary, the trial pits revealed variable upper soils composed largely of sandy clay. These soils were present to depths of 0.1 metres with made ground consisting of brown gravelly silty clay to 1.5 metres where they were underlain by brown slightly gravelly sandy silt. It was noted there is a relatively high water table on the site in the winter months and this has been accounted for in the design and construction methodologies.

Strategy

The strategy for controlling and mitigating potential adverse environmental or health and safety effects during construction will be to adopt the procedures and methods set out within this CEMP.

Operation Control

The strategy for controlling and mitigating potential adverse environmental or health and safety effects during construction will include the following, as appropriate:

- Identification and assessment of the potential for residual ground contamination to be presented prior to the start of any excavation works.
- Minimisation of potential risks to site workers as required by the Safety, Health and Welfare (Construction Regulations) 2013.
- Testing and sampling of excavated soils in order to assess the suitability of materials for re-use on site.
- Dust suppression from any contaminated soils by the regular use of water spray during any dry conditions, sheeting of haulage vehicle loads.
- Although contaminated material is not anticipated on the site, stockpiling of any contaminated materials will be avoided where possible.
- Stockpiles will be treated to prevent windblown dust.

- Adequate drainage will be designed and installed during construction work to manage surface water runoff.
- The handling and storage of any potentially hazardous liquids on site, e.g. fuels and chemicals, will be controlled and best practice guidelines. Storage tanks/container facilities will have appropriate bunding within the designated area.
- If hazardous liquids escape, remedial action will be taken as soon as possible.
- Where unforeseen contamination is identified during the course of the work, specific investigations will be carried out in the areas in question and appropriate health and safety procedures will be implemented during the removal of the material.

A strategy will be prepared to identify, analyse, segregate and control existing contaminated materials on site.

7.9 Transport

General Provisions

The works will be carried out in such a way that inconvenience to the public arising from increase in traffic flows and disruptive effects of construction traffic on local and main roads is limited wherever practical.

The key principle of the traffic management plan is to ensure the safety of all personnel (drivers & pedestrians). This means a separate entrance for vehicles and pedestrians. The onsite traffic flow will change through the course of the Development. All site traffic will be subject to speed restrictions.

Vehicles and pedestrians will be segregated at the site entrance. Site operatives will be required to wear high-vis clothing on site. Plant and truck operators will be required to have valid qualifications for the plant/trucks that they are operating.

Specific material storage will be identified and will be managed for on-site movement by the teleporter or the forklift.

A Traffic Management Plan will be developed for the project prior to commencing works. It will be reviewed and updated to reflect the changing access requirements and route availability. The Traffic Management Plan will be reviewed and updated in line with the construction programme and will typically include details of the following:

- Temporary Traffic Operations Supervisor (TTOS)
- Temporary traffic control measures.
- Temporary and permanent access to the works – vehicle and pedestrian.
- Off-loading and storage areas.
- Traffic management procedures for waste disposal vehicles.
- Personnel and vehicle segregation.

- Equipment e.g. road cones, temporary fencing and signage etc.
- Ensuring all work is planned and method statements prepared and detailing safe systems of work.
- Ensuring that all sub-contractors make adequate provision for vehicle selection and supervision of drivers.
- Making vehicle safety an integral part of the development safety & health plan.
- Defining standards for driver competence, vehicle safety and maintenance.
- Ensuring the coordination and cooperation between contractors.
- Ensuring that all workers receive site induction training, detailing safe traffic routes and site rules for operating vehicles. Establish safety monitoring procedures for the use of vehicles on site.

7.10 Waste

General Provision

All works carried out as part of these works will comply with all Statutory Legislation including the Waste Management Act & Local Government (Water Pollution) Acts, and the contractor will co-operate in full with the Environmental Section of the Local Authority.

It is proposed to reuse any excavated material onsite, however the disposal of waste generated during construction, will be managed to maximise the environmental and development benefits from the use of surplus materials and to reduce any adverse effects of disposal. In general, the principle of waste management hierarchy, which favours waste minimisation, re-use material and recycle over disposal to landfill will be favoured.

Construction and Demolition Waste

Methods for waste reduction will form the basic strategy for construction waste management from the start. Where possible materials will be re-used. Careful extraction of materials will be undertaken to ensure that the highest proportion of the materials can be re-used. This will reduce the level of new materials required for the proposed site. This in turn reduces the impact on new resources and carbon emissions associated with the extraction, manufacture and transportation of materials to the site. Undertaking the enabling works upfront ensures that more time can be spent on the careful recovery of materials on site. Where appropriate, excavated material from development sites should be reused on the subject site. If any of the excavated soil is found to be clean/inert, the site manager will investigate whether nearby construction sites may require clean fill material, to both minimize the costs of transport and to reuse as much material as possible. Any material used on another site will be done under Article 27 of the European Communities (Waste Directive) Regulations 2011.

Control during Construction

The contractor will ensure minimisation of waste arising on site and reuse where possible, either directly or by recycling, waste monitoring and setting of targets. Recyclable materials such as metal, timber, cardboard and office paper will be put in colour coded bins, ready for collection by the appropriate contractor.

Initiatives to reduce other waste streams include as far as practically possible:

- Minimising raw material waste through analysing design and construction techniques where possible.
- Liaison with suppliers to enable packaging materials to be sent back for reuse, the use of off-cuts where possible and the recycling of off-cut materials by suppliers.
- Engaging contractors in the process of maximising the use of recycled aggregates for hardcore.
- The entrance to the site will be kept clean as to minimise dust and pollution to the water course.

To ensure compliance with legislative requirements, only local authority licenced waste hauliers, waste contractors are permitted to collect and remove waste from site. All waste removed from site will be deposited at a licensed waste facility.

Waste delivery dockets must be completed and given to site management for recording purposes.

Suitable protection measures will be incorporated in the design of the waste management area to prevent pollution, and regular inspections carried out to ensure that stored waste is covered by present accidental spillage and from being blown away.

7.11 Waste Management Plan

At the outset a site waste management plan will be produced for this project. This will include a waste forecast identifying options for reuse, recycling and avoidance of landfill and to record actual waste. Please refer to the “Operational Phase, Waste Management Plan”

8.0 WORK FORCE

8.1 Employment and Management of Workforce

Working Hours

Working hours will be restricted to 08:00 to 18:00 Monday to Friday & 08:00 to 14:00 on Saturdays. No Sunday or Bank Holiday work will be permitted.

Out of hours working will be only permitted by arrangement with site management. Work outside of normal hours will be subject to approval by Donegal Co. Council and under permit from site management.

The PSCS will liaise with the Client to agree specific arrangements for activities outside of normal working hours that will minimise the risk and disruption to residents and members of the

public. All reasonable precautions will be taken for the operation of plant and equipment to avoid nuisance and excess noise impact on the surrounding residents.

8.2 Temporary Site Accommodation

Site accommodation will be contained within the site boundary. The principal welfare accommodation will comprise of site offices, toilets, canteen and drying rooms. These will be prefabricated where possible,

Preventative pest control measures will be put in place, and regular inspections will take place to ensure good housekeeping. Refer to Figure 5.1 above for indicative site compound location.

8.3 Site Security

It is intended to provide a fully enclosed site utilising the fencing where possible. This will be accomplished through a combination of IBEX fencing, palisade fencing, timber hoarding and a security-controlled access gate.

Designated vehicular and pedestrian access will be established and all other potential access points to the site secure so far as is reasonably practicable.

9.0 ENVIRONMENTAL MANAGEMENT

Construction of the proposed development will be carried out in line with best practice guidance in all areas of potential environmental impact and specific guidance documents are identified within the following sections. Across the full project duration, the Contractor will utilise the general guidelines set out in the CIRA C741 publication *Environmental Good Practice on Site (4th Edition)*¹.

9.1 Construction Phase Measures - Pollution Prevention

Works will follow best practice guidance as outlined in Guidelines on the Protection of Fisheries during Construction Works in and Adjacent to Waters (IFI, 2016). Although the risk of any significant impact on water quality in any receiving water bodies is considered to be extremely low given the lack of running water features on the site, best practice will be implemented at all times in relation to all construction activities to avoid any accidental pollution events occurring to the wet ditches in the area or polluting the ground water table.

This will include the following actions:

- SuDS will be constructed in line with manufacturer's guidelines / best practice methods.

¹ CIRA *Environmental Good Practice on Site (4th Edition)* (C741) (2015)

- Detention basins have been designed as off-line basins to cater for the 1 in 100 year storm events. The design of the detention basin is in accordance with CIRIA SuDS Manual C753 2015. Please refer to the accompanying drawings for further information.
- During construction, any surfaces which are intended to enable infiltration must be protected from compaction. This includes protecting from heavy traffic or storage materials.
- Water contaminated with silt will not be allowed to enter a watercourse or drain as it can cause pollution. All parts of the drainage system will be protected from construction runoff to prevent silt clogging the system and causing pollution downstream. Measures to prevent this include soil stabilisation, early construction of sediment management basins, channelling run-off away from watercourses and surface water drains and erosion prevention measures.
- Following construction, subsoil that has been compacted during construction should be broken up prior to the re-application of topsoil to reinstate the natural infiltration performance of the ground.
- Areas of SuDS that have been compacted will be refurbished.
- Pipe systems and orifices will be checked for blockages or partial blockages.
- Silt deposited during construction will be removed.
- Soils will be stabilised and protected from erosion whilst planting becomes established.
- Hydrocarbons or any hazardous chemicals will be stored in specific bunded areas. Refuelling of plant and machinery will also be carried out in bunded areas to minimise risk of any potential pollutants being discharged from the site.
- Pollution control measures will be implemented to control run-off from the site and prevent run-off which is potentially contaminated with sediments or hazardous chemicals entering the drainage network.
- Pouring of cement-based materials for works will only be carried out in dry conditions. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings and excess concrete will not be discharged directly into the drainage network. Concrete washout areas will be created to avoid any accidental discharge from the proposed development site.
- Foul drainage from site offices and compounds, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations to prevent the pollution of watercourses.
- A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available on site. Construction staff will be familiar with the emergency procedures and use of the equipment.

9.2 Environmental, Emergency and Accident Procedure

Measures will be carried out to avoid environmental incidents, however if these occur then the following types must be reported to the responsible person in the construction team.

The overall strategy in the event of a spillage will be “Stop-Contain-Notify” in the event of:

- Spills or discharge to the atmosphere, water supplies, sewage systems, rivers and other watercourses, or to the ground:
 - Any chemical products
 - Oils or fuels
 - Effluent/fumes and gases
 - Waste or contaminated materials
- Damage to existing:
 - Trees and wildlife
 - Flora and existing local habitats
- Any environmental incidents that could lead to:
 - Local Authority or regulatory enforcement
 - Public complaint

Emergency routes and procedures will be continuously adapted to suit the construction sequence and stage of the Development. An Emergency and Evacuation Plan will be prepared following the guidelines detailed below and updated on a regular basis during construction.

- Definition of the management organisation and responsibility for safety
- Definition of appropriate fire prevention measures, including good housekeeping of site, welfare facilities and offices.
- Adequate provision of fire extinguishers across the site.
- Use of non-flammable/fire retardant materials for protection of finished works.
- Safe use and safe storage of flammable materials of all categories, whether solid, liquid or gas.
- Appropriate waste management procedures.
- Monitoring the type and frequency of fire inspections/audits.
- Development of evacuation plans, to include escape routes, muster stations, means of sounding alarms and general emergency procedures.
- Site safety inductions and fire drills.
- The application of permit systems for Hot works, Confined Space Entry and Electrical Access Control.
- The provision of first aiders. Checking of emergency routes are available and unobstructed at all times.
- Liaison with the emergency services and occupants of the adjacent buildings.

First aid facilities will be established and at least one trained first aider will be present on-site at all times. In addition, trained Fire Wardens / Fire Marshalls will be in place on-site to address fire safety.

9.3 Dust

Dust control will be best achieved at sources, and if possible, activities will be carried out in a manner as to prevent dust generation.

If dust is generated, steps will be taken to protect workers in the vicinity who shall, as a minimum, be issued with appropriate dust masks. Dust will, as far as is reasonably practicable, be contained in the area where it was generated. Dust suppression will be carried out to ensure that dust nuisance affecting neighbouring properties is minimised.

Dust emissions from construction will be controlled through careful pre-project planning and effective site management. The following control measure and good practices, will be employed:

- Burning of materials is prohibited sites.
- Loading and unloading will only be permitted in designated areas.
- Provision of water sprays in dust sensitive locations will be introduced.

9.4 Ecology

To ensure the protection of ecological key receptors, this CEMP has been prepared in accordance with the mitigation measures set out in the Ecological Impact Assessment Report (EclA) and within the Natura Impact Statement (NIS). The following measures have been prescribed to ensure the protection of the receiving biodiversity:

9.4.1 Appointment of Environmental / Ecological Clerk of Works

A suitably qualified Environmental / Ecological Clerk of Works (EnCoW or ECoW) will be appointed by the Contractor. The EnCow / ECoW will ensure that all mitigation measures outlined within this report are implemented during the proposed construction works.

9.4.2 River Finn SAC

No construction works or movement of machinery/vehicles will occur within 50m of the River Finn. No instream works will be undertaken within the River Finn. Mitigation measures outlined in section 9.1 and 9.2 detail water quality control measures which will ensure the protection of the watercourse.

9.4.3 Vegetation Clearance

The construction work areas will be demarcated prior to the construction works commencing. No clearance of vegetation will be undertaken outside of the demarcated areas within the proposed development site.

9.4.4 Re-Planting of Vegetation

Approximately 220m of new hedgerow will be planted along the southern boundary of the proposed development site. The new hedgerow will include a mixture of native species to increase species diversity within the area. The proposed new planting scheme is illustrated in Landscape Plan and drawing no. 21597-2-100 which is included as Appendix G of the Planning, Engineering and Environmental Considerations, drawing no. 11062, which is included within the Planning Application.

9.4.5 Birds

In accordance with Section 40 of the Wildlife Acts, all vegetation proposed to be removed to facilitate the works will be cleared outside of the birds nesting season (1st March to 31st August inclusive). This will ensure there is no loss of nests as a result of the proposed construction works. In the event that clearance of vegetation is required within the bird nesting season, vegetation will first be surveyed by an experienced ecologist to identify the presence of active nests. Only vegetation confirmed to be nest free may be cleared. In the event that a nest is confirmed as present, the nest will either be removed under license obtained from NPWS or the nest will be cordoned off until the chicks have fledged or until nesting has failed.

9.4.6 Otter

In the event that the construction phase of the development is delayed more than 12 months after the initial baseline surveys, it is recommended that a pre-construction otter survey is undertaken along the stretch of the River Finn located within 150m of the proposed development site to establish the presence of any new otter holts. The pre-construction survey should be conducted no more than 10–12 months in advance of the construction works as per the NRA (2008b) guidelines. In the event that a new holt is identified within the Zol of the proposed works, a derogation license will be sought from NPWS.

9.4.7 Frogs

Suitable habitat to support frogs was identified within the drainage ditch. It is recommended that a pre-construction frog spawn survey is undertaken within drainage ditch habitat which maybe be disturbed during the common frog's spawning season (1st March – 31st June inclusive). In the event that frog spawn is identified within the footprint of the works, a derogation license under Sections 9, 23 and 43 of the Wildlife Acts will be sought from NPWS.

9.4.8 Invasive Species and Pathogens

In order to comply with Regulations 49 and 50 of the European Communities (Birds and Natural Habitat) Regulations (2011), the appointed Contractor will ensure biosecurity measures are implemented throughout the construction phase to ensure the introduction and translocation of invasive species is prevented. An Invasive Species Management Plan has been prepared and is included within the Planning Application and is included as Appendix 2 to the NIS.

The following mitigation measures, along with all measures outlined in the ISMP, are prescribed to control the translocation or spread of invasive species and / or pathogens:

- Biosecurity measures will be employed during the construction works associated with the drainage ditch instream works. The biosecurity measures will have regard to IFI Biosecurity Protocols including: *'IFI Biosecurity Protocol for Field Survey Work (December 2010)'*.
- Fencing will be established along the southern boundary of the proposed development site. The fencing will be installed approximately 20m from the bank of the River Finn. This will ensure no construction works or the movement of vehicles/machinery/site personnel occurs within the zone of influence of the invasive species, i.e. no works within 7m of the two invasive species.
- No material will be stored within 20m of the river bank. In addition, no tracked machinery may be used within 20m of the river bank.
- All machinery and equipment used during the culverting and redirecting of the drainage ditch will be inspected and will be completely dry prior to works commencing to prevent the risk of pathogen translocation. A 'Check, Clean, Dry' protocol will be undertaken with all equipment, machinery and vehicles entering and leaving the proposed development site. All equipment/machinery used within the drainage ditch will be checked for living plants and animals. Equipment and machinery used will be washed thoroughly and then allowed to dry for at least 48 hours.

9.4.9 Lighting

All temporary lighting associated with the construction works will be strategically placed by the Contractor following consultation with a suitably qualified ecologist. This will ensure that illumination beyond the works area is controlled. Lighting will be cowled and directional to reduce significant light splay. No lighting will be directed towards the surrounding hedgerows and treelines or towards the River Finn. Only low-pressure sodium, high pressure sodium or LED luminaires will be used on site to ensure that there are no significant negative impacts on bats. In addition, the column height of the temporary lights will be carefully considered to minimise light spill.

9.4.10 Management of Rubber Crumb during the Operational Phase

Boot cleaning points will be installed at all pedestrian access points around the pitch. This will ensure no rubber crumb is carried outside of the pitch.

Maintenance activities which will be undertaken during the operational phase of the development will include weekly brushing of the pitch surface, removal of any debris such as leaves or litter, weed spraying and yarn checks.

The life span of an all-weather pitch is typically 20-25 years. After this stage there may be a requirement to replace the synthetic carpet and rubber crumb infill. A specialist machine will be brought to the pitch to remove the crumb. The crumb will be retained in ½ tonne sacks, removed from site and disposed of / recycled appropriately. The old crumb will not be stored onsite. The removal and addition of new crumb will be contained within the site. The surrounding berms will ensure there is no potential the runoff of the crumb into the nearby the River Finn.

9.5 Water Resource

The works will be carried out and working methods adopted to ensure that construction activities do not adversely affect surface water and ground water quality. In particular, the potential impacts of any outflows from the site to the River Finn SAC. The most damaging being concrete leachate, oils and chemicals and suspended solids.

The following best practice measures will be adopted:

- All works must comply with the following guidelines: ‘*Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors (C532)*’ (CIRIA, 2001)² the Loughs Agency guidelines; ‘*Guidelines for Fisheries Protection during Development Works (Foyle and Carlingford Areas)*’ and per the Inland Fisheries Ireland (IFI) guidelines; ‘*Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016)*’ to ensure the protection of the River Finn and its tributaries.
- No instream works will be undertaken within the River Finn. In addition, there will be no abstraction of water from the River Finn or from the drainage ditch.
- Instream works will be carried out within the drainage ditch located to the south-west of the proposed development. The appointed Contractor will submit an Application for a Section 46/47 Permit along with a Method Statement outlining the proposed instream works to Loughs Agency prior to the works commencing.
- The drainage ditch will be blocked using a coffer dam to create a dry works area and water will be over-pumped to the existing manhole located to the north-east of the drain. All measures outlined on Page 9 and 10 of the Loughs Agency guidelines; ‘*Guidelines for Fisheries Protection during Development Works (Foyle and Carlingford Areas)*’ will be implemented during the instream works.
- Use of silt fences and silt bags to contain surface water run-off from the site.
- Silt fences will be installed along the southern boundary of the proposed works area, south of the proposed embankment location. Silt fences will also be installed around large stock piles of material.
- Silt fences will be constructed using a permeable filter fabric (Hy-Tex Terrastop Premium silt fence or similar) and not a mesh. Silt fencing will be installed as per the manufacturer’s guidelines prior to any ground disturbance works and shall be maintained until vegetation on the disturbed ground has been re-established. Once installed, the silt fence shall be inspected daily during construction and hourly during heavy rainfall by the appointed EnCow / ECoW.
- Excavation activities will not be carried out during or following heavy rainfall, i.e. if there is a yellow weather warning in place or 5mm in a 1-hour period.
- All stockpiled material will be stored within the site construction compound or within the proposed development site boundary which are located an excess of 65m from the bank of the River Finn.
- No material or vehicles will be stored within 20m of the drainage ditch.
- Discharge to public sewers – after prior agreement with the local authority.
- The existing storm water drainage system will be retained where possible during construction, with modifications as necessary to prevent ingress of debris.

²<https://www.ciria.org/ProductExcerpts/C532.aspxh>

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- Control of spoil and other materials to prevent spillage.
 - Oils/Fuels/Hazardous Wastes will be stored in bunded areas or in bunded containers.
 - Washout from concrete trucks will be contained or prohibited on site.
 - Surface water arising during excavation works will be discharged to the surface water system.
 - Sediment control will be implemented where surface water is contaminated with silt.

10.0 Conclusion

This CEMP presents a summary of the overall proposed development works, the management of the site during the construction works and the mitigation measures required to ensure the proposed works do not have a significant effect on the environment.

Prior to commencement of construction, the appointed Contractor will be required to update this document with site specific details including the location of spill kits on the site, the layout of the construction compound, machinery pre-start checklists and provide details on the persons responsible for environmental management for the duration of the works. This updated CEMP will also be required to include any specific construction phase environmental management procedures identified in the grant of planning for the development or subsequent to the planning submission. The Final CEMP document will be agreed with the developer prior to commencement of works and submitted to the planning authority. It will be a live document and updated accordingly throughout the project.

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