

Date	Sound Power at construction works, dB L <sub>w</sub> (A)	Calculated noise levels at varying distances, dB L <sub>Aeq,1hr</sub>					
		15m	20m	30m	50m	60m	100m
Site Clearance	115	75	72	69	64	60	57
<b>General Construction</b>							
<b>Landscaping</b>							

The predicted noise levels detailed in the **Table 12.15** above indicate that during the main construction phase, including site clearance, building construction works etc., assuming up to 5 items of plant are operating simultaneously at the closest noise-sensitive boundaries, there is potential for the residential significance threshold to be exceeded at distances of up to 45m. Hence it can be expected that when works take place within 45m of the residential properties bounding the site there is the potential for a brief or temporary significant impact. However, it should be noted that this is a worst-case scenario of 5 noisy items of plant located at the closest distance to the receptor, in practice the noise sources are likely to be spread across the construction site and hence for the majority of time it's likely that noise levels lower than those predicted in Table 12.10 will be experienced at the receptor locations causing a moderate impact. At receptors located further from site a not significant to slight impact will be experienced.

In terms of the nearest commercial properties the predicted noise levels are the order of the significance threshold of 75dB L<sub>Aeq,1hr</sub>. Again, the predicted associated construction noise impact is not considered significant.

A schedule of best practice noise mitigation measures is included in **Section 12.5.1**.

In terms of the additional construction traffic on local roads that will be generated as a result of this development the following comment is presented. Considering that in order to increase traffic noise levels by 1dB traffic volumes would need to increase by the order of 25% it is considered that additional traffic introduced onto the local road network due to the construction phase associated with various phases of the development, as outlined in the relevant sections of this EIAR will not result in a significant noise impact.

In terms of noise associated with these construction activities, the associated effect is stated to be:

**Table 12.16: Construction Noise Impacts**

Construction Noise Impact		
Quality	Significance	Duration
Negative	Moderate – Significant	Temporary

### 12.4.2.2 Construction Phase – Vibration

Potential for vibration impacts during the construction phase programme are likely to be limited given the groundbreaking, piling and excavations required. There is potential for piling to be used for building and basement foundations for apartment buildings. For the purposes of this assessment, the expected vibration levels during piling assuming augured or bored piles have been determined through reference to published empirical data. The British Standard BS 5228 – Part 2: Vibration, publishes the measured magnitude of vibration of rotary bored piling using a 600mm pile diameter for bored piling into soft ground over rock, (Table D.6, Ref. No. 106):

- 0.54mm/s at a distance of 5m, for auguring;
- 0.22mm/s at a distance of 5m, for twisting in casing;
- 0.42mm/s at a distance of 5m, for spinning off, and;
- 0.43mm/s at a distance of 5m, for boring with rock auger.

Considering the low vibration levels at very close distances to the piling rigs, vibration levels at the nearest buildings are not expected to pose any significance in terms of cosmetic or structural damage. In addition,

the range of vibration levels is typically below a level which would cause any disturbance to occupants of nearby buildings.

In this instance, taking account of the distance to the nearest sensitive off-site buildings, vibration levels at the closest neighbouring buildings are expected to be orders of magnitude below the limits set out in **Table 12.4** to avoid any cosmetic damage to buildings. Vibration levels are also expected to be below a level that would cause disturbance to building occupants, as set out in **Table 12.5**. The potential vibration impact during the construction phase is of *temporary, neutral and imperceptible* impact.

**Table 12.17: Construction Noise Impacts**

Construction Vibration Impact		
Quality	Significance	Duration
Neutral	Imperceptible	Temporary

### 12.4.3 Operational Phase

Once the development is operational, the potential noise impacts to the surrounding environment are minimal. The residential aspect of the development is not expected to generate any significant noise sources over and above those which form part of the existing environment at neighbouring residential areas (road traffic noise, estate vehicle movements, children playing etc.), and hence no significant impact are expected from this area of the development site.

The main potential noise impact associated with the proposed development is considered, therefore, to relate to the generation of additional traffic to and from the site as a result of the new residential buildings. Potential noise impacts also relate to operational plant serving the apartment buildings, where relevant.

Once operational, there are no vibration sources associated with the development site.

#### 12.4.3.1.1 Additional Vehicular Traffic on Surrounding Roads

A Traffic and Transport Assessment relating to the proposed development has been prepared as part of this EIAR (See **Chapter 15**). Information from this report has been used to determine the predicted change in noise levels in the vicinity of a number of roads in the area surrounding the proposed development, for the opening and design years.

For the purposes of assessing potential noise impact, it is appropriate to consider the relative increase in noise level associated with traffic movements on existing roads and junctions with and without the development. Traffic flow data in terms of the peak traffic flow figures has been assessed for the opening year and the opening year +15. The calculated change in noise levels during these two periods are summarised in **Table 12.18**. The assessed roads/routes are indicated in **Figure 12-5**.

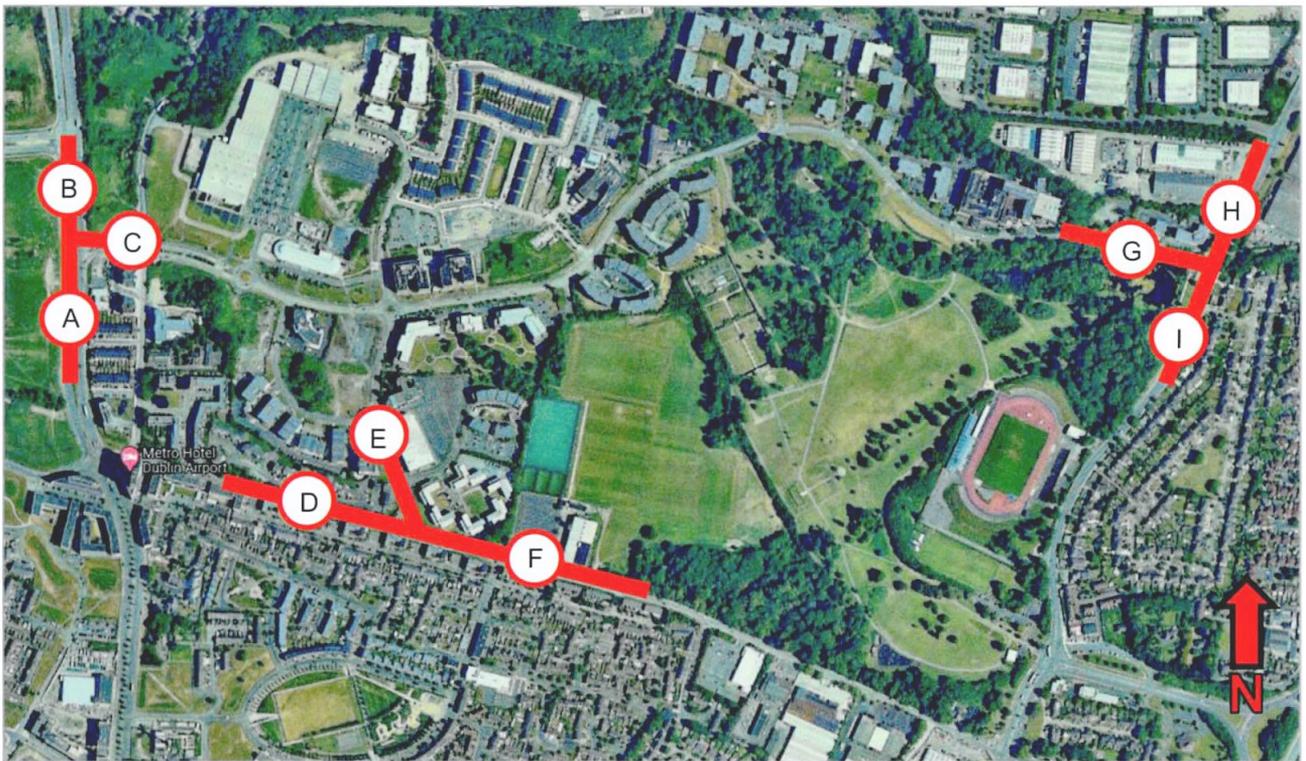


Figure 12.5 – Junction Reference

Source: Google Maps

Table 12.18: Change in Noise Levels

Period	Junction								
	A	B	C	D	E	F	G	H	I
2025	+0.1	0.0	0.0	+0.1	0.0	0.0	+0.1	0.0	0.0
2040	+0.1	0.0	0.0	+0.1	0.0	0.0	+0.1	0.0	0.0

The calculations indicate that the highest change in noise level will be +0.1 dB. Referring to the criteria presented in **Table 12.6** it can be concluded that the changes in noise level for all assessed roads will be imperceptible, neutral and long-term.

### 12.4.3.1.2 Building Services Plant

Once operational, there will be building services plant items required to serve the residential aspect of the development. These will typically be limited to heating and cooling plant and extract units, depending on the building design and user requirements. Given the use of these buildings, the majority of plant items are likely to be required during daytime hours only; however, there may be requirement for a night-time operational plant, depending on specific requirements.

The location or type of building services plant has not yet been established, therefore it is not possible to calculate noise levels to the surrounding environment. In this instance, is it best practice to set appropriate noise limits that will inform the detailed design during the selection and layout of building services for the development,

These items will be selected at a later stage, however, they will be designed and located so that there is no negative impact on sensitive receivers within the development itself. The cumulative operational noise level from building services plant at the nearest noise-sensitive location within the development (e.g. apartments, etc.) will be designed/attenuated to meet the relevant BS 4142 noise criteria for day and night-time periods as set out in this assessment. Based on the baseline noise data collected for this assessment it is

considered an appropriate design criterion is the order of 41dB  $L_{Aeq,15min}$ . This limit is set in order to achieve acceptable internal noise levels within residential spaces based on prevailing noise levels in the area.

Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, once the relevant noise criteria is achieved within the development it is expected that there will be no negative impact at sensitive receivers off site.

In terms of noise associated with day to day activities the associated effect is stated to be as follows:

**Table 12.19: Plant Noise Impacts**

Plant Noise Impact		
Quality	Significance	Duration
Neutral	Not Significant	Long Term

### 12.4.3.2 Operational Phase – Vibration

There are no sources of vibration associated with the day to day operation of the development that will give rise to impacts at nearby noise-sensitive locations. In terms of these the operational phase of the development the associated effect is stated to be:

**Table 12.20: Operational Phase Vibration Impact**

Operational Phase Vibration Impact		
Quality	Significance	Duration
Neutral	Imperceptible	Long Term

### 12.4.4 Inward Noise Impact

The development lands in question are within Zone D of the Dublin Airport noise contours. The operation of this and other transport elements (e.g. M50) are potential noise sources to the residential developments proposed for the site itself.

#### 12.4.4.1 Existing Noise Climate

The existing noise and vibration climate within the development lands was surveyed and the results summarised in **Section 12.3** of this report. The results of the survey have indicated that local traffic, traffic on the M50 and aircraft/airport noise, contribute to the noise levels at the measurement locations across the site.

In order to determine the inward noise impact for noise-sensitive properties proposed as part of the development, it is necessary to determine the internal noise levels within the proposed buildings. These can then be compared against appropriate internal noise criteria from ProPG, as discussed in **Section 12.2.2.4**.

##### 12.4.4.1.1 Stage 1 – Noise Risk Assessment

The initial noise risk assessment is intended to provide an early indication of any acoustic issues that may be encountered. It calls for the categorisation of the site as a negligible, low, medium or high risk based on the pre-existing noise environment. **Figure 12-6** presents the basis of the initial noise risk assessment, it provides appropriate risk categories for a range of continuous noise levels either measured and/or predicted on site. It should be noted that a site should not be considered a negligible risk if more than 10  $L_{AFmax}$  events exceed 60 dB during the night period and the site should be considered a high risk if the  $L_{AFmax}$  events exceed 80 dB more than 20 times a night.

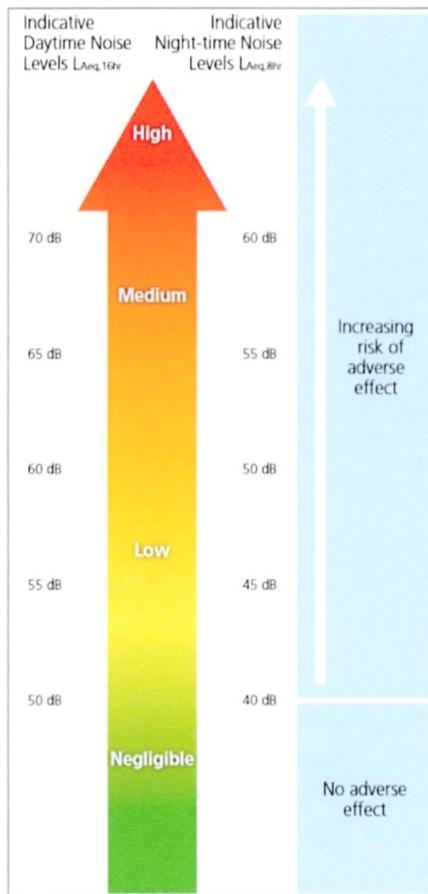
Paragraph 2.9 of ProPG states that:

*“The noise risk assessment may be based on measurements or prediction (or a combination of both) as appropriate and should aim to describe noise levels over a “typical worst case” 24 hour day either now or in the foreseeable future.”*

In this instance reference is made to baseline noise surveys undertaken at the site. Noise monitoring completed on the site during daytime periods indicate noise levels of some 50 - 57dB  $L_{Aeq,16hr}$ . Night time noise levels are the order of 46 - 53 dB  $L_{Aeq,8hr}$  across the site.

ProPG states the following with respect to the initial risk assessment:

*“The risk assessment should not include the impact of any new or additional mitigation measures that may subsequently be included in development proposals for the site and proposed as part of a subsequent planning application. In other words, the risk assessment should include the acoustic effect of any existing site features that will remain (e.g. retained buildings, changes in ground level) and exclude the acoustic effect of any site features that will not remain (e.g. buildings to be demolished, fences and barriers to be removed) if development proceeds.”*



**Figure 12-6 – ProPG Stage 1 – Initial Noise Risk Assessment**

Consideration also needs to be given to the fact that the noise environment across the site may change in future years. The major change to the local infrastructure that is likely to alter the noise environment is the development of the North Runway at Dublin Airport. To address this, Fingal County Council have produced noise zone maps for the area surrounding the airport.

These maps present noise contours as follows:

- Zone A –  $\geq 63$  dB  $L_{Aeq,16hr}$  and/or  $\geq 55$  dB  $L_{night}$ ;
- Zone B –  $\geq 54$  dB  $L_{Aeq,16hr}$  and  $< 63$  dB  $L_{Aeq,16hr}$  and  $\geq 55$  dB  $L_{night}$ ;
- Zone C –  $\geq 54$  dB  $L_{Aeq,16hr}$  and  $< 63$  dB  $L_{Aeq,16hr}$  and  $\geq 48$  dB  $L_{night}$  and  $< 55$  dB  $L_{night}$ ; and,
- Zone D –  $\geq 50$  dB  $L_{Aeq,16hr}$  and  $< 54$  dB  $L_{Aeq,16hr}$  and  $\geq 40$  dB  $L_{night}$  and  $< 48$  dB  $L_{night}$

Figure 12-7 presents the current development site in the context of these zones. The site lies within the Zone D contour. Comparing the site location with the noise contours a daytime noise level of 54 dB  $L_{Aeq,16hr}$  and a night-time noise level of 48 dB  $L_{night}$  is expected for aircraft noise.



**Figure 12-7: FCC Airport Noise Zones**

Taking account of the airport noise zones and the measured noise levels on site, cumulative noise levels in the order of 59 dB  $L_{Aeq,16hour}$  during the day period and 54 dB  $L_{Aeq,8hrs}$  during night period are indicated across the majority of the site.

Additionally, the Stage 1 Noise Risk Assessment requires analyses of the  $L_{AFmax}$  noise levels. In the case of the AWN survey the  $L_{AFmax}$  noise levels typically measured up to 68dB during the night. ProPG guidance considers 20 night events over 80 dB to be a high risk, therefore this site would be considered a medium risk in terms of maxima events.

Taken as a whole the site can be considered low to medium in terms of noise risk. ProPG states the following with respect to medium noise risk:

*Medium Risk: As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development.*

Given the above, it can be concluded that the development site will require an Acoustic Design Strategy to demonstrate that suitable care and attention have been applied in mitigating and minimising noise impact to such an extent that an adverse noise impact will be avoided in the final development.

It should be noted that ProPG states the following with regard to how the initial site noise risk is to be used,

*“2.12 It is important that the assessment of noise risk at a proposed residential development site is not the basis for the eventual recommendation to the decision maker. The recommended approach is intended to give the developer, the noise practitioner, and the decision maker an early indication of the likely initial suitability of the site for new residential development from a noise perspective and the extent of the acoustic issues that would be faced. Thus, a site considered to be high risk will be recognised as presenting more acoustic challenges than a site considered as low risk. A site considered as negligible risk is likely to be acceptable from a noise perspective and*

*need not normally be delayed on noise grounds. A potentially problematical site will be flagged at the earliest possible stage, with an increasing risk indicating the increasing importance of good acoustic design.”*

Therefore, following the guidance contained in ProPG does not preclude residential development on sites that are identified as having medium-risk noise levels. It merely identifies the fact that a more considered approach will be required to ensure the developments on the higher-risk sites are suitably designed to mitigate the noise levels. The primary goal of the approach outlined in ProPG is to ensure that the best possible acoustic outcome is achieved for a particular site.

#### **12.4.4.1.2 Stage 2 – Acoustic Design Strategy**

##### **Element 1 – Good Acoustic Design Process**

###### *ProPG Guidance*

In practice, good acoustic design should deliver the optimum acoustic design for a particular site without adversely affecting residential amenity or the quality of life or occupants or compromising other sustainable design objectives. Section 2.23 of the ProPG outlines the following checklist for Good Acoustic Design:

- Check the feasibility of relocating, or reducing noise levels from relevant sources;
- Consider options for planning the site or building layout;
- Consider the orientation of proposed building(s);
- Select construction types and methods for meeting building performance requirements;
- Examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, CDM (construction, design and management) etc;
- Assess the viability of alternative solutions; and,
- Assess external amenity area noise.

In the context of the proposed development, each of the considerations listed above have been addressed in the following subsections.

###### *Relocation of Reduction of Noise from Source*

Aircraft and road noise sources are located outside the redline boundary of the site and therefore, it is beyond the scope of this development to introduce any noise mitigation at source.

###### *Planning, Layout and Orientation*

Due to major noise source of concern in relation to the site being aircraft noise, planning, layout and orientation changes will not have any material impact on aircraft noise levels incident on the proposed buildings.

###### *Select Construction Types for meeting Building Regulations*

The design of all buildings are required to meet with all relevant parts of the Building Regulations. The specific detail of which will be completed at detailed design stage. In terms of the building sound insulation, the glazed elements and any required ventilation paths to achieve compliance with Part F of the Building Regulations will be the weakest elements in the façade.

Consideration will therefore be given to the provision of sound insulation performance for glazing and ventilation, where required, to achieve suitable internal noise levels within the development. Achievement of acceptable internal ambient noise levels does not form part of building regulation requirements, however, this will be incorporated into the building design in line with best practice and compliance with the guidance set out in ProPG.

###### *Impact of noise control measures on fire, health and safety etc.*

The good acoustic design measures that have been implemented on site, e.g. glazing and ventilation specifications, are considered to be cost-neutral and do not have any significant impact on other issues.

###### *Assess Viability of Alternative Solutions*

The site lies within Dublin Airport Noise Zone D. Due to the height at which aircraft noise would be incident to the dwellings and external amenity areas, an acoustic barrier or similar would be ineffective and is not proposed anywhere on the site.

**Assess External Amenity Area Noise**

ProPG provides the following advice with regards to external noise levels for amenity areas in the development:

*“The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB LAeq,16hr.”*

External noise levels across the site during the daytime are expected to range up to 59 dB LAeq,16hr.

It is noted that whilst external amenity areas located in Zone D would potentially be above the desirable level of 55 dB LAeq,16hr due to a combination of aircraft and road traffic noise, it is not possible to reduce the noise level across external spaces due to aircraft noise being the dominant noise source as per the daa noise contours.

*Summary*

Considering the constraints of the site, insofar as possible and without limiting the extent of the development area, the principles of Good Acoustic Design have been applied to the development.

**Element 2 – Internal Noise Levels**

*Internal Noise Criteria*

Element 2 of the ProPG document sets out recommended internal noise targets derived from BS 8233 (2014). The recommended indoor ambient noise levels are set out in **Table 12-21** and are based on annual average data.

**Table 12.21: ProPG Internal Noise Levels**

Activity	Location	(07:00 to 23:00hrs)	(23:00 to 07:00hrs)
Resting	Living room	35 dB LAeq,16hr	-
Dining	Dining room/area	40 dB LAeq,16hr	-
Sleeping (daytime resting)	Bedroom	35 dB LAeq,16hr	30 dB LAeq,8h

In addition to these absolute internal noise levels ProPG provides guidance on the flexibility of these internal noise level targets. For instance, in cases where the development is considered necessary or desirable, and noise levels exceed the external WHO guidelines, then a relaxation of the internal LAeq values by up to 5dB can still provide reasonable internal conditions.

*Discussion on Open / Closed Windows*

In the first instance, it is important to note the typical level of sound reduction offered by a partially open window falls in the region of 10 to 15 dB .

Considering the design goals outlined in **Table 12-21** and a sound reduction across an open window of 15 dB, the free-field noise levels that would be required to ensure that internal noise levels do not exceed good (i.e. at or below the internal noise levels) or reasonable internal noise levels (i.e. 5 dB above the internal noise levels) have been summarised in **Table 12.22**.

**Table 12.22: External Noise Levels Required to Achieve Internal Noise Levels**

Level Desired	Day 07:00 to 23:00hrs	Night 23:00 to 07:00hrs
Good	50 – 55 dB LAeq,16hour	45 dB LAeq,8hour

(i.e. at or below the internal noise levels)		
Reasonable (i.e. 5 dB above the internal noise levels)	55 – 60 dB LAeq,16hour	50 dB LAeq,8hour

In this instance, the external noise levels are such that it will not be possible to achieve the desired good internal noise levels with windows open for properties located within Zone D, and therefore appropriate acoustic specifications to windows and passive vents will be provided to ensure the rooms are adequately ventilated and achieve the good internal noise levels detailed here.

*Façade Noise Levels*

Based on the reviews and noise measurements presented previously for the site, noise levels have been predicted across the development. The expected levels are cumulative, taking account of aircraft and road sources, where relevant, at specific buildings. **Table 12.23** summarises the calculated noise level at the most exposed buildings.

**Table 12.23: Expected External Noise Levels on Site**

Location	Daytime, LAeq, 16hr	Night-time, LAeq, 8hr
All Facades	59	54

*Recommend Façade Treatment*

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.);
- Area of each element;
- Shape of the façade, and;
- Characteristics of the receiving room.

The principles 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. This approach corrects the noise levels to account for the frequency content of the source in question. In this instance, rail and road traffic noise, depending on the buildings in question. For properties with cumulative impacts from both rail and road, the frequency content of the dominant source has been used for calculations.

As is the case in most buildings, the glazed elements of the building envelope are typically the weakest element from a sound insulation perspective. In this instance, however, it has been calculated that standard double-glazing units will be sufficient for achieving a ‘good’ internal noise environment when windows are in the closed position. Note that this assessment assumes that the building will be ventilated by heat recovery units, therefore, removing the need to open windows to ventilate living spaces and also removing a potential route for noise ingress through the ventilation system.

It is important to note that the acoustic performance specifications detailed herein are minimum requirements which apply to the overall glazing system. In the context of the acoustic performance specification the ‘glazing system’ is understood to include any and all of the component parts that form part of the glazing element of the façade, i.e. glass, frames, seals, openable elements etc.

The assessment has demonstrated that the recommended internal noise criteria can be achieved through consideration of the proposed façade elements at the design stage. The calculated glazing specifications are preliminary and are intended to form the basis for noise mitigation at the detailed design stage. Consequently, these may be subject to change as the project progresses.

#### *Wall Construction*

In general, all wall constructions (i.e. block work or concrete) offer a high degree of sound insulation, much greater than that offered by the glazing systems. Therefore, noise intrusion via the wall construction will be minimal. The calculated internal noise levels across the building façade have assumed a minimum sound reduction index of 50 dB  $R_w$  for this construction.

#### *Internal Noise Levels*

Taking into account the external façade levels and the specified acoustic performance to the building envelope, the internal noise levels have been calculated. For all buildings within the development site, the good internal noise levels are achieved with windows closed.

## **12.5 Mitigation Measures**

### **12.5.1 Construction Phase**

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 (2009 +A1 2014) Parts 1 and 2 will be complied with. This includes guidance on several aspects of construction site mitigation measures, including, but not limited to:

- selection of quiet plant;
- noise control at source;
- screening, and;
- liaison with the public.

Further comment is offered on these items in the following paragraphs. Noise control measures that will be considered include the selection of quiet plant, enclosures and screens around noise sources, limiting the hours of work and noise monitoring, where required.

#### **12.5.1.1 Selection of Quiet Plant**

This practice 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 should be selected wherever possible. Should a particular item of plant already on the site be found to generate high noise levels, the first action should be to identify whether or not said item can be replaced with a quieter alternative.

#### **12.5.1.2 Noise Control at Source**

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 mitigation measures should be considered:

- Site compounds should be located away from noise sensitive boundaries within the site constraints. The use of lifting bulky items, dropping and loading of materials within these areas should be restricted to normal working hours.
- For mobile plant items such as cranes, dump trucks, excavators and loaders, maintaining enclosure panels closed during operation can reduce noise levels over normal operation. Mobile plant should be switched off when not in use and not left idling.

- For steady continuous noise, such as that generated by diesel engines, it may be possible to reduce the noise emitted by fitting a more effective exhaust silencer system.
- 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 ensure any leaks in the air lines are sealed. Erect localised screens around breaker or drill bit when in operation in close proximity to noise sensitive boundaries.
- For concrete mixers, control measures should be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum.
- For all materials handling ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials.
- For compressors, generators and pumps, these can be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation.
- All items of plant should 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.

### 12.5.1.3 Screening

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<sup>2</sup> can provide adequate sound insulation.

### 12.5.1.4 Liaison with the Public

A designated noise liaison officer will be appointed to site during construction works. Any noise complaints should be logged and followed up in a prompt fashion by the liaison officer. In addition, prior to particularly noisy construction activity, e.g. piling, the liaison officer will inform the nearest noise-sensitive locations of the time and expected duration of the noisy works.

### 12.5.1.5 Project Programme

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 a 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. Operational Phase

During the operational phase of the development, noise mitigation measures with respect to the outward impact of the development are not deemed necessary.

### 12.5.1.6 Additional Traffic on Adjacent Roads

During the operational phase of the development, noise mitigation measures with respect to the outward impact of traffic from the development are not deemed necessary.

### 12.5.1.7 Mechanical Services Plant

Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, once the relevant noise criterion adopted in this assessment is achieved within the development it is expected that there will be no negative impact at sensitive receivers off site, and therefore no further mitigation required.

## 12.6 Cumulative Impact

The proposed development, combined with other permitted developments in the area, have the potential to result in cumulative noise or vibration impacts at surrounding noise-sensitive locations during the construction and operational phases of the development.

The baseline scenario as measured, takes into account existing road traffic, aircraft noise and operational noise from the existing commercial operations in the vicinity of the development.

Potential operational cumulative impacts relate to increased traffic flows resulting from other developments and any building services plant from other sources. Considering that in order to increase traffic noise levels by 1dB traffic volumes would need to increase by the order of 25% it is considered that additional traffic introduced onto the local road network due to the construction and operational phases associated with various phases of the development, as outlined in the relevant sections of this EIAR will not result in a significant noise impact.

## 12.7 Residual Impact

### 12.7.1 Construction Phase

During the construction phase of the project there is the potential for temporary noise impacts on nearby noise-sensitive properties due to noise emissions from site activities. The application of binding noise limits and hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact is kept to a minimum as far as practicable.

During periods when construction works are occurring at distances of up to 45m from the nearest noise-sensitive locations to the site boundary, there is potential for temporary, negative, moderate to significant noise impacts to occur.

For the remainder of construction periods, construction noise impacts will be short-term, negative, slight to moderate.

Vibration impacts during the construction phase will be short-term and negligible.

### 12.7.2 Operational Phase

The predicted change noise levels associated with additional traffic is predicted to be of imperceptible impact along the existing road network. In the context of the existing noise environment, the overall contribution of induced traffic is considered to be of neutral, imperceptible and long-term impact to nearby residential locations.

Noise levels associated with building services plant are expected to be well within the adopted day and night-time noise limits at the nearest noise-sensitive properties taking into account the site layout, the nature and type of units proposed and distances to nearest residences. Assuming the operational noise levels do not exceed the adopted design goals, the resultant residual noise impact from this source will be of neutral, imperceptible, long-term impact.

## 12.8 Monitoring

### 12.8.1 Construction Phase

The contractor will be required to ensure construction activities operate within the noise limits set out within this assessment. The contractor will be required to undertake regular noise monitoring at locations representative of the closest sensitive locations to ensure the relevant criteria are not exceeded.

Noise monitoring should be conducted in accordance with the International Standard ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.

### 12.8.2 Operational Phase

Noise or vibration monitoring is not required once the development is operational.

## 12.9 References

- British Standard BS 4142: 2014+A1:2019: Methods for Rating and Assessing Industrial and Commercial Sound
- Design Manual for Roads & Bridges 2019
- British Standard BS 5228 (2009 +A1 2014): Code of Practice for Control of Noise and Vibration on Construction and Open Sites Part 1: Noise & Part 2: Vibration.
- British Standard BS 7385 (1993): Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration.
- Calculation of Road Traffic Noise, Department of Transport Welsh Office, HMSO, 1988.
- ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.
- ISO 9613 (1996): Acoustics – Attenuation of sound during propagation outdoors, Part 2: General method of calculation.
- EPA Guidelines on the Information to be contained in Environmental Impact Assessment Reports, (EPA, 2022).
- Professional Guidance on Planning & Noise (ProPG), (IoA, 2017).
- Fingal County Council Development Plan 2023-2029

## 13 CULTURAL HERITAGE

### 13.1 Introduction

Cultural Heritage is defined by UNESCO as “*the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations*” ([www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage](http://www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage)). In terms of the present project, Cultural Heritage is assumed to include all humanly created features on the landscape, including portable artefacts, which might reflect the prehistoric, historic, architectural, engineering and/or social history of the area.

The Heritage Act (1995) contains a list of various aspects of heritage, including archaeological monuments and objects, architectural heritage, fauna, flora, geology, heritage gardens and parks, heritage objects, inland waterways, landscapes, monuments, seascapes, wildlife habitats, and wrecks.

This chapter discusses the receiving environment from a Cultural Heritage perspective. It provides information with respect to previously identified baseline data and assesses the impact of the proposals on identified sites and areas of Cultural Heritage interest and/or potential.

#### 13.1.1 Author Information

Martin Byrne holds a BA in Archaeology & History (UCC, 1987), an MA in Archaeology (UCC, 1985) and a Diploma in EIA Management (UCD, 2001). He has been working full-time in the area of archaeological and historical heritage since 1990, initially through the Dept. of Archaeology at UCC and subsequently with Byrne Mullins & Associates, Archaeological & Historical Heritage Consultants – established in 1994 with Dr. Clare Mullins and has carried out a considerable number of Archaeological/Cultural Heritage assessment studies with respect to a wide range of developments, including residential developments. Martin Byrne is a full Member and founding Board Member of the Institute of Archaeologists of Ireland (IAI) and served as Chairperson from 2002 – 2003, the IAI representative on the Royal Irish Academy Standing Committee for Archaeology and RIA Archaeology Grants Subcommittee from 2014-2018 and is currently a company member of The Discovery Programme – Centre for Irish Archaeological Research, representing the IAI. He served on a National Monuments Service/Dept. Of Environment, Heritage and Local Government Expert Advisory Committee (2009-2010), tasked with reviewing existing and proposed legislation with respect to the area of Monument Protection and is the author of a number of archaeological papers published in national peer-reviewed books and journals.

#### 13.1.2 Scoping

An EIAR Scoping Report was submitted to the Development Applications Unit (DAU), Department of Housing, Local Government and Heritage; receipt of the report was acknowledged by the DAU (Ref: G Pre00108/2022). However, no subsequent heritage-related response was issued. Please see Chapter 2 of this EIAR for details of the consultation undertaken.

### 13.2 Assessment Methodology

The Cultural Heritage of the area of the proposed project was examined through an Archaeological, Architectural, and Historical study. The Archaeological and Architectural studies involved a documentary/cartographic search (Paper Survey) and focused field inspection of the area, while the Historical study involved a documentary search.

#### 13.2.1 Paper Survey

As part of a documentary/cartographic search, the following principal sources were examined, from which a list of sites and areas of Cultural Heritage interest/potential was compiled:

- Record of Monuments and Places – Co. Dublin (RMP)
- Sites and Monuments Record of the Archaeological Survey of Ireland (SMR) – [www.archaeology.ie](http://www.archaeology.ie)
- Topographical Files of the National Museum of Ireland
- Annual Archaeological Excavations Bulletin – [www.excavations.ie](http://www.excavations.ie)

- Dublin Archaeological Data – [www.heritagemaps.ie](http://www.heritagemaps.ie)
- Aerial Photographic & Cartographic Archive of the Ordnance Survey of Ireland – [www.osi.ie](http://www.osi.ie)
- Satellite Imagery – [www.google.ie/maps](http://www.google.ie/maps); [www.bing.com/maps](http://www.bing.com/maps)
- National Inventory of Architectural Heritage – Survey of the Architectural Heritage of Fingal County (NIAH) – [www.buildingsofireland.ie](http://www.buildingsofireland.ie)
- Placenames Commission – [www.logainm.ie](http://www.logainm.ie)
- Documentary and cartographic sources (see references section within this chapter)
- Fingal County Development Plan 2023-2029 (FCDP)
- Dublin City Council Development Plan 2022-2028 (DCDP)
- National Folklore Collection (The School's Collection) – [www.duchas.ie](http://www.duchas.ie)
- Open Topographic Data Viewer (LiDAR information) – [www.dcent.maps.arcgis.com](http://www.dcent.maps.arcgis.com)

### 13.2.2 Site Inspection

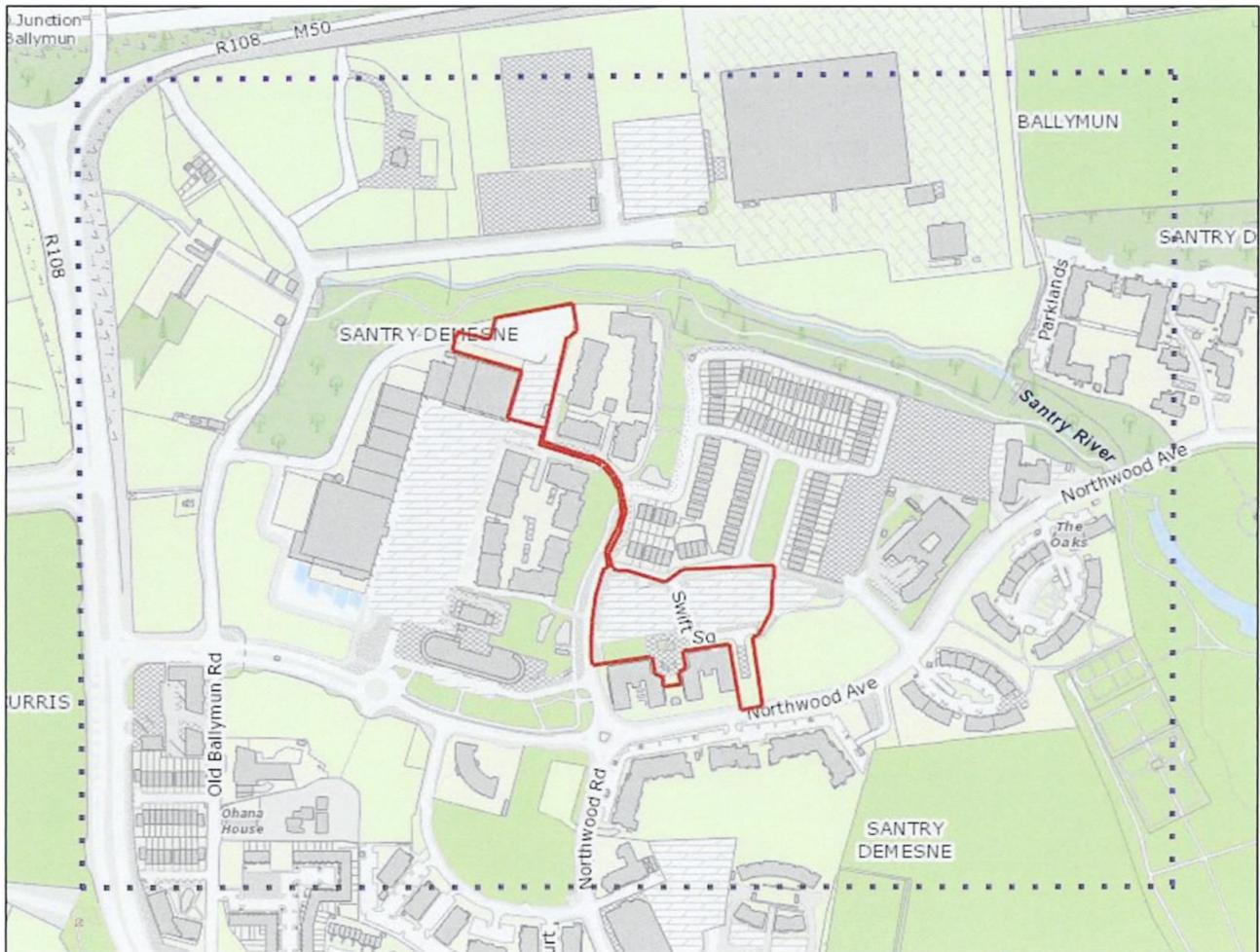
Following the completion of the preceding paper survey, a field survey was undertaken in early December 2022. This entailed a surface reconnaissance of the subject lands and inspections of the surrounding lands, where possible.

An attempt was also made to identify previously unrecorded sites of cultural heritage potential within, and in the immediate environs of, the proposed development area.

Sites/features of cultural heritage potential identified on the basis of the paper survey were inspected in an attempt to confirm their locations on the ground and to determine, if possible, their likely extent.

### 13.2.3 Definition of Study Area

The subject development lands (red-line boundary) and an area of 300m surrounding such lands were determined to be the Study Area for Cultural Heritage – **Figure 13-1**. The extent of the Cultural Heritage Study Area was chosen to reflect an appropriate context for the development, beyond which it was considered that a development of this nature would have no direct/indirect impacts.



**Figure 13-1: Site Location and Extent of Cultural Heritage Study Area**

Source: Ordnance Survey Ireland – [www.osi.ie](http://www.osi.ie); annotations by Chapter's Author

### 13.2.4 Assessment Criteria

The criteria for defining magnitude with respect to Cultural Heritage resources, based on standard authorities and guidelines, are outlined in **Table 13.1** below. These criteria are treated as an aid to professional judgement and cannot offer exact descriptions of what will occur in all cases.

**Table 13.1: Definition of terms relating to the Magnitude of an Impact**

Magnitude of Impact	Definition
<b>High</b>	<p><b>Negative:</b> Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where a cultural heritage asset is completely and irreversibly destroyed by the Project.</p> <p><b>Positive:</b> Large scale or major improvement or resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial) e.g. providing access to a monument</p>
<b>Medium</b>	<p><b>Negative:</b> Loss of resource, but not adversely affecting integrity of resource; partial loss of/damage to key characteristics, features or elements (Adverse). An impact which, by its magnitude, duration or intensity alters an important aspect of the environment. An impact like this would be where part of a cultural heritage asset would be permanently impacted upon leading to a loss of character, integrity and data about the archaeological / cultural heritage feature/site.</p>

	<p><b>Positive:</b> Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial)</p>
Low	<p><b>Negative:</b> Some measurable change in attributes, quality or vulnerability, minor loss or, or alteration to, one (maybe more) key characteristics, features or elements (Adverse) A moderate direct impact arises where a change to the site is proposed which though noticeable is not such that the archaeological / cultural heritage integrity of the site is compromised and which is reversible. This arises where an archaeological / cultural heritage feature can be incorporated into a modern-day development without damage and that all procedures used to facilitate this are reversible.</p> <p><b>Positive:</b> Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial)</p>
Negligible	<p><b>Negative:</b> Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). An impact capable of measurement but without noticeable consequences.</p> <p><b>Positive:</b> Very minor benefit to, or positive addition of one or more characteristics, features or elements (Beneficial)</p>

An evaluation of the sensitivity (value/significance) of Cultural Heritage monuments, sites and features is based on the extent to which the assets/resources contribute to the archaeological or architectural heritage character, through their individual or group qualities, either directly or potentially and guided by legislation, national policies, acknowledged standards and designations. **Table 13.2** below is based on standard authorities and guidelines (e.g. EPA, TII) and presents the criteria for defining sensitivity on Cultural Heritage assets/resources.

**Table 13.2: Definition of terms relating to the Scale of Sensitivity**

Sensitivity	Definition
Very High	<ul style="list-style-type: none"> <li>Sites of international significance: World Heritage Sites</li> <li>National Monuments</li> <li>Protected Structures of international and national importance</li> <li>Designed landscapes and gardens of national importance</li> <li>Assets of acknowledged international importance or that can contribute significantly to international and national research objectives</li> </ul>
High	<ul style="list-style-type: none"> <li>RMP / SMR sites</li> <li>Designated assets that contribute to regional research objectives</li> <li>Protected Structures of regional importance</li> </ul>
Medium	<ul style="list-style-type: none"> <li>Recently / newly identified archaeological sites (not yet included on the SMR / RMP; the importance of the resource has yet to be fully ascertained)</li> <li>Undesignated assets that contribute to regional research objectives</li> <li>NIAH Building Survey and Garden Survey Sites</li> </ul>
Low	<ul style="list-style-type: none"> <li>Undesignated Sites of local importance (e.g. townland / field boundaries)</li> <li>Assets compromised by poor preservation and/or poor survival of contextual associations</li> <li>Assets of limited value but with the potential to contribute to local research objectives (e.g. potential buried foundations associated with features / structures shown the 1st edition OS six-inch mapping)</li> <li>Historic townscapes or built up areas of limited historic integrity in their building or their settings</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>Assets with very little or no surviving archaeological interest.</li> <li>Buildings of no architectural or historic note</li> </ul>
Unknown	<ul style="list-style-type: none"> <li>The nature of the resource has yet to be fully ascertained, e.g. sites or areas of specific archaeological potential, greenfield areas or riverine / stream / coastal environs with inherent archaeological potential.</li> <li>Structures with potential historic significance (possibly hidden or inaccessible).</li> </ul>

The significance of the effect on Cultural Heritage is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The following Table 13.3 (from EPA, 2022, Table 3.4) provides the baseline criteria used to describe the impacts (effects) that the proposed development will have on Cultural Heritage Sites, Structures and Features.

**Table 13.3: Baseline Criteria to describe Impacts**

<b>Significance of Effects</b>	
<b>Imperceptible</b>	An effect capable of measurement but without significant consequences.
<b>Not significant</b>	An effect which causes noticeable changes in the character of the environment but without significant consequences.
<b>Slight Effects</b>	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
<b>Significant Effects</b>	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
<b>Very Significant</b>	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
<b>Profound Effects</b>	An effect which obliterates sensitive characteristics

### 13.3 Baseline Scenario (Existing Environment)

#### 13.3.1 General Historical Background

The subject development lands form part of the townland of Santry Demesne, in the barony of Coolock and the civil parish of Santry (O.S. 6” Map – Dublin Sheet 14). The name Santry derives from the Irish *Seantrabh* – the ‘old tribe’ (Placenames Database of Ireland – [www.logainm.ie](http://www.logainm.ie)), although Burnell (2006, 340) suggests that it may mean the ‘old dwelling’.

Santry parish is associated with St. Pappin, the son of Aengus McNathfraid, the first Christian King of Munster and the brother of saints Colman, Folloman, Jernoë and Naal. St. Pappin is believed to have flourished in the fifth and sixth centuries. The feast of St. Pappin was celebrated on 31st July at Poppintree. The name ‘Poppintree’ is a corruption of the Pattern or feast of St. Pappin. The Pattern was held under the branches of an ancient tree, which was thought to stand somewhere near the crossroads where the Dublin to Naul Road (Ballymun Road) met Santry Avenue, probably in the townland of Balcurris. The Pattern was discontinued sometime after 1846.

The subject lands are located within the general ancient boundaries of Fingal, the regional name applied to the northern half of County Dublin. According to Ball (1920) the name Fingal is used to denote the district into which predatory excursions were made by the Vikings. In the ninth century, a colony of Ostmen, or Northmen, was established in Dublin, ultimately settling in the tract of lands lying northwards along the coast. This area subsequently became known as Fine Gall – ‘the territory of the Galls or strangers’. Before the battle of Clontarf, Brian Boru is said to have raided the region of Fingal and set fire to large areas of land.

The first written record of the area dates to the ninth century when the Annals of the Four Masters record the death in 827 AD of ‘Cormac, son of Muirgheas, Abbot of Seantrabh’. The area of Santry witnessed a number of battles between the Vikings and native Irish, as well as between native Irish clans. The neighbourhood was plundered in the twelfth century by *Murchada Ua Maelseachlainn*, king of Meath, in revenge for the death of his son at the hands of the *MacGiolla Mocholmóg*, chiefs of Fingal.

Following the Anglo-Norman invasions, the lands in the region were granted to Hugh de Lacy, who in turn granted the area of Santry to Adam de Feipo or Phepoe who erected a church in the area sometime in the thirteenth century. It appears that de Phepoe wished that this ‘new’ church be dedicated to the French St. Poppo or Poppon, the Abbot of Stavelot. This is a different saint altogether from the Irish St. Pappin, who lived in the parish in the sixth century. The manor of Santry seems to have remained in the possession of the de Phepoe family until about 1375, when Johanna de Phepoe married Thomas Marewood, at which time the manor of Santry passed to her husband.

In the fifteenth and early sixteenth century, Santry formed part of the extensive lands of the Cistercian Abbey of St. Mary, Dublin. The last Abbot of St. Mary's, William Landey, surrendered all the estates of the Abbey, including those at Santry, to Henry VIII on 28th October 1539. In 1534 when John Barnewall was indicted for high treason for his part in the Kildare rebellion (Silken Thomas rebellion), his lands in Ballymun and Coolock were forfeited to the king. In 1641 the village of Santry was attacked and burnt by parliamentary forces after a party of royalist forces took up a position in the village.

The Barry family, a Protestant branch of the Cork Barrymore family, acquired the lands in the area after they had been confiscated from the Catholic Barnewall family in the 1620s. The first member of the Barry family to live at Santry was James Barry (1603-1672/3), the son of Richard Barry, a Protestant alderman and sometime Lord Mayor of Dublin. James was created Justice of the King's Bench with the title first Baron of Santry (1660-1). This was in recognition of his services at the time of the Restoration of the Monarchy. Portions of the large Santry Estate were already in James Barry's possession before 1641 and he was granted the remainder as forfeited land in the early 1650s.

The Down Survey Map of 1655-6 (**Figure 13-2**) illustrates the extent of the parish of Santry (*Santrie*) at that time. The accompanying 'terrier' to the map notes that "the Soyle thereof is Indifferent good but the west is much better than the east it is for the most part Arrable and Furrz & Pasture there is but little Meadow therein: The inhabitants of this Barony have no other ffyreing [firewood] but only ffurzz. The Chiefe towne in this Barony for Antiquity is Coolock from whence the Barony takes its name but at present it is much inferior to many others the Chiefest place Built are Mallahide and Donsoghly through this Barony Lyes the High Roade from Dublin to Swordes and so the province of Vlster". The Civil Survey (a.k.a the Down Survey; [www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie)) notes that Santry was owned by Sir James Barry in 1641 and 1670; a census in 1659 notes that these lands contained 41 English and 16 Irish. The Survey notes that the estate comprised 250 acres – 200 arable; 20 meadow; 14 pasture; 10 shrub-wood and 6 ash-wood) and contained a dwelling house of stone with a barn and an old stable, together with walls of as house, a garden and two orchards.

At the time of his marriage to Bridget Domville, in 1702, the 3rd Baron Barry of Santry (1680-1734) commenced construction of Santry Court. The 3rd Lord Barry had perhaps the greatest influence on the economic and manorial development of Santry and at his instigation the Protestant Church in the townland of Santry was erected entirely at his expense.



Figure 13-2: Extract from Civil (Down) Survey Map (1655-8)

Source: [www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie)

The estate remained largely intact and in the direct possession of the Barry family until 1751, when Lord Henry Barry, fourth Baron Barry of Santry, died without a male heir. Lord Henry was a member of the Hellfire Club but is best remembered for the tragic events of August 1738 at Palmerstown Fair. The Fair, also referred to as 'Saturnalia', was held annually in August. It was only surpassed by Donnybrook Fair for its merriment, drinking and carousing. It drew huge crowds from all sections of Dublin society. On the morning of 9th August 1738, Lord Barry, a young man of twenty-eight years, had ridden-out with a party from Dublin. On reaching Palmerstown the party dined at a local inn. The remainder of the story of that fateful day is recorded in his trial for murder which took place on 27th April 1739. He chose to be tried by his peers so that his trial took place in front of the Irish House of Lords at the 'new Parliament House' (now Dublin Castle), instead of in the Law Courts before a jury. This was the first trial for murder to take place and one of only three trials before the Irish House of Lords in Dublin Castle. Lord Barry was charged with the murder of Laughlin Murphy, who was described as 'a person who with a good deal of industry and difficulty maintained himself, a wife, and three small children, by being employed as a porter, and carrying letters and messages'. Lord Barry had been drinking at the inn for a considerable time when he began to argue with another man called Humphreys. Barry was too drunk to draw his sword from its scabbard, which seems to have made him angrier. He swore that he would kill the next man who spoke to him. The unfortunate Laughlin Murphy apparently passed Lord Barry in a passageway in the inn, and excused himself as he passed by. Lord Barry in a fit of drunken rage stabbed him. In fact Murphy did not die for another six weeks, which was used in Lord Barry's defence, but to no avail\*\*. The Irish peers found him guilty of murder, and he was sentenced to

execution by the sword (decapitation). Lord Barry is reputed to have commissioned an expert swordsman from France to carry out his execution, so that death would be relatively swift and painless. He signed his own death warrant at Dublin Castle on 28th April 1739 and the date of the execution was fixed for 22nd June the following year. In the event, he was not executed, but received a pardon under the Great Seal of the Kingdom of Ireland in 1739, and a re-grant of his estates in 1741. His reprieve was certainly due to the threat by his uncle Sir Compton Domville, who threatened to cut-off Dublin City's entire supply of drinking water, if Lord Barry was executed. This was no idle threat since the rivers that passed through his Templeogue Estate supplied much of Dublin's drinking water.

From as early as the 1740s the Parish of Santry had been well served by educational establishments. One of the oldest of these was the Santry Charter School erected on adjacent Ballymun Road. The School House was originally a mill built in about 1700. The Incorporated Society for Promoting English Protestant Schools in Ireland, better known as the Charter Schools, was established by George I I's Royal Charter in Ireland in 1733. The Charter School in the Parish of Santry was one of the most prominent and long-lived Charter Schools in Ireland. The Santry or Ballymun Charter School was built in 1739 and was initially an all-girls school. It was patronised by Dublin Corporation and Luke Gardiner who granted the land on which the school was built. The girls who lived at the school, besides being provided with a rudimentary education, 'were employed in winding silk and spinning cotton'. It was widely reported by contemporary observers and inspectors alike, that the Santry Charter School was the best of its kind in the country. The School ceased to operate in the 1840s and in 1900 became known as 'Santry Lodge'.

After the death of Lord Henry Barry in 1751, the Barry lands were inherited by his uncle, Sir Thomas Compton Domville, after which the Santry Estate, including Santry Court, demesne and nearly 5,000 acres of land remained in the Domville family's hands for almost 200 years (1751-1935). Much of the historical records for the Santry Estate date from the time of Sir Thomas Compton Domville's inheritance, perhaps, maybe because he needed to know exactly what land, tenants and estate workers he had inherited from his nephew. There is some evidence that the Santry Estate was experiencing financial difficulties partly due to the expenses incurred building Santry Court, but also because of the spendthrift habits of the fourth Baron. Amongst the earliest surviving records of the Santry Estate is the 'Wages Book for Santry Estate, c.1740-1750'. This shows the employees of the estate, together with their weekly wages. The manuscript also records other expenses connected with the Estate, including the names of Sir Compton Domville's horses, the frequency with which they needed to be shod and the costs involved. The horses had names such as Muke, Squeeker, Sandford, Sniper, Santry Mare and Button. The Wages Book recorded that the daily wage for the Santry Estate workers was six-pence. This shows that it cost the Estate almost as much to shoe a horse as to employ an estate worker for a week.

Rocque's map of 1760 (*An actual survey of the county of Dublin*; **Figure 13-3**) illustrates that the layout of Santry Demesne at this time. It includes a tree-line avenue (Santry Avenue) running east from the Ballymun-Naul Road (present R108) leading to Santry House (Santry Court), with extensive formal planting to the rear (north) of the house including two square walled-gardens; additional internal paths/trackways are indicated within the estate and a trapezoidal-shaped planted area with internal path/tack positioned to the west of the main residential and associated planted area. The Santry River is indicated along the northern boundary of the estate and the (Santry) Charter School is indicated outside the estate and on the western side of the Ballymun-Naul road, adjacent the river.

Like his nephew the last Baron Barry of Santry, Sir Thomas Compton Domville died without a male heir. In a provision made in his will of 1761, Thomas ensured that the Santry Estate would stay in the family's possession. He bequeathed it to Charles Pocklington, his nephew. Pocklington had to adopt the name 'Domville' before he was allowed to inherit Santry Estate.



Figure 13-3: Extract from Rocque – 1760 (North to the right)

Source: Ferguson, 1998, Map 26, p. 52

Taylor & Skinner's Maps of the Roads of Ireland of 1777 (Figure 13-4) indicate both Santry House, with associated demesne planting, and the Charter School on the Naul Road leading to Drogheda



**Figure 13-4: Extract from Taylor & Skinner – 1777 (Sheet 40)**

Source: Taylor & Skinner, 1778

During the 1798 Rebellion, an attack on the Northern Mail Coach below the walls of the Santry Estate on 23rd May was the climax of rebel activity in the area. According to eyewitness accounts, the hold-up of the mail coach was the 'Signal for the Outbreak' of the Rising in County Dublin, and more than 3,000 rebels were gathered there at the time. Although the mail coach was stopped and burned, the newspapers reported that nobody was ill-treated, and no possessions were taken from the passengers of the coach.

When Sir Charles Pocklington Domville died, the Santry Estate became the property of his eldest son, Sir Compton Pocklington Domville. In 1816 Sir Compton Pocklington Domville's application for the Lordship of Santry was granted. The family motto, *Qui Stat Caveat ne Cadat* ('Let the man who is standing be careful that he does not fall'), appeared on his grant of arms.

Lewis (1837) noted that the parish of Santry or Santreff contained 1159 inhabitants at that time, of which 125 resided in the village of Santry; he describes the land as being of good quality, chiefly in pasture and meadow, with fertile tillage an improving system of agriculture. He further notes that the village of Santry was pleasantly situated on the road to Swords and that it contained twenty-five 'neatly built' houses and that a station of the city police was located nearby; 30 children were 'clothed, maintained and educated' in the Charter School, while about 30 other children were educated in two other public schools. He described Santry House as a 'stately mansion of brick, containing many spacious apartments ornamented with numerous family portraits, a valuable collection of historical and scriptural paintings by the best masters, and many specimens of the fine arts'; the demesne, comprising more than 140 acres, was 'tastefully laid out in gardens and pleasure-grounds, richly embellished with timber, and commanding some beautiful scenery and some extensive mountain and sea views'.

The Ordnance Survey map of 1837 (**Figure 13-5**) indicates the layout and extent of Santry Demesne at that time, including Santry House and associated formal demesne planting, internal roads, tracks and paths, together with field divisions; A road (Santry Avenue) along the southern boundary of the estate, linking Ballymun Road to Santry Village, had been established by this time. The subject development lands incorporated a section of the northern extent of a forested area – Black Wood – and, as indicated in **Figure 13-6**, largely comprised areas of two larger agricultural fields; part of the boundary between these fields and the 'Black Wood' was positioned within the subject lands, as were a number of tracks/pathways through the woods.

Sir Charles Compton William Domville (1822-84) was the third son of Sir Compton Pocklington Domville and inherited Santry Court, demesne and estate in 1857. He immediately set-about a large renovation and building programme (gardens and house) that the Santry Estate. The 130 rooms were redecorated, the

gardens and out offices restored, a water supply was laid on to the house from the river and ornamental gas lamps lit the avenue to a replica of the Phoenix monument erected in the grounds Domville chose Ninian Niven (1799-1879), probably the best known Irish landscape gardener at the time, to redesign the gardens at Santry as well as the family estate at Templeogue. The improvements led to the planting of many new trees and the creation of a 'pleasure ground' at Santry. Visiting the demesne in 1883 the Reverend Benjamin Adams, the Church of Ireland rector and historian of Santry parish, was particularly impressed by the gas lights, which lit the main approach to Santry Court. These were spaced at regular intervals on both sides of the main entrance avenue and were an expensive indulgence on the part of Sir Charles. During his visit Adams also remarked on the large deer-park which was punctuated with pillars and vases in the memory of some of the Domvilles' favourite horses.

Sir Charles was the last member of the Domville family to reside permanently at Santry. He married Lady Margaret Frances St. Lawrence, a daughter of the third and last Earl of Howth. They had no children and Sir Charles died on 10th July 1884. After the death of Sir Charles, Santry House passed briefly to his brother, Sir William Compton Domville, and then to the Pöe family who were relatives of the Domville's by marriage.

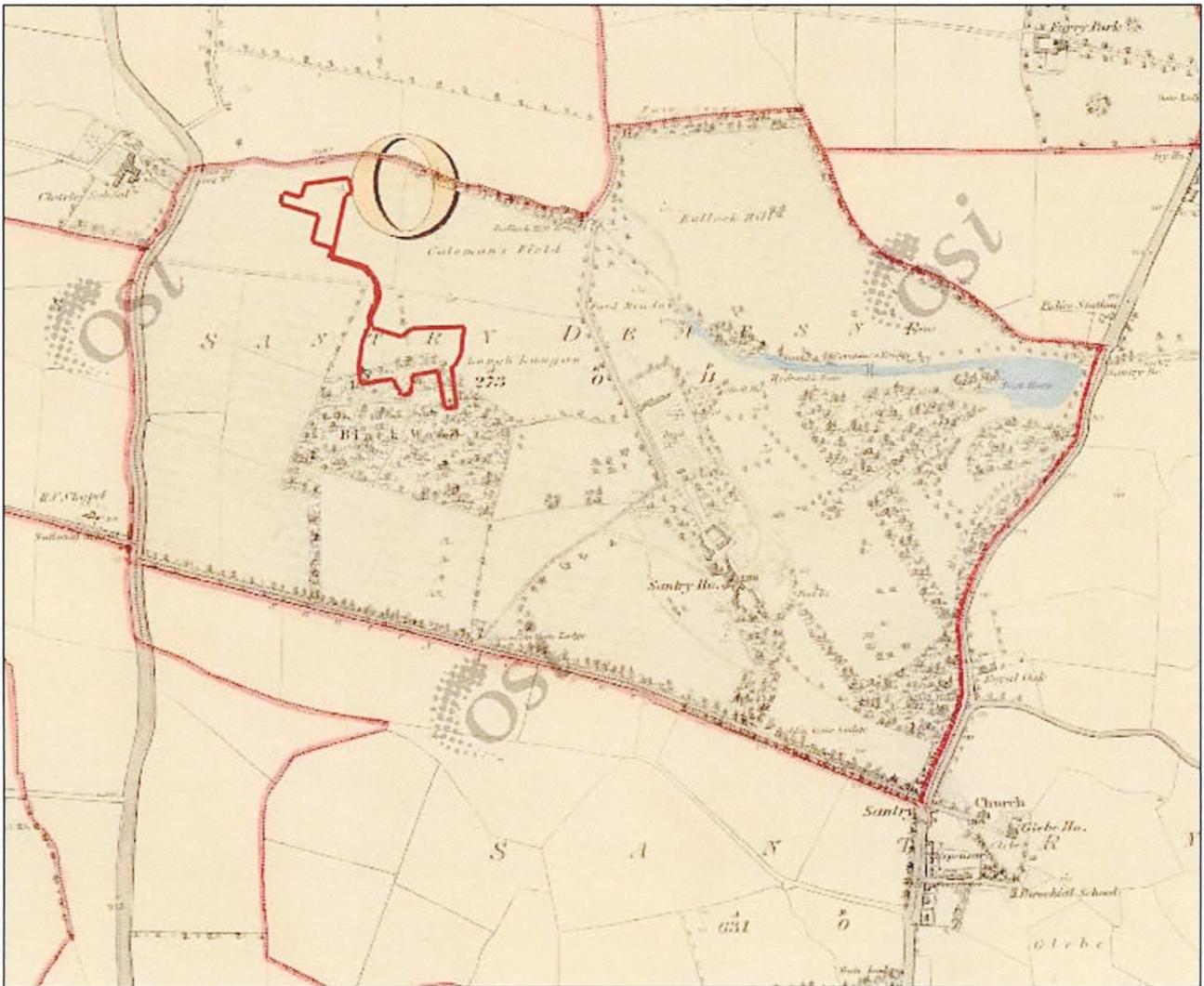
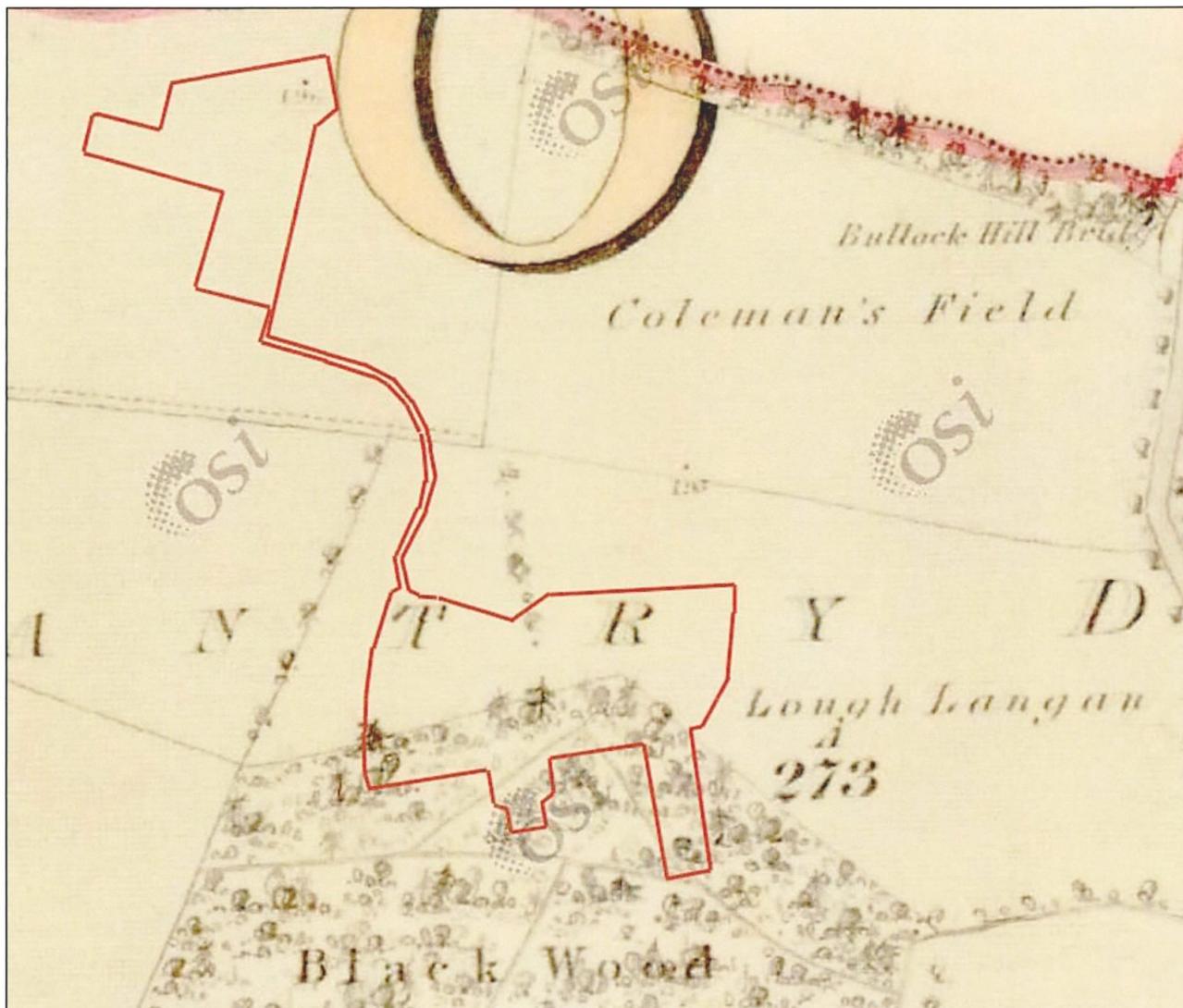


Figure 13-5: Extract from O.S. Map of 1837 (Dublin Sheet 14)

Source: Ordnance Survey Ireland – [www.osi.ie](http://www.osi.ie)



**Figure 13-6: Extent of subject planning extent superimposed on an enlarged extract of 1837 O.S. map**

Source: Ordnance Survey Ireland – [www.osi.ie](http://www.osi.ie)

The Ordnance Survey map of 1910 (**Figure 13-7**) indicates that the subject lands were largely in agricultural use at this time and incorporated the northernmost extent of the 'Black Wood', including associated tracks and pathways; in addition, a number of changes to the surrounding agricultural fields had been made since 1837 (**Figure 13-6**), with some having been enlarged and others subdivided.

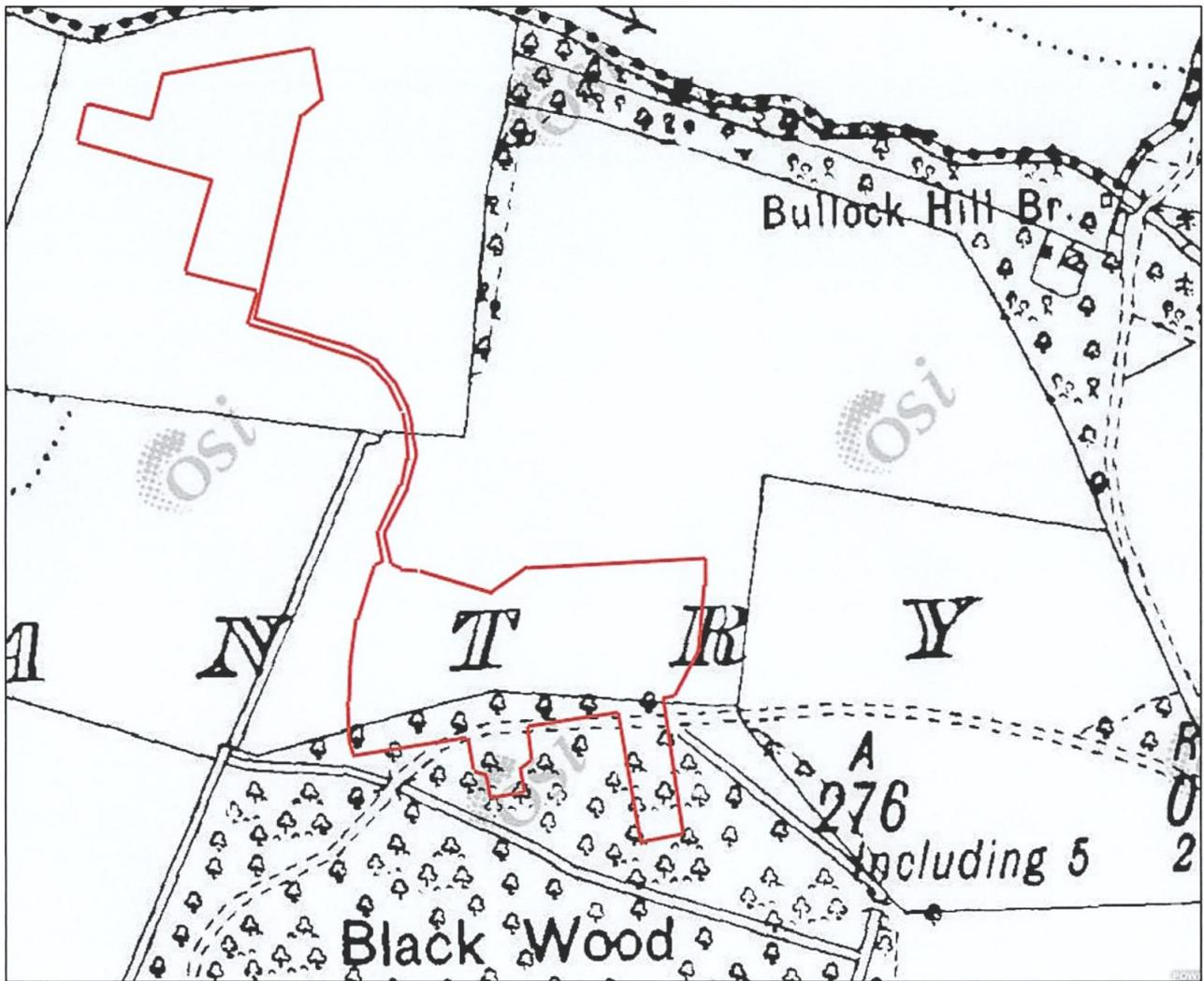
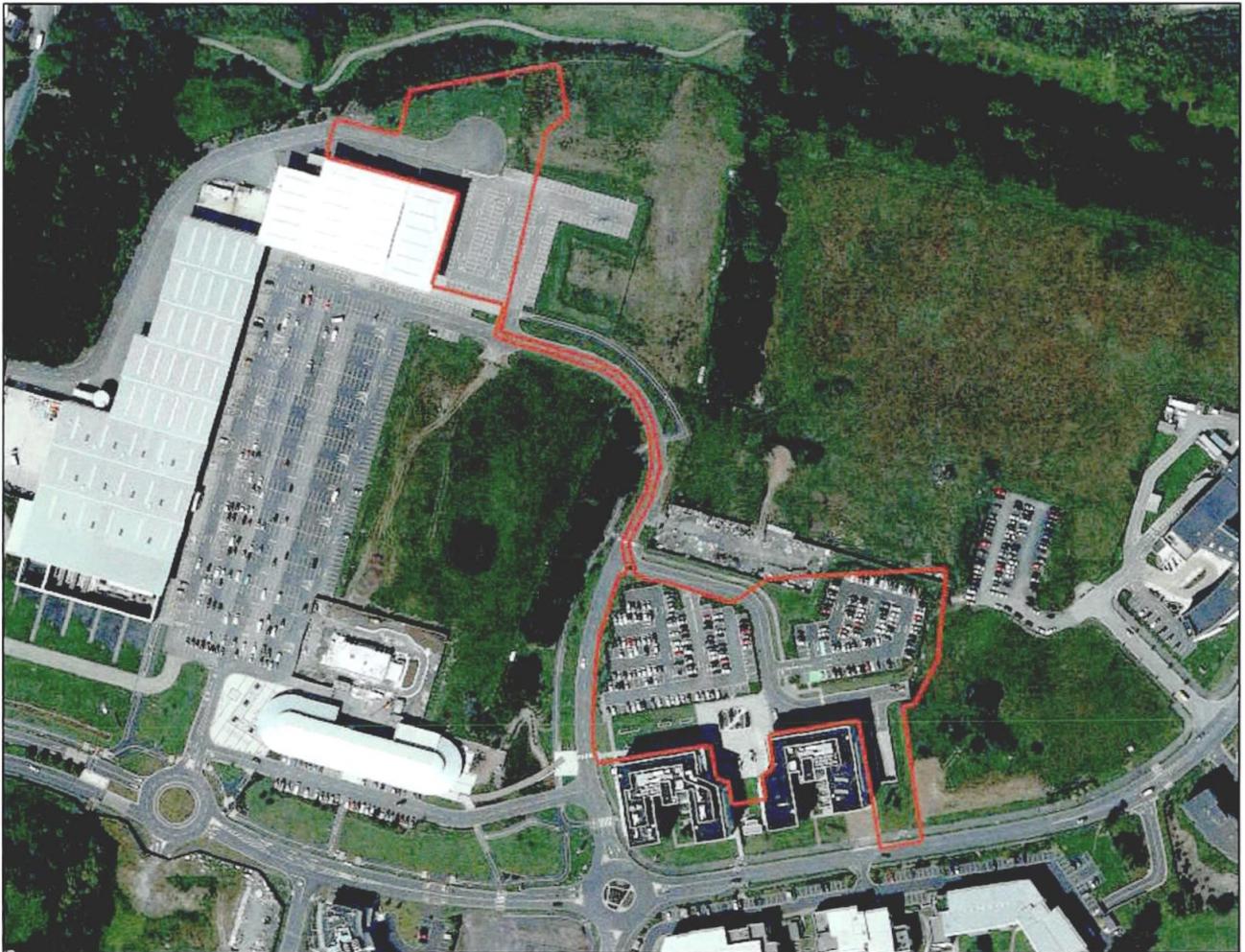


Figure 13-7: Extract from Ordnance Survey Map of 1910 (Dublin Sheet 14) (indicative subject site outlined in red)

Source: Ordnance Survey Ireland – [www.osi.ie](http://www.osi.ie)

Dublin Corporation acquired Santry House in the early 1930s, and proposed to convert it into a mental home attached to Grangegorman. During World War II, it was used as a store by the Defence Forces, during which time it was gutted by fire; it was demolished in 1959 because of its dangerous state of repair. The entrance doorway was removed and is now held in State storage, while the entrance gates were removed and re-erected at St. Brendan's Hospital, Grangegorman.

The lands in the area largely remained in agricultural use until more recent years, when they were developed for commercial and residential use; much of the subject site was developed for surface car parking, with associated hard and soft landscaping, as illustrated in **Figure 13-8**. Such development would have entailed extensive ground disturbance/reduction works. In addition, the proposed temporary access to the west, routed through the Whitehaven SHD Lands, was largely previously utilised as a construction compound, which was subsequently reinstated .



**Figure 13-8: Aerial View of Site and Immediate Environs (2017)**

Source: Ordnance Survey Ireland – [www.osi.ie](http://www.osi.ie)

### 13.3.2 Archaeological Heritage

Archaeology is the study of past societies through their material remains and the landscapes they lived in.

*“The archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence” (DAHG 1999, p9).*

Archaeological heritage comprises all material remains of past societies, with the potential to enhance our understanding of such societies. It includes the remains of features such as settlements, burials, ships and boats and portable objects of all kinds, from the everyday to the very special. It also includes evidence of the environment in which those societies lived. The terms “site” or “monument” are used generally to refer to fixed structures or areas of activity, as opposed to particular moveable objects. Historic wrecks are also part of the archaeological heritage (DHLGH, 2021, 3).

#### 13.3.2.1 Statutory Protections

The statutory and administrative framework of development control in the zone of archaeological potential or in proximity to recorded monuments has two main elements:

- a. Archaeological preservation and licensing under the National Monuments Acts and
- b. Development plans and planning applications under the Planning Act.

### 13.3.2.1.1 National Monuments Acts 1930-2004

Section 12 (1) of the National Monuments (Amendment) Act, 1994 provides that the Minister for the Environment, Heritage and Local Government shall establish and maintain a record of monuments and places where the Minister believes there are monuments, such record to be comprised of a list of monuments and relevant places and a map or maps showing each monument and relevant place in respect to each county of the State. This is referred to as the ‘Record of Monuments and Places’ (RMP), and monuments entered into it are referred to as ‘Recorded Monuments’.

Section 12(3) of the National Monuments (Amendment) Act 1994 provides for the protection of monuments and places in the record, stating that

*“When the owner or occupier (not being the Minister) of a monument or place which has been recorded under subsection (1) of this section or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Minister and shall not, except in the case of urgent necessity and with the consent of the Minister, commence work for a period of two months after having given the notice”.*

### 13.3.2.1.2 Fingal County Development Plan 2023-2029

The following relevant Archaeological Heritage Policies and Objectives are set out in Chapter 10 of the Development Plan 2023-2029 – see **Table 13.4 below**:

**Table 13.4: Archaeological Heritage Objectives – Fingal County Development Plan 2023-2029**

Archaeological Heritage Policies and Objectives	
HCAP3	<b>Record of Monuments and Places/Sites and Monuments Record</b> Safeguard archaeological sites, monuments, objects and their settings listed in the Record of Monuments and Places (RMP), Sites and Monuments Record (SMR), underwater cultural heritage including protected wrecks and any additional newly discovered archaeological remains.
HCA01	<b>Preservation in-situ</b> Favour the preservation in situ or at a minimum preservation by record, of archaeological sites, monuments, features or objects in their settings. In securing such preservation the Council will have regard to the advice and recommendations of the National Monuments Service of the Department of the Housing, Local Government and Heritage.
HCA02	<b>Protection of RMPs/SMRs</b> Protect all archaeological sites and monuments, underwater archaeology, and archaeological objects, which are listed in the Record of Monuments and Places, Wreck Inventory of Ireland and all sites and features of archaeological and historic interest discovered subsequent to the publication of the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process.
HCA07	<b>Archaeology and Development Design</b> Ensure archaeological remains are identified and fully considered at the very earliest stages of the development process, that schemes are designed to avoid impacting on the archaeological heritage
HCA08	<b>Archaeological Impact Assessment</b> Require that proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies.
HCA09	<b>Archaeology in the Landscape</b> Ensure that in general development will not be permitted which would result in the removal of archaeological monuments with above ground features or protected wrecks and that this will be especially the case in relation to archaeological monuments which form significant features in the landscape.
HCA010	<b>Context of Archaeological Monuments</b> Ensure that development within the vicinity of a Recorded Monument or Zone of Archaeological Notification does not seriously detract from the setting of the feature and is sited and designed appropriately.

**Note:** The Record of Monuments and Places (RMP) for County Dublin was published in 1998. Consequently, all monuments discovered in Fingal since the publication are not RMP Sites but are subject to protection under Policy HCAP3 and Objective HCA02 of the County Development Plan 2023-2029, as set out above.

### 13.3.2.2 Archaeological Inventory

There are no previously identified individual sites of archaeological interest located within the defined study area (Section 13.2.3). The nearest is the site of the former Santry Court/Santry House, which is listed in the RMP (Ref: DU014-030) and located approximately 500m to the southeast of the subject lands (see **SITE CH-1; Figure 10-9**). The historical background of the house is described above in **Section 13.2.1**.

No features of archaeological potential were noted by cartographic and aerial photographic research or by and no surface features/traces of archaeological potential were noted by the surface reconnaissance survey.

### 13.3.2.3 Archaeological Artefacts

The Topographical Registers of the National Museum of Ireland have one record relating to the general area, as follows:

- NMI Ref: 1947:43 – Stone Axe Head retrieved from ruins of Santry Court

### 13.3.2.4 Results from previous documented relevant archaeological investigations

A search undertaken of the annual Archaeological Excavations Bulletin ([www.excavations.ie](http://www.excavations.ie)) and the Dublin Archaeological Data ([www.heritagemaps.ie](http://www.heritagemaps.ie)) indicates that a number of archaeological investigations have been undertaken within the defined study area, none of which were located within the subject development lands, as follows:

- A programme of archaeological monitoring was undertaken by Sinead Phelan, Margaret Gowen & Co (Licence No: 03E1003) at the site of the Game Building, Santry Demesne. Nothing of archaeological interest was uncovered.
- A programme of archaeological monitoring of the mechanical removal of topsoil with respect to the development of lands in the western area of Santry Demesne was undertaken by E. Eoin Sullivan Margaret Gowen & Co (Licence No: 05E0894). The development comprised offices, retail warehousing and enterprise starter units. This led to the identification and excavation of two isolated pits and a probable garden feature. The first pit was oval in plan and measured 0.8m (north–south) by 0.5m. The cut was regular and deepest (0.1m depth) at the northern portion but was irregular and shallow on the southern portion. The pit had a single fill consisting of grey clay with traces of ash and occasional pieces of charcoal. There was insufficient charcoal for a dating sample. No artefacts were discovered within the fill of the pit. The second pit was subcircular in plan and measured 0.42m (north–south) by 0.36m. The cut was shallow and gently sloping on the western and southern portion, but sharp and steep at the northern and eastern portion. The pit had a single fill consisting of light-black clay with several pieces of wood charcoal. A probable garden feature was identified due to the discovery of a rectangular-shaped stone setting of red bricks set in mortar. The chamber was filled with disturbed dry grey sand and contained several pieces of scrap wrought iron, primarily pipe, clay pipe and many pieces of clear window glass. A short length of clay pipe bore the inscription ‘Sloan & Co., Clay Works’. The chamber was constructed of red brick with a clay lining on the sides and base. The internal dimensions of the chamber were 0.9m (east–west) by 1.43m with a depth of 0.8m. The clay lining was 0.22m thick throughout.

Further monitoring in 2006, undertaken by Emer Dennehy under an extension of the original Excavation Licence, did not uncover anything of archaeological interest or potential.

- A programme of Archaeological Testing was undertaken by James Hession, Headland Archaeology (Ireland) Ltd (Licence No: 09E0481) as part of the advance works on proposed route of Metro North light rail project. For the purposes of these works the Metro North route was subdivided into fourteen testing areas. Testing Area 13 was located in Ballymun and Balcurris townlands, Co. Dublin, on the footprint of the Metro North alignment, Northwood Stop and construction compound (west of subject lands and on western side of Ballymun Road). A total of twelve test-trenches were excavated in two fields and no features of archaeological significance were identified
- Programmes of Archaeological Testing and Monitoring was undertaken by Martin Byrne, Byrne Mullins & Associates (Licence No: 20E0536) with respect to the Blackwood Square residential development, currently under construction to the west of the subject site. The programme of testing involved the machine excavation of six trenches in the southern area of the site, following which all topsoil

stripping/general ground reduction works onto the surfaces of the underlying subsoils was monitored. Nothing of archaeological or historical interest was uncovered.

### 13.3.3 Architectural Heritage

Architectural heritage has several definitions and meanings for people. A useful rule of thumb (which is actually the legal situation) is set out in the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 which provides the following definition:

- a. structures and buildings together with their settings and attendant grounds, fixtures and fittings,
- b. groups of such structures and buildings, and
- c. sites, which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

A rich architectural heritage has survived to the present day in Fingal County. While there are impressive demesne features and large houses in the County, most of the County's architectural heritage has come from vernacular traditions with local craftsmen sometimes borrowing from the traditions of classical architecture to construct buildings that met local needs. This rich architectural heritage contributes enormously to the overall built environment and, indeed, helps to give it definition in terms of place and character for those that live and work in the county as well as those who visit there.

#### 13.3.3.1 Fingal County Development Plan 2023-2029 & Dublin City Development Plan 2022-2028

Section 51 of the Planning and Development Act, 2000 (as amended) requires Local Authority Development Plans to include a record of structures. These structures form part of the architectural heritage of the Local Authority/Council Administrative Areas and are to be protected. The Councils draw up these lists, referred to as the Record of Protected Structures (RPS). The RPS is a section of the Development Plan in which each structure is given a reference number.

There are no structures listed in the RPS of the Fingal County Development Plan 2023-2029 as being located within the subject site or wider Cultural Heritage study area. Likewise, there are no structures listed in the RPS of the Dublin City Council Development Plan 2022-2028 as being located within the wider Cultural Heritage study area.

#### 13.3.3.2 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of Housing, Local Government and Heritage. It was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. The NIAH provides the basis for the recommendations of the Minister for Housing, Local Government and Heritage to planning authorities with respect to inclusions in the individual RPS.

There are no structures of Architectural Heritage interest listed by the non-statutory NIAH as being located within the subject site or overall Cultural Heritage study area.

The gardens and landscaped demesne lands are included in the NIAH Garden Survey (ID No: 2380), the extent of which are illustrated above in **Figure 13-5**. Such features have largely been removed from the overall demesne lands apart from some wooded areas near the eastern and north-eastern extents of the townland/former demesne and outside the overall Cultural Heritage study area.

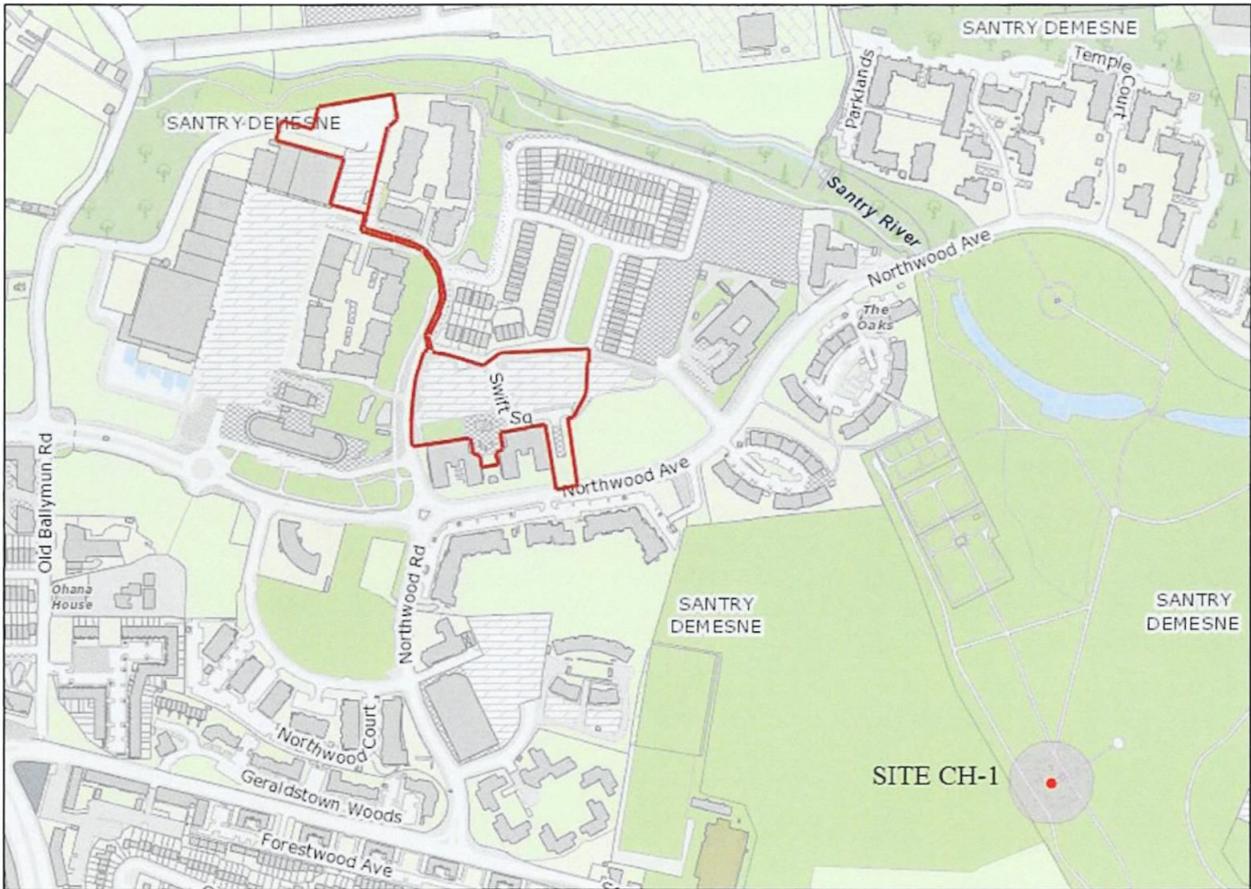


Figure 13-9: Location of Cultural (Archaeological) Heritage Site identified within the defined study area (indicative subject site outline in red)

## 13.4 Impact Assessment

### 13.4.1 Do Nothing

In terms of Cultural Heritage, in the event that the subject lands are not developed, they will remain as currently established. Given the historical, archaeological and architectural heritage of the landholding, as described above in **Section 13.3**, no impacts in these respects will occur as a result of the development not proceeding.

### 13.4.2 Construction Phase

#### 13.4.2.1 Historical Heritage

The general historical background to the subject development area was introduced above in **Section 13.3.1**. In summary, there are no significant historical events associated with the proposed development lands which have the ability to be impacted upon by the proposed development.

#### 13.4.2.2 Archaeological Heritage

The general archaeological background to the subject development area was introduced above in **Section 13.3.2**. In summary, there are no previously identified archaeological monuments and features located within the overall study area associated with the subject project; the nearest being approx. 500m to the southeast (CH-1). No features of archaeological potential were noted by cartographic and aerial photographic research and no surface features/traces of archaeological potential were noted by the surface reconnaissance survey.

Given the above, it is considered that the development of the site will not cause any direct impacts to any previously recorded archaeological monuments or features; in addition, given the previous extensive ground

disturbance works associated with the development of car parking on the site, it is considered that there is *negligible* potential for the discovery of subsurface features within the overall planning extent/boundary.

### 13.4.2.3 Architectural Heritage

There are no structures listed in the Record of Protected Structures (RPS) of the Fingal County Development plan 2023-2029 as being located within, or in the immediate environs of, the subject proposed development lands. Likewise, there are no structures listed in the RPS of the Dublin City Council Development Plan 2022-2028 as being located within the wider Cultural Heritage study area.

The National Inventory of Architectural Heritage (NIAH) has not identified any structures within the defined study area; it does include garden and landscape features within Santry Demesne (Garden ID No: 2380), much of which have been removed and with no remains within the wider Cultural Heritage study area. Consequently, it is predicted that no impacts to any structures or garden features of architectural heritage interest will occur during the construction phase of the development.

## 13.4.3 Operational Phase

### 13.4.3.1 Historical Heritage

The general historical background to the subject development area was introduced above in **Section 13.3.1**. In summary, there are no significant historical events or memorial structures associated with the proposed development lands which have the ability to be impacted upon by the proposed development following its construction.

### 13.4.3.2 Archaeological Heritage

There are no extant archaeological monuments located within, or in the immediate environs of, the subject development site. The nearest monument to the subject development lands is the site of the former Santry House/Santry Court (CH-1) which was demolished in 1959, and for which there are no extant remains. Consequently, it is not predicted that the visual setting of any archaeological monuments will be impacted upon by the proposed subject development.

### 13.4.3.3 Architectural Heritage

There are no structures or garden/demesne features of Architectural Heritage Interest located within the site or wider cultural heritage study area. Consequently, it is predicted that no impacts with respect to architectural heritage will occur as a result of the operation of the development.

## 13.5 Mitigation Measures

### 13.5.1 Construction Phase

#### 13.5.1.1 Historical Heritage

There are no significant historical events associated with the proposed development lands which have the ability to be impacted upon by the proposed development. Consequently, no mitigation measures are required.

#### 13.5.1.2 Archaeological Heritage

As noted above in **Section 13.4.1.2**, it is not considered likely that the development, as proposed, will cause any direct impacts to any identified archaeological monuments; as further noted, given the extent of previous ground disturbance and topsoil stripping within the extent of the site, it is considered that there is negligible potential for the discovery of subsurface features within the overall planning boundary. Consequently, it is considered that no further archaeological interventions are required with respect to the development of the site.