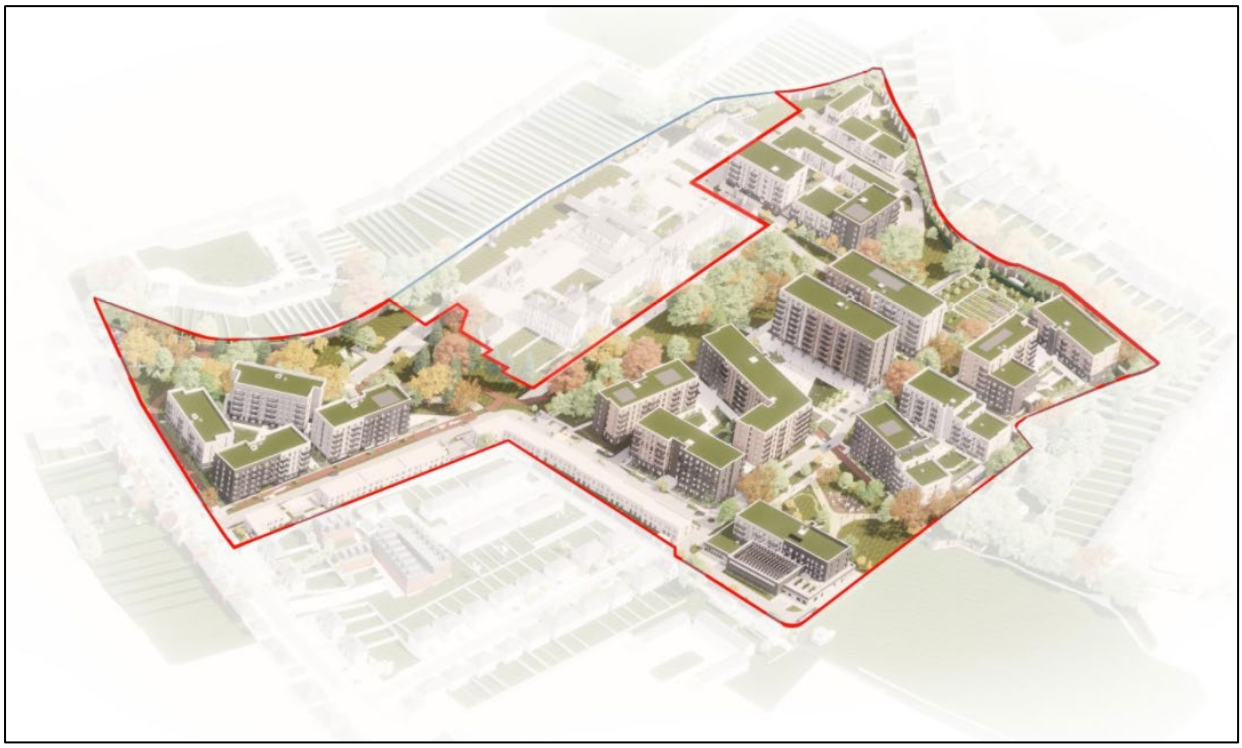
ADDENDUM ENVIRONMENTAL IMPACT ASSESSMENT REPORT
VOLUME 1 – NON-TECHNICAL SUMMARY

PART 10 PLANNING APPLICATION AT FORMER CENTRAL MENTAL HOSPITAL, DUNDRUM, DUBLIN 14



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17.0 ARCHITECTURAL HERITAGE

14.1 Introduction

This chapter of the Environmental Impact Assessment Report has been prepared by Alastair Coey Architects, a RIAI Grade 1 accredited Conservation Practice. The chapter examines the likely impacts, both direct and indirect, on protected structures and other heritage assets. This assessment extends to both built-heritage within the site and in the wider area.

14.2 Methodology

Heritage assets affected or likely to be affected by the development have been identified and characterised. The characterisation has taken into consideration the guidance provided by the Planning & Development Act on evaluating historic or protected structures for their special interest. The evaluation has involved careful consideration of Architectural, Historical, Archaeological, Artistic, Cultural, Scientific, Technical and Social interest.

Heritage assets have been assessed in terms of their sensitivity to change, and the degree to which the proposed development will impose change on the assets, directly or indirectly. The understanding of the sensitivity to change and the degree of change probable allows a quantitate and qualitative determination of the likely impact on the heritage assets. Impacts are determined to be Positive, Neutral or Negative, and the degree of impact is established, ranging from Very Significant to Negligible.

Where negative impacts are noted as a possibility, mitigation measures to reduce the severity of the impact or eliminate it are identified. These mitigation measures include i) Control over the height of proposed structures in proximity to Heritage Assets, ii) The retention and enhancement of historic landscape, iii) a sensitive approach to interventions in historic fabric, and iv) enhancing public access to heritage assets.

14.3 Baseline Environment

The former Central Mental Hospital site, with some interventions and additions, largely retains the Country House Demesne model that was adopted at its inception. The pioneering approach to the treatment of the criminally insane that the former CMH represented is directly evidenced by the composition of the site and the structures present. Those which have been identified as being of specific importance, and susceptible to change by the Development, are:

- The Main Hospital Building (a Protected Structure) including its adjoined ancillary structures such as the dining-hall.
- The Infirmary (a Protected Structure)
- The Perimeter Wall which surrounds the site.
- The Gate Lodge.
- The Chapel (a Protected Structure)
- The ‘Airing Yards’ (patient exercise areas)
- The Farmstead Buildings including ancillary structures.
- The Walled Garden.

- The Historic Landscape.

14.4 Potential Impacts of the Proposed Project

14.4.1 Principal Potential Impacts

The principal potential impacts to Heritage Assets from the developments are:

14.4.1.1 Impact to Main Hospital Building

- Impacts to the setting and context of the Main Hospital Building (a Protected Structure) that arise from the siting of new residential buildings in proximity to it and within its curtilage. The Main Hospital Building, as planned and as it currently exists, is the dominant building on the site, and sits in the context of a park-land demesne. The proposed apartment blocks in close proximity to the Main Hospital Building impact this dominance, particularly in respect of their height. Their presence additionally changes the parkland character of their setting to be one more urban in character, impacting the aesthetic value of the existing building and its evidential role as a hospital set specifically in a landscape ascribed therapeutic value.

14.4.1.2 Impact to the Perimeter Wall

- Loss of historic fabric to the perimeter wall arising from the creation of new vehicular and pedestrian openings. A defining characteristic of the Perimeter Wall is its continuity. With the exception of the main vehicular entrance and some sporadic, and blanked-off, doorways it is unbroken over its c.1660m length. This complete enclosure makes a strong evidential contribution to the character of the site as being a parkland demesne. Punctures in the wall, as proposed for new pedestrian and cycle access, do not alter this character in any substantial sense, nor do the proposed sections of height-reduction. The complete removal of sections to create the necessary vehicular access routes does however alter the localised character of the perimeter wall.

14.4.1.3 Impact to the Chapel

- Impacts to the setting and context of the chapel (a Protected Structure), farmstead and walled garden. As with the Main Hospital Building these structures exist in a planned park-land setting. The insertion of new-build apartment blocks in that shared setting impacts the original and planned setting for those elements.

14.4.1.4 Impact to the Infirmary

- Impacts to the setting and context of the infirmary (a Protected Structure). The Infirmary enjoys a, somewhat loosely defined, but contextual relationship with the Main Hospital Building. The insertion of new-build apartment blocks in that shared setting impacts the original and planned setting for those elements.

14.4.1.5 Impact to the Historic Landscape

- Loss of Historic Landscape due to development. Although there have been changes to land-usage since the formal landscape was set out (creation of car-parking areas, late 20C built reception centre, the almost full abandonment of its productive agricultural and market-garden capacity) the Historic Landscape still reflects to a greater extent its original role as a therapeutic and productive resource. Development of housing on this land impacts this evidential value.

14.5 Mitigation Measures

Mitigation measures are proposed to minimise any potential impacts as a result of the proposed development. These measures are set out in the full in the corresponding chapter of the EIAR, Appendix 24.1 of the EIAR and in Appendix 2 of this Non-technical summary.

14.6 Residual Impacts (post-mitigation)

Impacts to the setting and context of heritage assets may be mitigated as noted in section 17.2. By the nature of the Heritage Assets, these mitigation measures are aimed principally at reducing the severity of the impact. With mitigation measures applied:

- The siting and massing of new-build elements will ensure that the dominance of the Main Hospital Building is not compromised, and the relationship it enjoys with the historic landscape in its immediate curtilage is retained and enhanced.

- Openings in the perimeter wall will be limited to those necessitated by the change of use of the site, and new openings will be sensitively and appropriately detailed. The perimeter wall will continue to be a defining feature of the site.

- The most significant elements of the Historic Landscape, that being the walled garden and the landscaping to the immediate south of the Main Hospital Building, will be retained and enhanced. Impacts to these will be reduced to the change in setting/context and the loss of extent.

Residual impacts of a Moderately Negative nature do remain after the implementation of the mitigation measures, applying to the Main Hospital Building, Perimeter Wall and Historic Landscape. These impacts arise from the unavoidable and fundamental change from the site as a ‘closed-world’ private demesne to a public site largely characterised by residential development.

APPENDIX 2 – Mitigation Measures

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Population and Human Health (Chapter 7)		
Mitigation		
P_1	The construction contractor will establish a feedback mechanism for residents to report any concerns or issues related to construction activities. By establishing this feedback mechanism, the construction contractor will engage with the community to address concerns and provide updates on mitigation efforts.	Construction
P_2	All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted / licensed waste disposal contractor. All sampling and soil handling will be undertaken by suitably qualified and trained persons using suitable personal protective equipment to avoid risks to human health.	Construction
P_3	The mitigation measures set out in Chapter 9: Land, Soils, Geology and Hydrogeology, Section 9.5.1 and Chapter 10: Hydrology, Section 10.6.1, will be implemented during the construction works for the protection of human health and populations. These measures relate to controlling sediment runoff, preventing spillage of hydrocarbons, soil excavation and other chemicals and groundwater dewatering works.	Construction
P_4	In order to mitigate the potential dust-related health impacts during the Construction Phase, dust related mitigation measures have been provided in Chapter 11 Air Quality of this EIAR. The mitigation measures draw on best practice guidance from Ireland (DCC, 2018), the UK (IAQM (2023), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997). These measures will be incorporated into the overall Construction Environmental Management Plan (CEMP) prepared for the Site.	Construction
P_5	Best practice noise and vibration control measures will be employed by the contractor during the Construction Phase in order to avoid significant impacts at the nearest sensitive buildings. The best practice measures set out in *BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites - Noise* and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001 will be complied with. Further details are provided in Chapter 13: Noise & Vibration.	Construction

P_6	The mitigation measures set out in Chapter 18: Materials Assets (Roads and Traffic) will be implemented to mitigate against traffic relates impacts to human health.	Construction
P_7	Measures incorporated into the development design to mitigate the potential effects on hydrology will be implemented, as outlined in Chapter 10 Hydrology. Design measures to minimise the likelihood of any spills entering the water environment includes the design of the car park with hydrocarbon interceptors.	Construction
P_8	The best practice noise control techniques outlined in Chapter 13 Noise and Vibration will be reviewed and implemented as appropriate. This will ensure that noise levels are acceptable for the protection of human health.	Construction
P_9	The mitigation measures set out in Chapter 18: Materials Assets (Roads and Traffic) should be implemented to mitigate against traffic relates impacts to human health. This includes the implementation of a Mobility Management Plan.	Construction

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Biodiversity (Chapter 8)		
Mitigation		
B_1	An Ecological Clerk of Works will oversee the project and will operate in consultation with NPWS and the DLR biodiversity officer.	Construction
B_2	A pre-construction inspection for terrestrial mammals will be carried out.	Construction
B_3	An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted.	Construction
B_4	Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) in relation to the removal of trees and timing of nesting birds will be followed e.g. do not remove trees or shrubs during the nesting season (1st March to 31st August). If removal is required during this season the removal of woody material will be carried out under the supervision of an ecologist. If nesting birds are present NPWS will be contacted and removal will be subject to conditions outlined by NPWS.	Construction
B_5	Lighting during construction will be carried out in consultation with the project ecologist.	Construction
B_6	Removal of deciduous trees. Should any mature broadleaved tree be scheduled for removal as part of the development plans, it will first be surveyed for bat presence by a suitably experienced specialist. If bats are found, an application for a derogation licence should be made to the National Parks and Wildlife Service to	Construction

	allow its legal removal. Such trees will be felled in the period late August to late October, or early November, in order to avoid disturbance of any roosting bats as per National Roads Authority guidelines (NRA 2006a and 2006b) and also to avoid the bird breeding seasons. Any tree felling will be completed by mid-November at the latest as bats roosting in trees are very vulnerable to disturbance during their hibernation period (November – April). Trees may be removed at other times but the likelihood of encountering bats during works will be higher. Trees with ivy-cover, once felled, will be left intact onsite for 24 hours prior to disposal to allow any bats beneath foliage to escape overnight. A derogation licence for bats for bat roosts on site is seen in Appendix 2 of Appendix 8.6.	
B_7	Trees to be retained. Several species of bats roost in trees. Where possible, treelines and mature trees that are located immediately adjacent to planned construction areas or are not directly impacted will be avoided and retained intact. Retained trees will be protected from root damage by machinery by an exclusion zone of at least 5 metres or equivalent to canopy height. Such protected trees should be fenced off by adequate temporary fencing prior to other works commencing.	Construction
B_8	A pre-construction bat assessment will be carried out on all buildings to be demolished.	Construction
B_9	Native species will be chosen in all landscaping schemes. Planting schemes will attempt to link in with existing wildlife corridors (hedgerows and treelines), both onsite and off, to provide continuity of wildlife corridors. Retention of boundary hedgerows and treelines will also serve to screen the development.	Construction
B_10	Lighting restrictions. In general, artificial light creates a barrier to bats so lighting will be avoided where possible. Where lighting is required, directional lighting (i.e. lighting which only shines on work areas and not nearby countryside) will be used to prevent overspill during construction. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvers and shields to direct the light to the intended area only. Mature trees will not be directly lit during construction or operation of the proposed development.	Construction
B_11	45 bird boxes and 10 bat boxes will be placed on site as an enhancement and mitigation measure. The position of these boxes will be carried out in consultation with an ecologist.	Construction
B_12	Control measures will be carried out on the Himalayan balsam on site as outlined in the CEMP.	Construction
B_13	Measures and recommendations outlined in Appendix 8.7. Badger Survey Assessment and Mitigation Measures will be followed in consultation with NPWS. Mitigation measures outlined in the Badger Conservation Management Plan (Appendix 8.8) will be carried out.	Construction

B_14	The measures outlines in the Invasive Species management Plan (Appendix 8.10) will be followed.	Construction
B_15	A post construction inspection of drainage connections to the onsite drain will be carried out by the project ecologist to ensure that the petrochemical interceptor is in place and working.	Operational
B_16	A post construction inspection of drainage connections to the onsite drain will be carried out by the project ecologist to ensure that the petrochemical interceptor is in place and working.	Operational
B_17	A Habitat Management Plan will be in place and monitored by the project ecologist. The Habitat Management Plan (Appendix 8.9) has been prepared by Altemar with the support of AECOM Ireland Ltd. It involves the implementation of significant Habitat Management measures in line with the Dun Laoghaire Rathdown County Council Development Plan 2022-2028.	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Land, Soils, Geology and Hydrogeology (Chapter 9)		
Mitigation		
LS_1	To prevent the accidental release of hazardous materials (fuels, paints, cleaning agents, etc.) during construction site activity all hazardous materials will be stored within secondary containment designed to retain at least 110% of the storage contents. Temporary bunds for oil/diesel storage tanks will be used on the site during the construction phase of the project. Safe materials handling of all potentially hazardous materials will be emphasised to all construction personnel employed during this phase of the project.	Construction
LS_2	Sediment runoff will be minimised by sediment skirts around soil stockpiles, sediment retention barriers in temporary surface water drains and the use of adequate construction roads.	Construction
LS_3	The provision of wheel wash areas at the construction entrances to the development will minimise the amount of soil deposited on the surrounding road network.	Construction
LS_4	Measures will be implemented throughout the construction stage to minimise the risk of contamination of the soil from accidental oil and petrol leakage from site plant. All lock up/storage areas will have a metal or concrete leak proof floor. Any accidental chemical spillages will be cleaned up and disposed of in an approved landfill site in accordance with the chemical manufacturer's recommendations.	Construction
LS_5	Exposed soil surfaces to be protected with 150mm stone hardcore layer	Construction

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Hydrology (Chapter 10)		
Mitigation		
H_1	Any run-off will be intercepted on site, where the ground falls towards adjoining properties or public roads/footpaths. This will be achieved with open drains or French drains and collected for treatment based on the conditions of a DLRCC and/or Irish Water licence, prior to pumping to the surface sewer network.	Construction
H_2	Should any discharge of construction water be required during the construction phase, discharge will be to foul sewer. Pre-treatment and silt reduction measures on site will include a combination of silt fencing, settlement measures (silt traps, 20 m buffer zone between machinery and watercourses/ stormwater sewer/ drainage ditch, refuelling of machinery off site) and hydrocarbon interceptors.	Construction
H_3	Any minor ingress of groundwater and collected rainfall in the excavation will be pumped out during construction. It is estimated that the inflow rate of groundwater will be low and limited to localised perched water. It is therefore proposed that the water be discharged via the existing stormwater sewer network. Extensive monitoring will be adopted to ensure that the water is of sufficient quality to discharge to the sewer. The use of slit traps and an oil interceptor (if required) will be adopted if the monitoring indicates the requirements for the same with no silt or contaminated water permitted to discharge to the sewer. There may be localised pumping of surface run-off from the excavations during and after heavy rainfall events to ensure that the excavations are kept relatively dry. Due to the very low permeability of the Dublin Boulder Clay and the relative shallow nature for excavations, infiltration to the underlying aquifer is not anticipated. Based on SI information (Site Investigations Ltd, 2021), it is not anticipated that there will be rock removal required for the proposed single storey basements in the development, for building foundations, for service trenches or for any other works.	Construction
H_4	Run-off water containing silt will be contained on site via settlement tanks and treated to ensure adequate silt removal. Silt reduction measures on site will include a combination of silt fencing and settlement measures (silt traps, silt sacks and settlement tanks/ponds).	Construction
H_5	The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection. This will prevent any potential negative impact on the stormwater drainage and the material will be stored away from any surface water drains. Movement of material will be minimised to reduce the degradation of soil structure and generation of dust. Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water	Construction

	ingress into excavations. Soil from works will be stored away from existing drainage features to remove any potential impact.	
H_6	Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site and the suitable distance of topsoil piles from surface water drains will be maintained.	Construction
H_7	To minimise any impact on the underlying subsurface strata from material spillages, all oils, solvents and paints used during construction will be stored within temporary bunded areas. Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s) (plus an allowance of 30 mm for rainwater ingress). Drainage from the bunded area(s) shall be diverted for collection and safe disposal.	Construction
H_8	Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area (or where possible off the site) which will be away from surface water gulleys, the existing open ditch or drains. In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors" (CIRIA 532, 2001) will be complied with.	Construction
H_9	Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil. Wash down and washout of concrete transporting vehicles will take place at an appropriate facility offsite.	
H_10	In the case of drummed fuel or other chemical which may be used during construction, containers should be stored in a dedicated internally bunded chemical storage cabinet and labelled clearly to allow appropriate remedial action in the event of a spillage.	Construction
H_11	Temporary storage of soil will be carefully managed in such a way as to prevent any potential negative impact on the receiving environment. The material will be stored away from any surface water drains (see Surface Water Run-off section above). Movement of material will be minimised to reduce degradation of soil structure and generation of dust.	Construction
H_12	All excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be	Construction

	determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.	
H_13	Site investigations carried out at the site in 2021 found no residual contamination on site. Nonetheless, all excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.	Construction

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Air Quality (Chapter 11)		
Mitigation		
A_1	Communications • Prior to construction works commencing on site, develop and implement a stakeholder communications plan that includes community engagement. Community engagement includes explaining the nature and duration of the works to local residents and businesses. The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site boundary, this notice board will also include head/regional office contact details.	Construction
A_2	Site Management • During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions. Dry and windy conditions are favourable to dust suspension; therefore, mitigations must be implemented if undertaking dust generating activities during these weather conditions. • A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any	Construction

	remedial actions carried out. The complaints log will be made available to the local authority when asked. • Any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation will be recorded in the log book. • Regular liaison meetings will be held with other high risk construction sites within 250 m of the site boundary where feasible, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.	
A_3	Preparing and Maintaining the Site • The site layout will be planned so that machinery and dust causing activities are located away from receptors, as far as is possible. • solid screens or barriers will be erected around dusty activities or the site boundary that are at least as high as any stockpiles on site. • site runoff of water or mud will be avoided. • site fencing, barriers and scaffolding will be kept clean using wet methods. • materials that have a potential to produce dust from site will be removed as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • stockpiles will be covered, seeded or fenced to prevent wind whipping.	Construction
A_4	Operating Vehicles/Machinery and Sustainable Travel • all vehicles engines will be switched off when stationary - no idling vehicles. • the use of diesel or petrol powered generators will be avoided and mains electricity or battery powered equipment used where practicable. • a maximum-speed-limit of 15 kph will be imposed and signposted on haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).	Construction

	• a Construction Logistics Plan will be produced to manage the sustainable delivery of goods and materials. • a Travel Plan will be implemented that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)	
A_5	Operations • Only cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems will be used • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • enclosed chutes and conveyors and covered skips will be used • drop heights will be minimised from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Construction
A_6	Waste Management • No bonfires or burning of waste materials.	Construction
A_7	Measures Specific to Demolition • Prior to demolition blocks will be soft striped inside buildings (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). • During the demolition process, water suppression will be used, preferably with a hand-held spray. Only the use of cutting, grinding or sawing equipment fitted or used in conjunction with a suitable dust suppression technique such as water sprays/local extraction should be used. • Drop heights from conveyors, loading shovels, hoppers and other loading equipment will be minimised, if necessary fine water sprays will be employed. • explosive blasting will be avoided, using appropriate manual or mechanical alternatives.	Construction

A_8	Measures Specific to Earthworks • earthworks and exposed areas/soil stockpiles will be re-vegetated to stabilise surfaces as soon as practicable. • Hessian, mulches or trackifiers will be used where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • the cover in small areas will only be removed during work and not all at once. • During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.	Construction
A_9	Measures Specific to Construction • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. • For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.	Construction
A_10	Measures Specific to Trackout • A speed restriction of 15 kph will be applied as an effective control measure for dust for on-site vehicles. • dry sweeping of large areas will be avoided. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • on-site haul routes will be inspected for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. • all inspections of haul routes and any subsequent action in a site will be recorded in log book.	Construction

	• hard surfaced haul routes will be installed, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. • a wheel washing system will be implemented (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. • Access gates will be located at least 10 m from receptors where possible.	
A_11	Monitoring • daily on-site and off-site inspections will be undertaken, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This will include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary. regular site inspections will be carried out to monitor compliance with the CEMP, record inspection results, and make an inspection log available to the local authority when asked. • the frequency of site inspections will be increased by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. dust deposition monitoring locations will be agreed with the relevant environmental management official within Dún Laoghaire-Rathdown County Council. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Refer to Section 11.7.1 of the EIAR for more detail on this monitoring.	Construction

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Climate (Chapter 12)		
Mitigation		

Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. During the construction phase the following best practice measures shall be implemented on site to prevent significant GHG emissions and reduce impacts to climate:		
C_1	Creating a demolition and construction program which allows for sufficient time to determine reuse and recycling opportunities for demolition wastes	Construction
C_2	Appointing a suitably competent demolition contractor who will undertake a pre-demolition audit detailing resource recovery best practice and identify materials/building components that can be reused/recycled	Construction
C_3	Materials will be reused on site where possible	Construction
C_4	Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods	Construction
C_5	Ensure all plant and machinery are well maintained and inspected regularly	Construction
C_6	Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site	Construction
C_7	Waste materials will be re-used on site where possible and where re-use is not possible on-site they will be sent off-site for recycling, re-use or recovery	Construction
C_8	Material choices and quantities will be reviewed during detailed design, to identify and implement lower embodied carbon options where feasible	Construction
C_9	Sourcing materials locally where possible to reduce transport related CO_2 emissions	Construction
C_10	The project shall review and determine compliance with the requirements set out in the EU Taxonomy Regulation (Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Text with EEA relevance)) in relation to circular economy. This is specific to reuse, recycling and material recovery of demolition and construction wastes	Construction
C_11	Based on the waste volumes and disposal methods presented in Ch. 19 Material Assets – Waste, an estimated total of approx. 12,686 tonnes of excavated material generated during the construction phase of the development site can be reused. This will be further refined at detailed design and construction stage. This material re-use represents GHG savings of 53.4 tCO_2e;	Construction

C_12	Other materials such as concrete, bricks, tiles and ceramics, metals and timber may be diverted from waste processing by recycling or disposal in landfill, and can instead be reused on-site. This will reduce the associated CO_2 by approximately 20.6 tonnes	Construction
C_13	The residential units will aim to achieve a minimum Building Energy Ratio (BER) of A2 (25-50 kwh/m^2/yr with CO_2 emissions <10 kg CO_2/m^2 per year)	Operational
C_14	Achieve air permeability performance of 3 m^3/m^2/hr @ 50 Pa	Operational
C_15	Ensure thermal bridging details are designed to achieve thermal bridging factors of 0.08W/m^2K	Operational
C_16	Energy Performance Coefficient (EPC) < 0.30	Operational
C_17	Carbon Performance Coefficient (CPC) < 0.35	Operational
C_18	Meet or exceed minimum U-Value standards identified in Part L 2022 Dwellings	Operational
C_19	A combination of low energy strategies such as air to water heat pumps, a continuous whole-house ventilation system and solar photovoltaic energy will be decided and implemented to achieve A2 BER Rating	Operational
C_20	Provide an appropriate combination of technologies to ensure energy consumption is in line with Part L 2022 Dwellings requirements	Operational
C_21	Use of natural daylight will be maximised to reduce the need for artificial lighting	Operational
C_22	Where artificial lighting is required this will be in the form of energy efficient light fittings within in the dwellings and common areas, with latter being on dusk-dawn profiles	Operational
C_23	Solar gains will be optimised to reduce space heating demands during the winter months, whilst limiting summertime solar gains to reduce space cooling demands	Operational
C_24	Natural/passive ventilation in circulation areas, car parks and other common areas removes need for mechanical ventilation	Operational
C_25	All in-curtilage parking spaces will be capable of being fitted with EV charging points. All off-curtilage spaces will be ducted for EV charging, with 10% fitted out from the outset	Operational
C_26	High quality secure short-term and long-term bicycle parking facilities will be provided and the connectivity of onsite pedestrian and cycle infrastructure has been incorporated into the design of the proposed development	Operational

C_27	The proposed development location maximises connectivity to existing and proposed public transport bus and Luas services, providing sustainable alternative to private vehicles	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Noise and Vibration (Chapter 13)		
Mitigation		
N_1	Selection of quiet plant is recommended in relation to static plant such as compressors and generators. It is recommended that these units be supplied with manufacturers' proprietary acoustic enclosures. The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. The least noisy item will be selected wherever possible. Should a particular item of plant already on the site be found to generate excessive noise levels, the first action will be to identify whether or not said item can be replaced with a quieter alternative.	Construction
N_2	If replacing a noisy item of plant is not a viable or practical option, consideration will be given to noise control at source. This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds; rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact. The following best practice migration measures will be employed : • Site compounds will be located away from noise sensitive boundaries within the site constraints. • The lifting of bulky items, dropping and loading of materials within these areas will be restricted to normal working hours. • For mobile plant items such as cranes, dump trucks, excavators and loaders, , utilising an acoustic canopy to replace the normal engine cover and/or ensuring the enclosure panels are closed during operation can reduce noise levels over normal operation. Mobile plant will be switched off when not in use and not left idling. • For steady continuous noise, such as that generated by diesel engines, noise control measures include fitting a more effective exhaust silencer system to reduce the noise emitted. • For percussive tools such as pneumatic breakers, a number of noise control measures include fitting muffler or sound reducing equipment to the breaker tool and ensuring any leaks in the air lines are sealed.	Construction

	• Erecting localised screens around breaker or drill bit when in operation in close proximity to noise sensitive boundaries. • For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum. • For all materials handling, materials will not be dropped from excessive heights, lining drops chutes and dump trucks with resilient materials. • For compressors, generators and pumps, these will be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation. • All items of plant will be subject to regular maintenance. Such maintenance can prevent unnecessary increases in plant noise and can serve to prolong the effectiveness of noise control measures.	
N_3	Screening is an effective method of reducing the noise level at a receiver location and can be used successfully as an additional measure to all other forms of noise control. Standard construction site hoarding (2.4m in height) with a mass per unit of surface area greater than 7 kg/m^2 can provide adequate sound insulation. This will be required, as a minimum around the site perimeter.	Construction
N_4	A designated Community Liaison Officer (CLO) will be appointed to site during construction works. Any noise complaints will be logged and followed up in a prompt fashion by the CLO. In addition, prior to particularly noisy construction activity (e.g. demolition), the CLO will inform the nearest noise sensitive locations of the time and expected duration of the noisy works.	Construction
N_5	The phasing programme will be arranged so as to control the amount of disturbance in noise and vibration sensitive areas at times that are considered of greatest sensitivity. If piling works are in progress on another site at the same time as other works of construction that themselves may generate significant noise and vibration, the working programme will be phased so as to ensure noise limits are not exceeded due to cumulative activities. This will be reviewed in relation to other potential cumulative works occurring on adjacent construction site in close proximity to noise sensitive properties which have the potential to lead to significant construction noise impacts.	Construction
N_6	The assessment outlined previously has specified noise limits at the nearest noise sensitive properties that must be achieved in order to ensure the impact is acceptable, summarised in Section 13.2.2.1 of Chapter 13 Noise and Vibration	Operational

	To achieve these noise limits, it will be necessary to review (at the detailed design stage) the variety of mitigation measures and forms of noise control techniques that will be applicable. Some example of these measures are as follows: • Duct-mounted attenuators on the atmosphere side of air moving plant; • Splitter attenuators or acoustic louvres providing free ventilation to internal plant areas; • Solid barriers screening any external plant; and • Anti-vibration mounts on reciprocating plant. In addition to the above, the following measures will be adopted to minimise potential noise disturbance for neighbours: • All mechanical plant items (e.g. motors, pumps etc.) shall be regularly maintained to ensure that excessive noise generated by any worn or rattling components is minimised; • Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from site do not exceed the noise limits outlined in this document; and • Plant items will be selected such that site noise emissions do not contain tonal or impulsive characteristics at nearby noise sensitive locations.	
N_7	Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, once the relevant noise criteria included in Section 13.6.2 of the Noise and Vibration Chapter (i.e. design criterion is the order of **40dB $L_{Aeq,15min}$** during daytime periods and **35dB $L_{Aeq,15min}$** at night at the façades of the nearest noise sensitive locations). It is expected that there will be no negative impact at sensitive receivers on or off site, and therefore no further mitigation required.	Operational
N_8	The British Standard BS EN 12354-3: 2000: *Building acoustics – Estimation of acoustic performance of buildings from the performance of elements – Part 3: Airborne sound insulation against outdoor sound* provides a calculation methodology for determining the sound insulation performance of the external envelope of a building. The method is based on an elemental analysis of the building envelope and can take into account both the direct and flanking transmission paths. The Standard allows the acoustic performance of the building to be assessed taking into account the following: • Construction type of each element (i.e. windows, walls, etc.);	Operational

	• Area of each element; • Shape of the façade, and; • Characteristics of the receiving room. The principals outlined in BS EN 12354-3 are also referred to in BS8233 and Annex G of BS8233 provides a calculation method to determine the internal noise level within a building using the composite sound insulation performance calculated using the methods outlined in BS EN 12354-3. The methodology outlined in Annex G of BS8233 has been adopted here to determine the required performance of the building facades.	

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Landscape and Visual (Chapter 14)		
Mitigation		
	No specific Mitigation measures required	

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Microclimate (Chapter 15)		
Mitigation		
	No specific Mitigation measures required	

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Cultural Heritage and Archaeology (Chapter 16)		
Mitigation		
CA_1	Whilst it is acknowledged that preservation in-situ is the preferred method to conserve the archaeological resource, the layout of the proposed blocks, as designed, cannot avoid the predicted direct impacts. As such, prior to the commencement of construction, AA1-AA5 will be preserved by record through full archaeological excavation. The work will be carried out under licence to the National Monuments Service of the DoHLGH	Construction
CA_2	All topsoil stripping associated with the proposed development will be monitored by a suitably qualified archaeologist. If any features of archaeological potential are discovered during the course of the works,	Construction

	further archaeological mitigation may be required, such as preservation in-situ or by record. Any further mitigation will require approval from the National Monuments Service of the DoHLGH	
CA_3	Detailed mitigation is provided in the Architectural Heritage chapter (17) in relation to the historic landscape and is not repeated here. Aspects of the landscape have been retained as part of the proposed development, including the hospital buildings to the immediate north, access drive and gate lodge, walled gardens, farm outbuildings, chapel and the perimeter wall	Construction
CA_4	Detailed mitigation is provided in the Architectural Heritage chapter in relation to the historic landscape and is not repeated here. Aspects of the landscape have been retained as part of the proposed development, including the hospital buildings to the immediate north, access drive and gate lodge, walled gardens, farm outbuildings, chapel and the perimeter wall	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Architectural Heritage (Chapter 17)		
Mitigation		
CH_1	The heights of Block 2 to the immediate east of the Main Hospital Building have been set to ensure that the dominance of the Main Hospital Building is retained.	Operational
CH_2	The historic landscape to the immediate south of the Main Hospital Building will be retained and enhanced. The main car-park and the C20 swimming-pool building are both proposed for removal and the areas of landscaping reinstated	Operational
CH_3	Where sections of the wall are being removed, and where it is feasible to do so, the wall will not be removed in full but reduced to a height of 1200mm	Operational
CH_4	Where sections of wall are being removed completely, and where it is feasible to do so, the former position of the wall will be indicated in the landscaping by use of natural stone as the paving material	Operational
CH_5	Where sections of the wall are removed completely, the retained sections will be terminated in such a fashion as to indicate that the wall did not merely terminate there but has been purposely interrupted, e.g. by the use of sensitively and appropriately detailed piers in masonry, concrete or metal	Operational
CH_6	The historic landscape in the immediate environs of the Chapel will be retained and enhanced	Operational
CH_7	Changing the site from being a private demesne to a publicly accessible area brings with it the possibility of the Chapel acquiring a larger congregation and playing a productive part in the lives of more people	Operational

CH_8	The mature landscaping of mature trees that visually separate the Infirmary from Block 10 will be retained (see extract below from the Landscape proposals, application Drawing DSRM-ACM-00-ST-DR-L-1001.pdf)	Operational
CH_9	The 20th century maintenance office that sits in close proximity to the Infirmary, and which constitutes a detracting feature, will be removed, as will the dust extraction equipment associated with the latter use of the infirmary as a woodworking workshop.	Operational
CH_10	The proposed road alignment in proximity to the farmstead preserves the ability to view and appreciate the complex of buildings.	Operational
CH_11	Currently present features which detract from the overall presentation of the area as ornamental landscaping will be removed and the landscaping enhanced.	Operational
CH_12	The ornamental sweeping approach road, one of the key aspects of the designed landscape, will be retained.	Operational
CH_13	The detrimental effect of the admissions unit and the main car-park will be reversed, with the area of landscaping to the south of the hospital being significantly enhanced.	Operational
CH_14	The walled garden, as noted above, will be retained and enhanced.	Operational
CH_15	The new-build developments are largely constrained to the open paddock areas of the site, areas which have low heritage significance in themselves, and what value they do have lies only in their contribution to the setting of other heritage assets.	Operational
CH_16	The airing yards will be thoroughly recorded before removal. The contribution that they make to the understanding of the development and operation of the hospital complex will therefore be preserved. Retention of their physical aspects, beyond this, would add a limited amount when weighed against the benefits accrued from developing the site.	Construction

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Material Assets – Roads and Traffic (Chapter 18)		
Mitigation		
RT_1	Tracked excavators will be moved to and from the Site on low-loaders and will not be permitted to drive onto the adjacent roadway	Construction
RT_2	The applicant shall at all times keep all public and private roads and footpaths entirely free of excavated materials, debris and rubbish	Construction

RT_3	Public roads outside the Site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris	Construction
RT_4	The applicant shall be responsible for and make good any damages to existing roads or footpaths caused by his own contractors or suppliers transporting to and from the Site	Construction
RT_5	The contractor shall confine his activities to the area of the Site occupied by the works and the builders' compound, as far as practicably possible, during any particular phase of the works	Construction
RT_6	All construction workers will be encouraged to use public transport, and also to car share where appropriate. On site staff car parking can also be provided to ensure no construction workers will be required to park on adjacent roads or streets	Construction
RT_7	No daytime or night-time parking of site vehicles or construction staff vehicles will be permitted outside agreed areas.	Construction
RT_8	Construction work will be limited to normal working hours; that are 08.00 – 19.00 on weekdays and 08.00 – 14.00 on Saturdays. All deliveries of materials, plant and machinery to the Site and removals of waste or other material will take place within the permitted hours of work. Vehicle movements will be planned to ensure arrival and departure times are maintained inside the agreed working hours.	Construction
RT_9	Deliveries will be co-ordinated to prevent queuing of vehicles adversely affecting traffic flow and to minimise disruption to local traffic. They will be timed and coordinated to avoid conflict with collection of waste, other deliveries (particularly to adjoining owners), and rush hour traffic. Large deliveries will be scheduled outside peak traffic hours to minimise disruption.	Construction
RT_10	Properly designed and designated access and egress points to the construction site will be used to minimise impact on external traffic	Construction
RT_11	Firm, level, and well-drained pedestrian walkways will be provided	Construction
RT_12	Adequate visibility will be provided at the proposed access point to the proposed development off Dundrum Road	Construction
RT_13	Footpaths will not be blocked resulting in pedestrians having to step onto the carriageway	Construction
RT_14	The final Construction Traffic Management Plan with be submitted and agreed with the planning department prior to the commencement of any development	Construction
RT_15	A Mobility Management Plan has been prepared for the proposed development which includes recommended mitigation measures to reduce usage of private cars and increase the use by residents and patrons within the	Operational

	development of more sustainable modes of travel, such as including good cycle parking provision, will further promote the greater use of sustainable travel modes. It is projected that successful implementation of the mobility management plan measures included will reduce the vehicular trip generation from the proposed development below that included for in the Traffic Impact Assessment for the proposed development.	
RT_16	A Stage 2 Road Safety Audit (RSA) will be undertaken at the detailed design stage to ensure that the final design is in accordance with the TII Road Safety Audit Guidelines (December 2017) prior to the commencement of construction. A Stage 3 post construction and pre-opening of the proposed development in accordance with RSA guidelines to address any potential road safety issues related to the completed scheme.	Operational
RT_17	During the operational phase of the development, it is projected that the adjoining road network can readily accommodate the additional traffic from the proposed development	Operational
RT_18	The recent improvement to the Luas has significantly increased the capacity of the route and the Luas is future proofed to accommodate further capacity increases to 2030. The bus network capacity is also proposed to be increased city wide over the coming years up to 2030.	Operational
RT_19	DLR have updated the Dundrum LAP and the overall transport network proposed for the proposed development is consistent with the LAP. This will further promote sustainable travel modes in the area	Operational
RT_20	Wider national, regional and local policy objectives combined with planned investment in sustainable travel modes will further mitigate the impact of the development over time	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Material Assets – Waste (Chapter 19)		
Mitigation		
WM_1	A project specific RWMP has been prepared in line with the requirements of the requirements of the EPA 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021) and is included as Appendix 19.1. The mitigation measures outlined in the RWMP will be implemented in full and form part of the mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the proposed development.	Construction

	• Prior to commencement, the appointed Contractor(s) will be required to refine / update the RWMP (Appendix 19.1) in agreement with DLRCC and in compliance with any planning conditions, or submit an addendum to the RWMP to DLRCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream. • The Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.	
WM_2	A quantity of topsoil and sub soil will need to be excavated to facilitate the proposed development. The Development Engineers have estimated that the majority excavated material will need to be removed off-site. Correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site.	Construction
WM_3	Building materials will be chosen to 'design out waste'	Construction
WM_4	On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated: ○ Concrete rubble (including ceramics, tiles and bricks); ○ Plasterboard; ○ Metals; ○ Glass; and ○ Timber.	Construction
WM_5	Left over materials (e.g. timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible; (alternatively, the waste will be sorted for recycling, recovery or disposal)	Construction

WM_6	All waste materials will be stored in skips or other suitable receptacles in designated areas of the site	Construction
WM_7	Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required);	Construction
WM_8	A Resource Manager will be appointed by the main Contractor(s) to ensure effective management of waste during the excavation and construction works	Construction
WM_9	All construction staff will be provided with training regarding the waste management procedures	Construction
WM_10	All waste leaving site will be reused, recycled or recovered, where possible, to avoid material designated for disposal	Construction
WM_11	All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted or licenced facilities	Construction
WM_12	All waste leaving the site will be recorded and copies of relevant documentation maintained	Construction
WM_13	Nearby sites requiring clean fill material will be contacted to investigate reuse opportunities for clean and inert material, if required. If any of the material is to be reused on another site as by-product (and not as a waste), this will be done in accordance with Regulation 27 (By-products), as amended, European Union (Waste Directive) Regulations 2011-2020. EPA approval will be obtained prior to moving material as a by-product.	Construction
WM_14	All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in a designated, easily accessible areas of the site.	Operational
WM_15	A project specific OWMP has been prepared and is included as Appendix 19.2. The mitigation measures outlined in the OWMP will be implemented in full and form part of the mitigation strategy for the site. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the NWMPCE , Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland and the DLRCC waste bye-laws.	Operational

	The Facilities Management Company / Residents and Tenants of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of this OWMP, ensuring a high level of recycling, reuse and recovery at the site of the proposed development.	
WM_16	On-site segregation of all waste materials into appropriate categories including (but not limited to): ○ Organic waste; ○ Dry Mixed Recyclables; ○ Mixed Non-Recyclable Waste; ○ Glass; ○ Waste electrical and electronic equipment (WEEE); ○ Batteries (non-hazardous and hazardous); ○ Cooking oil; ○ Light bulbs; ○ Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.); ○ Furniture (and from time to time other bulky waste); and ○ Abandoned bicycles	Operational
WM_17	The Facilities Management Company / Residents and Tenants will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.	Operational

WM_18	The Facilities Management Company / Residents and Tenants will ensure that all waste collected from the Site of the proposed development will be reused, recycled or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available	Operational
WM_19	The Facilities Management Company / Residents and Tenants will ensure that all waste leaving the site will be transported by suitable permitted contractors and taken to suitably registered, permitted or licensed facilities	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Material Assets – Built Services (Chapter 20)		
Mitigation		
BS_1	A method statement for all works to be carried out will be prepared by the contractor and agreed with the various service providers prior to commencement of works to outline what measures are to be taken to ensure there is no loss of service during the works or to ensure such losses are minimised when they are unavoidable.	Construction
BS_2	Dewatering measures will only be employed where necessary.	Construction
BS_3	If concrete mixing is carried out on site, the mixing plant will be sited in a designated area with an impervious surface	Construction
BS_4	The existing surface drainage channel within the lands that serve adjacent lands will be retained for as long as possible.	Construction
BS_5	Construction methods used will comply with the noise and dust requirements as set out in the relevant EIAR chapters to reduce, as much as possible, dust and noise pollution	Construction
BS_6	Comprehensive traffic management procedures, including the provision of access to all roads, and access/egress points will be prepared and agreed with the DLRCC. These traffic management measures will be implemented at times when traffic disruption may be experienced.	Construction
BS_7	Road sweeping and/or wheel wash facilities will be provided, as required	Construction
BS_8	All oils/diesel stored on site for construction equipment will be located in appropriately bunded areas.	Construction
BS_9	Filters and silt traps will be used to prevent rain washing silts and other materials into the surface water network and creating blockages	Construction

BS_10	All onsite sewers will be tested and surveyed prior to connection to the public sewer to prevent any possibility of ingress of ground water.	Construction
BS_11	All sewers will be inspected and where necessary sealed to ensure that uncontrolled ground water inflow does not occur	Construction
BS_12	Any leakage from the foul sewer will be cordoned off and the contaminated effluent and soil collected and disposed by licensed contractors	Construction
BS_13	The contractor will adhere to any specific requirements, required by the local authority when introducing a new watermain connection	Construction
BS_14	Commissioning of the system to be carried out in accordance with the engineering specifications set out in the drawings and specifications document	Construction
BS_15	Provision of Utilities will be carried out in accordance with the recommendations of the relevant statutory bodies (ESB, Gas Networks Ireland, Irish Water, EIR, Virgin, City and County Councils etc.)	Construction
BS_16	The watermain connection to the public system is to be in accordance with the Uisce Éireann requirements to avoid any contamination risk	Construction
BS_17	SuDS measures on site include green roofs, blue roofs, attenuation tanks/soakaway's, permeable paving and detention basins	Operational
BS_18	Dual & low flush toilets and water economy outlets will be used to reduce flows from the development and water demand	Operational
BS_19	The site water main system will be metered as directed by Uisce Éireann to facilitate detection of leakage and the prevention of water loss	Operational

Mitigation/Monitoring No.	Description of Mitigation/Environmental Commitment	Phase
Major Accidents and Disasters (Chapter 21)		
Mitigation		
RM_1	A Site Emergency Response Plan will be developed prior to the commencement of operations and will include detailed procedures in the event of a major accident. This plan will contain detailed plans for the response to emergencies such as loss of containment of natural gas, fuel oil, fires and severe weather events. A stock of emergency equipment such as spill kits will be maintained on site in particular around the fuel storage areas.	Operational