# Proposed Cork Prison

# Environmental Impact Statement VOLUME 1 - NON-TECHNICAL SUMMARY



Prepared for the Irish Prison Service



by Sweett Group



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#### **Preamble**

This Environmental Impact Statement (EIS) forms part of an Environmental Impact Assessment (EIA) undertaken in relation to a proposed new replacement Prison for the existing Prison in Cork City. The new Prison is proposed on a site adjoining the existing Prison buildings that is largely vacant, but contains the prison car parks for staff and visitors.

The document is structured as follows:-

# **VOLUME I**

A Non-Technical Summary – A summary of each of the Sections of the EIS of the main report highlighting the principal features.

# <u>VOLUME II</u>

**Introduction** – An outline of the background to the proposed development including a description and assessment of alternatives which were considered.

**Description of the Project** – A detailed description of the site, its layout, design, construction and operation of the proposed development.

**The Receiving Environment and Environmental Impacts** – A comprehensive description of the existing environment of the site and its surrounding area, an assessment of the likely impacts and effects that would result from the proposed development and a description of the measures envisaged to mitigate any significant adverse impacts/effects. The topics covered include:-

- Human Beings
- o Traffic
- Ecology
- Soils and Geology
- Water and Hydrogeology
- Noise and Vibration
- Resource and Waste
- o Material Assets
- Urban Landscape and Visual Impact
- Cultural Heritage
- O Daylight, Sunlight and Artificial Light

# **VOLUME III**

**Appendices** 

# **Non-Technical Summary**

# 1.0 INTRODUCTION

The Sweett Group was appointed by the Director General of the Irish Prison Service (IPS) to undertake an Environmental Impact Assessment of a proposed new Prison replacing the existing one in Cork City. This Non-Technical Summary forms part of the Environmental Impact Statement produced as part of that process.

The existing Prison dates from 1849 and was originally built as a garrison prison for the adjoining Army Barracks (now Collins Barracks). A series of additional structures were built since then and the site is now congested with buildings. The conditions in the prison are particularly poor. Overcrowding, absence of in-cell sanitation, deteriorating buildings and services are features of the building complex. It is difficult to manage and is operationally inefficient. Various alternative solutions to the challenge of solving the problem posed by the existing prison have been carefully considered and a decision has now been taken to proceed with the construction of a new prison.

The proposed prison site adjoins the existing prison buildings on Rathmore Road in North Cork and is largely vacant, but contains both the staff and visitor car parks for the existing prison.

The consent process for prison projects is by means of the Planning Acts or as an alternative in the case of larger prisons or extensions through the 2007 Prisons Act (subject to a decision to that effect by the Minister of Justice and Equality. The Minister has made a Decision (SI 240 of 2012) that the proposed new prison should follow the process set out in the Prisons Act.

#### 2.0 DESCRIPTION OF THE DEVELOPMENT

#### 2.1 The Site

The proposed site is situated on Rathmore Road in the northern part of Cork City. It adjoins the existing Prison and Collins Army Barracks is located directly across Rathmore Road. It is also bounded by residential property to the North, East and South. Frontage and access are available from Rathmore Road.

The site forms the apex of a hill and land falls away mainly to the North and South. The site is in grassland but for the aforementioned car parks. There is a partially built security wall constructed some 10 years ago that formed part of a previous proposal.

The site occupies an area of 2.64 ha and is shown outlined in **Drg.No.SL** (2)-101.

# 2.2 The Design and Construction of the Development

#### Size and Scale

The proposed development is for a Prison that would accommodate 310 male prisoners. Car parking is provided for staff members, as well as spaces for visitors.

The complex will consist of three main building elements with a total floor area of circa 15,072sq metres as follows:-

- The Entry Buildings including the Visitor and Energy Centre
- The Prison Accommodation and Services Block
- The Sports/Multifunctional Hall

The Prison will be surrounded by a high security wall on three sides.

The complex would have a full range of infrastructure services.

The main prison accommodation building is planned in a H-shaped format and is two/three-storeys high with an attic services floor. The other buildings are rectilinear in shape and are lower in height. The Visitor Building and Energy Centre are single storey; the gate building is two-storeys and the Sports Hall is a high single storey.

The buildings have a masonry expression with individual windows and pitched roofs. Given the length of the main building, it is designed to have a vertical bay emphasis. Finishes are render and coloured profiled metal sheeting to upper levels. The pitched roofs are finished with composite coloured metal profiled sheeting with the exception of the Visitor Building which has a slate roof.

The proposed prison is shown in Drg. Nos. SL (2-)101 – Drg. Nos. PL (2-) 908A inclusive.

#### Construction

Construction will be carried out using reinforced concrete pad and strip foundations and ground beams as required, concrete ground floor slab and reinforced concrete and pre-cast concrete superstructure with solid concrete block and portal frame steel roof structures.

Excavations will involve the use of a JCB Backactor or CAT325/350 and may involve the use of hydraulic breaking equipment to break localised areas of strong bedrock.

# **Phasing**

The development will be constructed in three phases; the first being site set-up establishing the site compound and car parking arrangements, followed by the construction of the prison security wall and underground services and finally the buildings. It is anticipated that the first two phases

would take 6 months to complete and the buildings 18 months- a total build period of 24 months.

# **Safety**

Site safety will be of paramount importance during the build period and will comply with the Safety, Health and Welfare at Work Act 1989 and the Welfare at Work (Construction) Regulations 2001. A Project Supervisor Design Stage will be appointed and the appointed Building Contractor will act as Project Supervisor at Construction Stage. He will be required to produce a site specific Health and Safety Plan and appoint a Health and Safety Officer to ensure compliance with the Plan.

#### **Constructional Constraints**

The project will be subject to the following constraints in order to minimise impacts on the environment:-

- Completion in the fastest time possible commensurate with safety and quality considerations.
- Construction activities confined to normal working hours except in special circumstances.
- Compliance with noise level limits
- Compliance with a Construction Management Traffic Plan
- Compliance with emission limits
- Compliance with a Construction Waste Management Plan

#### 2.3 Operation

The Prison will be maintained and operated to the highest standards comparable to those of other Western European democracies. Details of the prison operation are not set out for security reasons.

# 3.0 RECEIVING ENVIRONMENT, IMPACTS AND MITIGATION MEASURES

#### 3.1 Human Beings

The proposed prison will be located in a transitional zone between an older denser urban form and a more suburban morphology to the North. The neighbouring uses are mixed but are predominantly residential with the Army, local industrial estate, service shopping and business centre, as well as Schools and other social infrastructure, providing employment. There are significant areas of social housing to the North and these areas have seen described as socially deprived in studies carried out by Cork County Council. The population in the local area has been static in the immediate area, but growing nearby due to a number of infill developments recently constructed. This is likely to continue as there are further units under construction.

There is a good infrastructure of Schools in the area, as well as other social facilities that can be expected in a well-established urban area.

The impact generally on human beings will be neutral as the proposed prison is a replacement facility. However the retention of the Prison in the area will be positive in terms of employment and social consolidation. New construction employment will be positive at a time when unemployment is particularly high in the construction industry. There will be temporary negative impacts arising from construction activities such as noise, dust and additional traffic and these are considered in more detail below. However the temporary nature of construction work and appropriate mitigation measures will ameliorate these impacts significantly.

#### 3.2 Traffic

The traffic is not expected to increase in the operational phase of the proposed Prison, given that it is a replacement prison. The existing prison will be mothballed. It is unlikely that any future use would give rise to a level of traffic comparable to the existing prison. However this can be assessed at a future date if and when new proposals emerge for these buildings. Staff and visitors are currently heavily reliant on car transport and although some of this arises from the shift nature of staff working hours, more sustainable methods of commuting will be encouraged. Bus services are available on Glen Avenue and Ballyhooley New Road. There are no cycle lanes or special provision for cyclists. The difficult terrain of steep hills in the vicinity can be noted.

Construction will give rise to an increase in traffic from operatives and from servicing vehicles. The site is serviced from Rathmore Road which currently features a hazardous junction and an absence of segregated pedestrian pavements. The forecast increases in traffic are modest; the typical 30% impact threshold will not be exceeded.

Mitigation Measures include:-

- An improvement of the hazardous junction.
- The provision of a footpath along Rathmore Road.
- The preparation of a Construction Traffic Management Plan.
- The preparation of a Mobility Management Plan for the new Prison.

Subject to the implementation of the mitigation measures the impacts will be temporary, neutral to slight.

#### 3.3 Ecology

The site is largely an area of grassland within an urban area. In terms of flora, the habitat can be described as *dry meadows and grassy verges*. There was no evidence of any fauna, although foxes may visit and rodents are likely to occur. Bird species are limited. Swallow and swift may feed there in summer months. Birds observed were typical of suburban land and included feral pigeon, magpie, jackdaw, blackbird, robin, wren and goldfinch.

None of the flora or fauna species are rare and the site is of little ecological value. The impact of development would be to further increase the urbanisation of this area of the City.

There is no way of mitigating the habitat loss. The impact will be permanent. Japanese knotweed is present on the site and as it is an offence under the European Communities (Birds and Natural

Habitats) Regulations to disperse it to new areas, it would have to be eliminated by spraying or be removed to a licensed landfill before earthworks begin.

# 3.4 Soils, Geology and Hydrogeology

The overburden soils at the site have been classed as made ground but comprise of firm sandy clays and clayey sands and gravels. Bedrock comprises variably weathered purple brown and green brown sandstone. The trial pits showed that initially the sandstone ranges from highly/moderately weathered and weak in the upper zones to slightly weathered and becoming moderately strong to strong with depth. Soil cover is shallow at the higher parts of the site.

The base of the trial pits effectively denotes the interface of the highly weathered sandstone and the more moderately to slightly weathered sandstone, becoming progressively less weathered with depth. The sandy clay sub-soil is classed as firm in consistency while the sands were found to be compact.

Groundwater was rarely encountered in the trial pits and temporary sidewall stability was noted to be good during excavation.

The site is underlain by a Locally Important Bedrock Aquifer described by the Geological Survey of Ireland as moderately productive only in local zones. There is no groundwater source protection zone. The flow beneath the subject site is expected to be in a southerly direction towards the River Lee.

The ground water is identified as being of "Good" quality in the South Western River Basin Management Plan and should be protected.

Impacts arising from the construction phase could include soil removal and compaction. There is no evidence of historical spillages that may have contaminated the site or part of it, however unexpected contamination may be encountered during excavation works and contaminants may migrate. Accidental spills and leaks from oils or fuels stored on site or from vehicles is also a risk. The use of concrete and cement is also a source of possible pollution. Surface water run-off may contain increased silt potentially causing damage to groundwater.

The potential impact on soils, geology and hydrogeology however is considered to be slight.

The risk during the operational phase is considered to be slight. The only possible source of contamination would arise from accidental contamination of the soil and groundwater accidental spillages of chemicals, oil or fuel.

Mitigation Measures include:-

- Minimum disturbance of top soils and sub soils necessary to construct the project.
- Separation of concrete, topsoil, made ground/fill and subsoil stockpiles.
- Retention of topsoil and subsoil for re-use where possible on site.
- Spoil to be stored away from any surface water drains.
- Monitoring of excavated material for any sign of contamination.

- Use of licensed contractors and use of surplus soils for landscaping or land reclamation where suitable and legally permitted and use of licensed sites for off-site treatment/recycling/disposal.
- Use of bunded designated areas for storage of paints, oils, solvents etc. to minimise any impact from spillages.
- Refuelling or lubrication of vehicles to take place in designated areas away from surface water gulleys or drains.
- Spillage kits and absorbent packs to be maintained on-site.
- Concrete to be mixed off site.
- Surface water runoff to be treated to ensure silt removal before entering the sewage system.
- Installation of liquid separators to drainage system to impermeable surfaces to prevent contamination during the operational phase.
- Bunding of all areas designated for oil and fuel storage in the completed development.

Subject to the implementation of the mitigation measures the impact will be slight.

# 3.5 Water Quality and Hydrology

The site is located within the Lower Lee/Owenboy catchment area. Existing water run-off from the site infiltrates into the ground with some run-off from the hard standing car park areas. There are no water courses within the site or adjacent lands. The site lies within the Lower Lee/Owenboy Management Unit within the South Western River Basin District as defined under the EU Water Framework Directive and is subject to the Management Plan for that district. The current status of this Unit is "Moderate". Its main impediment to reaching "Good" status is diffuse agricultural pollution.

A Stage 1 Assessment of the site in accordance with the Flood Risk Management Guidelines (OPW/Department of Environment, Heritage and Local Government) was carried out and no flooding issues were present on the site or in its vicinity. On-site attenuation should ensure that the proposed development will not contribute to any future flooding issues.

The site is serviced by Local Authority sewers and water supply.

The potential impacts that could occur during the construction phase are accidental spillages from oils and fuels stored on site or from machinery or vehicles and the use of concrete and cement. Accidental wastewater discharges from construction staff welfare facilities and at worksites are also potential impacts as is surface water run-off from compacted ground.

The potential impacts during the operational phase are limited to possible accidental spillages from cars or service vehicles.

All of these potential impacts can be mitigated. The impacts during both phases are judged to be slight-moderate.

# Mitigation Measures include:-

- Careful storage and separation of construction and excavated materials away from surface water drains.
- Refuelling and lubrication of construction vehicles and plant/equipment in designated bunded areas.
- Use of drip trays.
- Attendance by personnel during the course of refuelling or lubrication.
- Provision of spill kits and absorbent packs in each vehicle with operatives trained in their use.
- Designation of areas for oil and fuel storage within bunds and special drainage arrangements.
- Concrete mixing to take place off-site.
- Removal of effluent from temporary toilet facilities off site for appropriate treatment.
- Attenuation of surface water during the operational phase with controlled discharges rates.
- Use of hydrocarbon interceptor before discharge of water to Local Authority network.
- Regular maintenance of interceptor and attenuation tanks.
- Full compliance with local authority standards in relation to water supply and waste water installation.

Subject to the implementation of the mitigation measures the residual impact would be imperceptible.

#### 3.6 Noise and Vibration

Noise surveys were carried out at three sensitive receptor locations during day and night time. Background noise was typical of a suburban location and noise was dominated by local and distant traffic noise. No significant vibration was observed.

Noise is not expected to be a significant issue during the operational phase as exercise yards are contained by buildings and the canine unit is remote from residential use. Modern air conditioning plant is not a significant generator of noise and the car parks are replacement facilities.

Construction noise will however impact on the local area. It will arise from any rock breaking, Builder's plant and machinery, car parking on site and delivery vehicles.

Given the urban location of the development site, the nearest dwellings and the measured survey readings, it is considered appropriate to select the *Reasonable* limit for Living Rooms during the

day and the Good limit for Bedrooms during the night. The appropriate internal criteria are therefore 40dB  $L_{Aeq}$  day and 30dB  $L_{Aeq}$  night.

For the purposes of this study, it is also appropriate to derive external limits based on the internal criteria noted in the paragraph above. This is done by factoring in the degree of noise reductionafforded by anopen window. BS 8233 Paragraph 8.4.7.3 Table 10 suggests this is in the range 10 – 15dB. In order to provide a "worst-case" assessment, 10dB will be used.

As there is the potential for short periods of noise to cause a greater disturbance at night, a shorter assessment time period (T) is also adopted. Appropriate periods are 1 hour for daytime (07:00 to 23:00 hours) and 5 minutes for night-time (23:00 to 07:00 hours).

The following criteria will apply at the façades of those residential properties closest to the proposed development:

- Daytime (07:00 to 23:00 hours) 50dB L<sub>Aeq,1hr</sub>
- Night-time (23:00 to 07:00 hours) 40dB L<sub>Aeq.5min</sub>

Assuming construction activities are restricted to weekday daytime periods only and piling is not undertaken or is limited, the likely impact of construction noise on the local environment would not be significant and be temporary in nature.

The associated noise impact of car park activities on the local environment will not be significant.

The associated noise impact of additional vehicular traffic on the local environment will not be significant.

Vibration could arise from any localised rock breaking but is not expected to be significant.

Mitigation Measures include:-

- Isolating exercise areas from neighbouring residential areas through design.
- Isolating the canine unit from neighbouring residential areas by location.
- Using dogs trained not to bark.
- Setting noise limits at sensitive receptors as set out above.
- Constructing the prison wall as a first stage to act as a noise barrier.
- Maintaining roadways in good even condition.
- Locating noisy equipment away from sensitive locations.
- Selecting plant with low noise generation characteristics.
- Monitoring vibrations from any localised rock breaking.

Subject to the implementation of the mitigation measures the impact would not be significant.

# 3.7 Air Quality and Climate

Road traffic can be expected to be the dominant source of emissions. The operational phase is not expected to give rise to any significant increase in emissions from either traffic or plant and machinery, given the replacement nature of the project. There will be increased emissions during the construction phase principally from dust generated in construction activity. Emissions from plant and machinery are expected to be negligible. Additional construction traffic will give rise to additional emissions but these are expected to be negligible.

Mitigation Measures include:-

- The preparation of a dust minimisation plan to include:-
  - Regular cleaning of both site and local roads (Rathmore Road)
  - Regular watering of site roads during dry or windy conditions
  - Wheel washing of all vehicles at exit/entry point to the site
  - Speed restrictions within the site of 20 kph.
  - Covering of vehicles containing dust generating potential including soil
  - Locating and stock piling materials to minimise exposure to wind
  - Water misting or spraying to mitigate dusty activities
  - Monitoring procedures

Subject to the implementation of the mitigation measures, the impact would be negligible.

#### 3.8 Resource and Waste

A comprehensive, site specific Construction and Demolition Waste Management Plan and an Operational Waste Management Plan have been prepared for the proposed development. Implementation of both of these will ensure that that waste management is undertaken in accordance with the Cork City Waste Management Plan 2004-2009. This Plan is due to be evaluated and revised by the end of 2012.

The two site specific plans predict the amount of constructional and operational waste. Subject to the implementation of the plans, the impacts are predicted to be insignificant.

Mitigation Measures include:-

- On-site segregation of all waste construction materials into appropriate categories including:
  - o Top-soil, sub-soil and bedrock
  - o Concrete, bricks, blocks, tiles, ceramics and plasterboard

- Metals
- o Dry recyclables e.g. cardboard, plastic and timber
- Reuse of left over materials where possible.
- Re-use of uncontaminated excavated materials in place of imported fill.
- On-site segregation of all operational waste into appropriate categories including:
  - Organic waste
  - Cardboard and paper
  - Plastic
  - Glass
  - o Metals
  - Mixed non-cyclables
- Storage in skips or other receptacles in designated areas.
- Recycling of all waste leaving the site where feasible.
- Use of licensed waste contractors and facilities only.
- Recording and maintaining records of all waste leaving the site.

Subject to the implementation of the mitigation measures, the impacts will not be significant.

#### 3.9 Material Assets

Material Assets comprise the physical resources in the area, be they of human or natural origin.

The Material Assets of Human Origin were identified as:-

- > Transportation Infrastructure
- Recreational Facilities and Amenities
- Public Utilities

Those of Natural Origin were identified as:-

- ➤ Undeveloped land resource
- ➤ Geological Resource
- Natural Amenities

Transport infrastructure has been considered in the Section on Traffic. Recreational facilities of a public nature can be found in the Glen Recreational Area to the North of the site and private facilities West of Collins Barracks. The development site is used occasionally by children or teenagers for recreational or other purposes and for exercising dogs, but such use is unauthorised. The proposed development would be neutral on recreational facilities, given the replacement nature of the prison. The loss of the open area may be regarded by some as negative but may be regarded by others as positive in terms of security to residential units backing on to the space. No mitigation measures are required.

Impacts on Public Utilities would be neutral, given the replacement nature of the proposed prison and slightly positive with mitigation.

Mitigation measures include:-

- The installation of a modern efficient system water supply and drainage system with appropriate fittings to showers, w.h.b.s and w.c.s and this would reduce water consumption and foul water discharges.
- The use of porous surfaces to car park and yard areas.
- Attenuation to surface water to achieve a greenfield run-off rate.
- Investigation into the use of rainwater harvesting.

Subject to the implementation of the mitigation measures, the impact would be negligible to slightly positive.

# 3.10 Urban Landscape and Visual Impact

The proposed prison will be a substantial building complex set within a mixed urban morphology with older denser development to the South and a suburban character to the North. The scale of the buildings reflects their use; the Army Barracks and existing prison contain buildings that are extensive in volumetric terms. Housing generally is terraced. Building heights range from single to three-storey with a predominant height of two-storeys. The site is largely screened by surrounding development and in terms of the public domain can only be seen clearly from Rathmore Road. There are glimpses of the site available from Ballyhooley New Road and distant views from the North from the Ballyvolane area. There are also glimpses between the housing terraces on Brandon Crescent. A series of photomontages has been produced which illustrate the visual impact of the proposed development.

The impacts will be confined largely to the operational stage. The buildings represent a significant change; however it is one that whilst altering the character of the area, would do so in a manner that is consistent with emerging trends. Impacts range from Imperceptible to Moderate, depending on the view, with most views being Neutral. The impact will be permanent.

Mitigation of impacts on views was an integral consideration in the design of the project. Specific design measures include:-

- Height being kept as low as possible.
- Splitting of buildings into three groupings to follow the hill contours insofar as possible from a functional point of view.
- Scaling the buildings down in height as they interface with other buildings to the South and North.

- Locating the entrance area to the South along the public section along Rathmore Road, which has the effect of limiting the view of the prison wall from the public domain.
- Giving special architectural treatment to the entry building complex to lessen the forbidding appearance often associated with prison buildings.
- Setting the prison wall back as far as possible from the neighbouring housing to the East.

# 3.11 Cultural Heritage

# **Built Heritage**

The site is vacant but for the existing car parks and there are no structures of interest from a heritage point of view. The existing prison has an entrance area which is of historic and architectural interest and an issue of curtilage arises. Mitigation measures include:-

Ensuring that the development allows the existing prison entrance area to maintain its historic visual relationship with the relevant section of Rathmore Road as it originally served the prison.

The residual impact will be neutral.

# **Archaeology**

A desk-based study and field survey was carried out on the site at Rathmore Road, Cork City (ITM 568347, 573139). This study sought to identify and describe known and potential archaeological constraints within and immediately adjacent to the site.

There are no Recorded Monuments within or adjacent to the proposed site and there were no surface expressions of potential archaeological features noted in the field survey. The desk based survey traced the development of the site through cartographical sources from the Mid-Eighteenth Century to the present day. No archaeological features were recorded in these historical maps. However a mid-Nineteenth Century account of the Collins Barracks by a local historian (J. Windele) contains a vague reference to the Barracks having replaced an earlier early-medieval ring fort called RathMór, the name given to the townland. This report is uncorroborated in the other available sources; however aerial photography does show a number of subsurface anomalies within the proposed site; the exact nature of which is unclear at present.

Mitigation measures include:-

A limited programme of archaeological test trenching. No trenching is required under the current car park, which has been previously dug out and filled, or in the northern part of the site which contained a number of now demolished buildings. Testing is restricted to the green field area along Rathmore Road, either side of the existing car park, where a number of unidentified anomalies were noted in an aerial photo from 2005.

Subject to the implementation of the mitigation measures, the impact would be slight, although this is dependent on the results of the test excavations.

# 3.12 Daylight, Sunlight and Artificial Light

The proposed development will change conditions in relation to sunlight, daylight and artificial light in the area.

The most significant impact will be on some properties to the East of the site with some impact on some properties to the North. Many of these currently enjoy an open aspect. The effect of the construction of the prison wall/buildings will be to increase shadowing at evening time in spring, summer and autumn. New floodlights would potentially impact the rear of the houses unless suitable mitigation is undertaken.

Mitigation measures include:-

- Locating the prison wall as far away as possible from the boundary with neighbouring property.
- Ensuring a light coloured finish to the prison wall to reflect light.
- Using directional cowls to floodlights to light the ground plane.
- Using low light level luminaires whose lighting levels can be increased in emergency situations.

Subject to the implementation of the mitigation measures the impacts will be neutral but slightly negative in the case of a number of properties close to the site boundary on a permanent basis.

# 3.13 Property Values

The proposed prison will be neutral in terms of property values given its replacement nature. The consolidation of employment in this part of Cork would assist in maintaining employment in the area and housing demand.























