

Non-Technical Summary

Introduction

This Non-Technical Summary has been provided as part of the waste licence application by South Dublin County Council (SDCC) for a site at the Grange Castle Golf Club (GCGC), New Nangor Road, Dublin, and has been prepared in accordance with the requirements of Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004, as amended.

Applicant Details

The address for the proposed development is:

Grange Castle Golf Club, New Nangor Road, Clondalkin, Dublin 22, D22 WY66.

Company/Organisation: South Dublin County Council (SDCC)

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Planning authority

The subject/application site is situated in the functional area of South Dublin County Council.

Site Location

South Dublin County Council (SDCC) owns Grange Castle Golf Club which is located off the N7 road at Clondalkin, Dublin 22.

The golf course is bounded by the R136 Outer Ring Road to the east and the Nangor Road to the north. A number of industrial units are located immediately north of the main entrance off the Nangor Road. Corkagh Park is located immediately to the east.

Casement Aerodrome, a military airbase owned by the Irish Department of Defence, is situated to the south west. A business park and football club and pitch are located to the south.

High density housing developments are located to the north east. In 2007, 125 acres of land to the west of the site were developed for Profile Park Business Park and a number of data centres are also located in this area.

The surrounding landscape is made up of a patchwork of pasture and arable fields, with grassland being the dominant land cover. The field system is separated by clumps of mixed woodland and sparse hedgerow networks. Dense patches of mixed woodland, playing pitches and landscaped areas dominate the southern part of the area in Corkagh Park. The predominant landscape character type is flat urban fringe farmland.

Site History / Background

Grange Castle Golf Club (GCGC) was established in 1998 and is owned by SDCC. The golf club is managed and maintained by Synergy Golf Limited. The golf course is located within a parkland with an 18 Hole course, with seven lakes and a number of streams.

The main entrance to the golf course is located just off the Nangor Road. A club house including a small café, toilet facilities and car park are located on the north of the site. A maintenance yard and associated building are located to the rear of the club house. The GCGC lands are described as follows;

- The original golf club is an active golf course in 2019.
- Work commenced on Phase 1 (8 holes) in June 2003 following receipt, by SDCC, of Part 8 planning permission in 2002. Works were completed with the area open for play in June 2006.
- Work commenced on Phase 2 ('5 holes') in October 2007 following receipt, by SDCC, of Part 8 planning permissions in 2002 and 2006. These works were indefinitely placed on hold in Spring 2008 due to bad weather conditions and access difficulties.
- Phase 3 ('holes 14 & 15') received Part 8 planning permission in 2006 and in February 2008 work commenced but was subsequently placed on hold in May 2009 due to ease of access.

The development of Phases 1, 2 and 3 (hereafter referred to as "the site") are indicated in **Figure 1.1** and are the subject of this application.

Previous Activity at the Site – 2007 and 2009

During October 2007 and May 2009 some material was imported to GCGC from various sources to areas defined as the 5 holes (Phase 2) and holes 14 & 15 (Phase 3) to provide a mounding around the perimeter of the course and between fairways to enhance safety and prevent stray balls leaving the course or injuring players on the adjacent hole.

Phase 1 had been completed by 2006 so no importation of material to Phase I was undertaken between October 2007 and May 2009. This area is now been fully landscaped as an active golf course.

The volume of infill material within the '5 holes' (Phase 2) and 'holes 14 & 15' (Phase 3) was calculated following a review of historic (1998) and current (2009) topographic surveys which provided information on pre and post filling levels.

The volume of infill material was calculated at 90,230m³ for Phase 2 and 126,726m³ for Phase 3. It is estimated (Unit weight of material in situ assumed to be c. 1.5t/m³) that approximately 325,000 tonnes of material was imported into GCGC.

This volume of material was imported in order to meet the contouring requirements of the site in accordance with the specified works as defined by the course designer. the depth of infill material varied from 0m to 4.6 management below ground level.

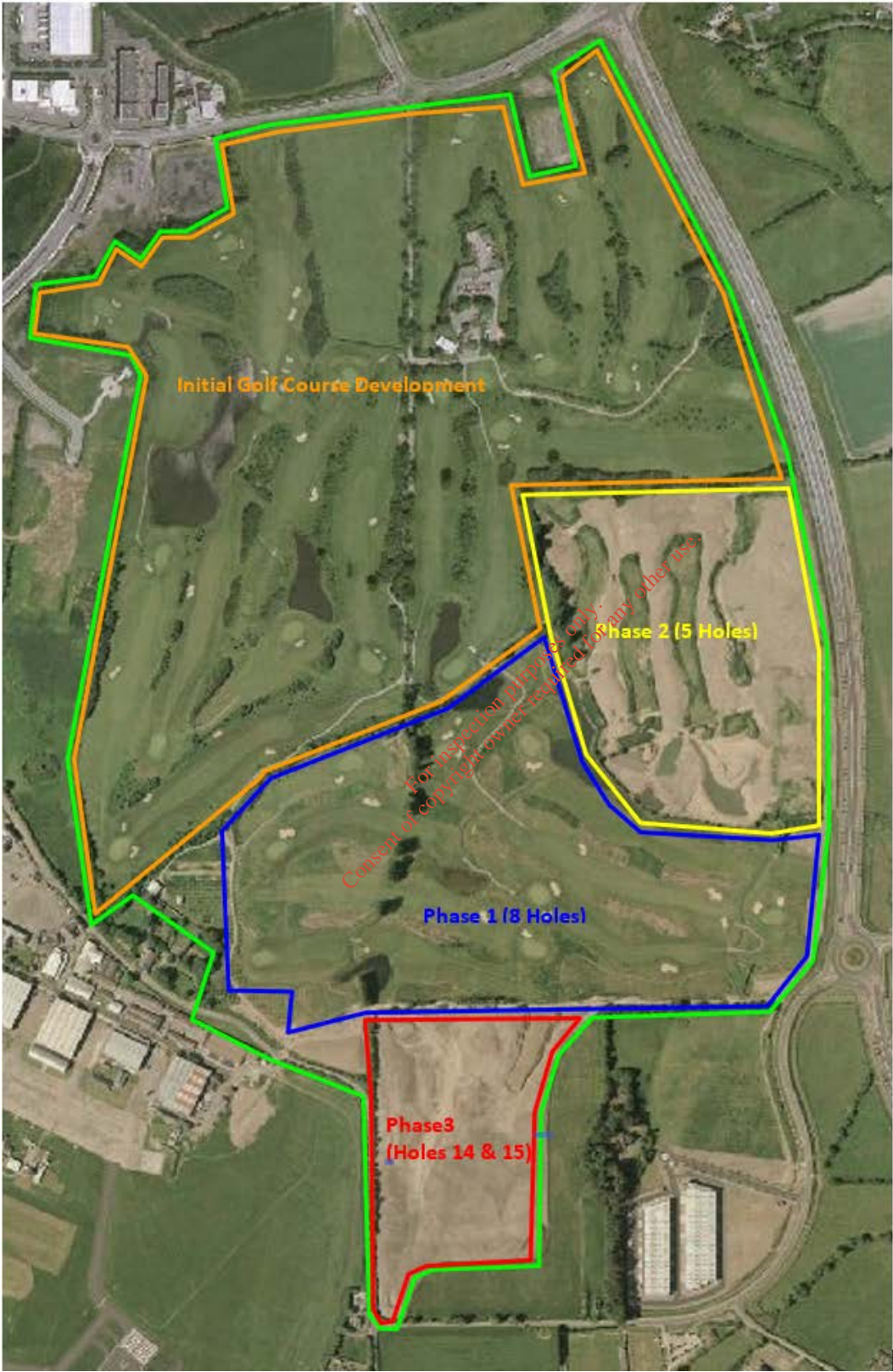
The material was described in the 2011 Environmental Risk Assessment as being typically comprised of a grey/brown gravelly clay matrix with a minor waste component. The waste component comprised less than 2% extraneous inert materials from construction and demolition developments such as plastic, timber, textiles, brick, concrete and metals.

The vast majority of the extraneous material is inert and thus does not present any risk either to the environment or to the integrity of the infill material as a construction material in its own right.

The material previously imported comprises the following EWC Codes;

- 17 05 04 soils and stones other than those mentioned in 17 05 03;
- 17 01 07 mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06.

Figure 1.1 The phases of development at Grange Castle Golf Club



Enforcement History / Site Investigations

The importation of material into GCGC for the further development of the course was the subject of an initial complaint to the Environmental Protection Agency (EPA), with the core of the complaint relating to the requirement for waste authorisation.

Following receipt of information from SDCC, the EPA issued a decision indicating that the activity was not subject to a requirement for waste authorisation.

Following this decision, two additional complaints were received in September 2010. The EPA completed a site inspection in October 2010 and subsequently issued a site inspection report whereby the EPA advised that it was rescinding the previous declaration and considered the infill material to be a waste and subject to waste management legislation and advising of the necessity for a Waste Licence for the site.

In February 2011, SDCC commissioned an Environmental Risk Assessment (ERA). This ERA was completed on the Phase 1, Phase 2 and Phase 3 in February 2011. This ERA report was submitted to EPA in May 2011. Following receipt of this ERA, the EPA requested SDCC to provide a proposal to regularise the site in accordance with the Waste Management Act, 1996 (as amended) having regard to Ministerial Direction of 3rd May 2005 (Circular WIR: 04/05).

Nature of the Proposal

A retrospective Waste Licence for the subject site as a Soil Recovery Facility is being sought. The waste licence application is being made to regularise the site in respect of the historical unregulated importation of soil onto the site.

The proposal in the waste licence application is for the material to remain *in situ*, with no construction works required. As a consequence of EPA direction and the findings of the ERA, there is no proposed removal of the imported materials. There is no proposed movement of the materials onsite in any way, and no further importation of material to the site will take place.

This retention of the materials onsite is the subject of this EPA waste licence application and environmental impact assessment report.

The EPA stated that SDCC is not required to remove the material in its entirety from site and that, if granting of waste authorisation is successfully obtained by SDCC from the EPA, this may provide for the extension of the Golf Course to be completed, if deemed appropriate.

Legislative Context

Under the European Communities (Waste Directive) Regulations 2011 (S.I. No.126 of 2011) the material imported to the site is classified as waste and not as a by-product.

Under the Waste Management Act, 1996 (as amended) and having regard to the Ministerial Direction of 3rd May 2005 (Circular WIR: 04/05) the EPA does not require the removal of the material in its entirety from site.

Having regard to Circular 04/05, and where it is deemed appropriate to leave waste in-situ, the holder of the waste shall:

Carry out, or arrange for the carrying out, of a risk assessment to determine the environmental impact, if any, of the waste illegally deposited;

Make application for a permit or licence to the relevant local authority or the Agency which will determine the actions required by the holder to remediate and manage the site into the future;

Comply with any permit or licence so given to ensure that all remediation and management measures determined by that permit or licence are complied with and that the site poses no identifiable future threat to the environment or human health;

Not be permitted to import greater quantities of material for deposition other than such inert material/soil as may be necessary for site conditioning.

Quantity of Waste to be Accepted

No waste material will be accepted on to the subject site, therefore, there are no quantities of waste proposed as part of the application. The existing 325,000 tonnes of material imported will remain *in situ* and will not be moved.

Operating Hours

There is no proposed development or operations, and no construction or operational activity will take place in relation to this application. Therefore, no operational hours are proposed with respect to this application.

Relevant Classes of Activity being sought

A retrospective Waste Licence for the subject site as a Soil Recovery Facility is being sought. No activities or operations will be taking place.

The Main Class of Activity selected in for the purposes of this waste licence application is:

R5: Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials

No other classes of activity are being sought.

European Waste Catalogue (EWC) codes, as presented by Commission Decision 2000/532/EC of 3 May 2000, relating to the waste previously imported to the site, which will remain *in situ*, have been outlined earlier. There will be no further waste material imported to the site and so there are no additional EWC codes proposed as part of this application.

Resource and Energy Use

The application does not propose to abstract groundwater or surface water for use at the site, nor does it propose to use water from the public supply or any other source. The application does not propose to generate renewable or non-renewable electricity at the subject site.

No waste will be accepted, and no processing or operations will be taking place. There will be no infrastructure developed or utilities required at the site with respect to the application and no activity will be taking place, therefore no electricity and water usage is required.

There will be no requirement for site plant or equipment and so no fuel, oils etc. will be used or are required for the operation or maintenance of such.

As no waste will be accepted, and no processing or operations will be taking place, therefore, no raw and ancillary materials, substances, preparations, intermediates, products etc. will be produced by or utilised.

Plant, Methods, Processes, Abatement, Recovery and treatment Systems and Operating

It is proposed that the material previously imported to the site remain *in situ* with no further movement of material or importation of additional waste material to the site. No operations are proposed, and no licensable activity will be taking place at the subject site. There will be no processing of the existing material. This retention of the materials onsite is the subject of this EPA waste licence application and associated environmental impact assessment report.

As no activity will be taking place, no methods, processes, ancillary activities, abatement, recovery and treatment systems, operating procedures, plans, process flow diagrams, reports or supporting documentation in relation have been proposed or developed with respect to this application. No infrastructure will be developed, and no plant or machinery will be required on site.

Section 40 (4) Waste Management Act 1996

The Waste Licence Application details how the applicant meets with the requirements of Section 40(4) of the Waste Management Act. South Dublin County Council has considered the requirements of Section 40(4) [(a) to (g)] of the Waste Management Act 1996, as amended during preparation of the Waste Management Licence Application.

Existing and proposed emissions

There are no significant existing emissions from the subject site. There is a potential for fugitive dust emissions from the existing material remaining on site, however, the effects are deemed imperceptible given the existing ground colonisation by plants that bind the material.

There are no significant emissions or discharges associated with the proposal foreseen.

In terms of noise emissions, the subject site will not be a source, as there will be no activity, processing, or traffic movements and so there will be no change to baseline/existing noise emissions sources in the vicinity.

There will be no activities or movements, such as vehicles or plant, taking place which would generate significant emissions to air. As the proposal involves the materials remaining *in situ*, the existing potential for fugitive dust emissions from the material remaining on site remains. However, as there will be no movement of the material, the effect will remain as imperceptible.

In terms of emissions to surface water, ground and sewer, the subject site is not predicted to be an emission source and so there will be no change to baseline/existing emissions sources in the vicinity.

There will be no discharge of any trade effluent or other matter to a sewer of a sanitary authority. There will be no activity at the site or operational staff, and so there will be no domestic foul sewerage infrastructure or associated discharge.

The likely significant effects of the activity and proposed mitigation measures are summarised in the table below.

Environmental Factor	Likely Effects Identified	Brief Description of Effect	Mitigation Measures Proposed to Control Effects
Surface Water	None	N/A	None
Noise	None	N/A	N/A
Air	Dust	Dust is more fully described in the respective EIAR Section under Air.	Mitigation measures for dust, are described in the respective EIAR sections.
Climate	None	N/A	N/A
Soil	None	N/A	N/A
Flora and Fauna	None	N/A	N/A

Sources, Location, Nature, Composition, Quantity, Level and Rate of Emissions from the Facility

While there is to be no construction works or expected further soil transfer at the site, due to the presence of the un-vegetated soil there is a potential for fugitive dust emissions which may cause an impact at sensitive receptors in close proximity. The nearest sensitive receptor, Baldonnell House and Orchard, is located outside a 100-metre radius of the exposed ground and thus is not likely to experience any adverse impacts.

The golf course consists of several artificial ponds which are connected via a series of interconnecting drains. The internal drainage network of the north western half of the site discharges to the Baldonnell Stream and the remainder discharges to the south east towards the Camac River. Both the Baldonnell Stream and the Camac River are tributaries of the River Liffey, which flows into Dublin Bay.

Groundwater flow across the site will generally follow the local topography and flows southeast to west and northwest towards the Griffeen River. While the ERA determined that there is no risk to groundwater, ongoing monitoring is proposed as part of the aftercare programme.

Monitoring and Sampling Points

There are no mitigation measures required in regard to climate, noise and vibration. The site should be managed as a non-active soils recovery facility as licenced by the EPA.

In terms of air quality, four dust gauges will be put in place on site to continually monitor levels and ensure monthly dust levels will remain below the guideline of 350 mg/m²/day as a 30-day average at sensitive receptors as outlined in the German Government TA Luft guidance.

Both the Baldonnell Stream and the Camac River will be monitored (upstream and downstream) periodically as part of the ongoing licence requirements. Standard surface water run off parameters will be assessed at intervals agreed with the EPA.

Groundwater monitoring is proposed at a series of four wells to be installed at the site (one upstream at the south east of the site) and two downstream of the site. Samples will be assessed against the EPA groundwater threshold values.

Prevention, Minimisation and Recovery of Waste

There is no proposed development and no future licensable activity will be taking place at the subject site.

There will be no future activity or processing of material. The material previously imported to the site is inert and will remain *in situ*, with no further movement of material or importation of additional waste material to the site.

As there will be no activity taking place or operational staff present at the site, no associated operational waste, such as canteen, office, and other waste streams will be generated. Therefore, no waste prevention or minimisation measures or waste acceptance procedures are proposed for this application.

However, South Dublin County Council is committed to the principles of sustainable waste management, prevention, and minimisation and will employ appropriate measures to ensure that the existing material on site is maintained/managed in accordance with the waste hierarchy.

South Dublin County Council will consider lifecycle analysis in relation to all future decisions and plans made in relation to the site in order to prevent waste generation.

Relevant waste policy and legislation is discussed in **Chapter 3 of the EIAR Document**.

Off-Site Treatment or Disposal of Solid or Liquid Wastes

As no activity or operations will be taking place and no materials will be accepted at the subject site, there is no requirement for off-site treatment or disposal of solid or liquid wastes.

Measures including Emergency Procedures, to Prevent Unauthorised or Unexpected Emissions

The proposal is of negligible human health or environmental risk. As no activity or operations will be taking place at the subject site, no measures, such as emergency procedures, to prevent unauthorised or expected emissions are proposed.

Major Accident Hazards involving Dangerous Substances

The European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2000 (S.I. No. 476 of 2000) does not apply to the proposal as there will be no activity or operations and no material will be accepted at the subject site.

Protection of Groundwater Against Pollution Caused by Certain Dangerous Substances

The Council Directive 80/68/EEC of 17 December 1979 on the Protection of Groundwater Against Pollution Caused by Certain Dangerous Substances does not apply to the proposal as there will be no activity or operations and no dangerous substances or material is present or will be accepted at the subject site.

Closure, Restoration, Remediation or Aftercare

A full Closure Restoration and Aftercare Management Plan (CRAMP) is prepared in accordance with EPA guidelines, and has been included as part of this waste licence application. See attachment 9.2.1 CRAMP.

Financial Provision

Appropriate Financial provision for site closure liability will be put in place by SDCC to address requirements.

Inclusion of EIAR and Planning Permission Documents

Environmental Impact Assessment Report documentation is included with this application.

Planning consent for the 5 holes (Phase 2) and holes 14 & 15 (Phase 3) have been secured by SDCC in accordance with Part 8 of the Planning and Development Regulations 2001, as amended.

BAT

The only waste historically accepted at the facility comprised largely inert soils and stone. As such, the BAT Guidance Note - Waste Sector (Landfill) - Dec 2011 does not apply to the existing soil recovery facilities.

There is no BREF addressing soil recovery facility. JRC document 'Best Available Techniques (BAT) Reference Document for Waste Treatment' addresses contaminated soils only.

Alternatives

The following is a review of the alternatives considered as part of the proposal for the development and the rationale for the final project chosen, considering the effects on the environment.

In the context of the proposal/application, this relates primarily to the issues of the site location and the site layout. Given the finding of the ERA, there is no need for a remedial strategy, so this possibility is not considered further in this assessment. A number of different scenarios have been reviewed to determine the best way to deal with the imported soil.

The scenarios assessed were:

- Leave on-site - leaving all materials onsite with no disturbance.
- On-site processing – extracting all materials and processing onsite to remove those materials that are contaminated and are not appropriate for placement at the site, then replacing the soil and stone back in place. Extracted materials to be managed at an appropriate offsite facility.
- Partial off-site and infill - extracting those materials that are contaminated and are not appropriate for placement at the site, and placement at an appropriate offsite facility.
- Dig and dump - removing all materials offsite for management at an appropriate facility

Each of the above scenarios were assessed through a review of the various technical criteria as follows:

- Environmental impact - potential for the proposed scenario to have a significant impact on the receiving environment.
- Impact on existing operations - potential for the scenario to disrupt the activities of the golf club.
- Construction time and cost - summary of the financial and engineering impacts associated with the completion of each scenario.

A review of the alternative scenarios against the criteria listed above is presented in the table below:

Scenario	Environmental Impact	Impact on Existing Operations	Construction Time and Costs
1. Onsite processing	Low - some construction works required	Moderate - disruption to golf course	low
2. Partial offsite and infill	Low - some construction works required	Moderate - disruption to golf course	Moderate
3. Dig and dump	Low - some construction works required	Moderate - disruption to golf course	High
4. Leave onsite	Negligible - No changes to site infrastructure	Negligible - No changes to site infrastructure	None

The analysis indicates that scenarios 1-3 require construction works which would generate environmental impacts during the construction phase. These environmental impacts would be mitigated by implementing appropriate measures outlined in a Construction Environmental Management Plan (CEMP).

The operation phases of scenarios 1-3 would have low environmental impacts. The construction works required for these scenarios would however cause a moderate impact on the existing golf course activities as the presence of machinery onsite and trucks transporting the soil would disrupt the users of the golf course.

The costs associated with Scenario 2 and 3 are moderate and high respectively, due to the high costs of landfill disposal.

Scenario 4 requires no construction work therefore negligible environmental impact and impact on the golf course and there are no costs associated. Also, as per the recommendation of the ERA, Scenario 4 is an acceptable option to leave the soil *in situ*, therefore Scenario 4 is the most appropriate for consideration. The contents of this EIAR assess the operational impacts of Scenario 4 involving no construction works and the soil remaining *in situ*.