



**SEÁN
HARRINGTON
ARCHITECTS**

Architectural Design Statement - May 2017

PROJECT:
Housing Development at Corkagh Grange

CLIENT:
South Dublin County Council

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1.0 Introduction

Introduction

This report was prepared by Seán Harrington Architects to accompany the part viii planning application to South Dublin County Council for 109 dwellings at Corkagh Grange, and forms part of the suite of drawings and reports to be submitted to the Local Authority. This report is an Architectural Design Statement prepared by SHA to provide background to the design process and intent of the Architectural design team in their design of this new housing community.

The document proceeds with the site context followed by a description and analysis of the proposed development. The document concludes with further sections on landscape design and energy efficiency.

The Architects have adhered closely to all relevant legislation and guidance documentation, including the following publications;

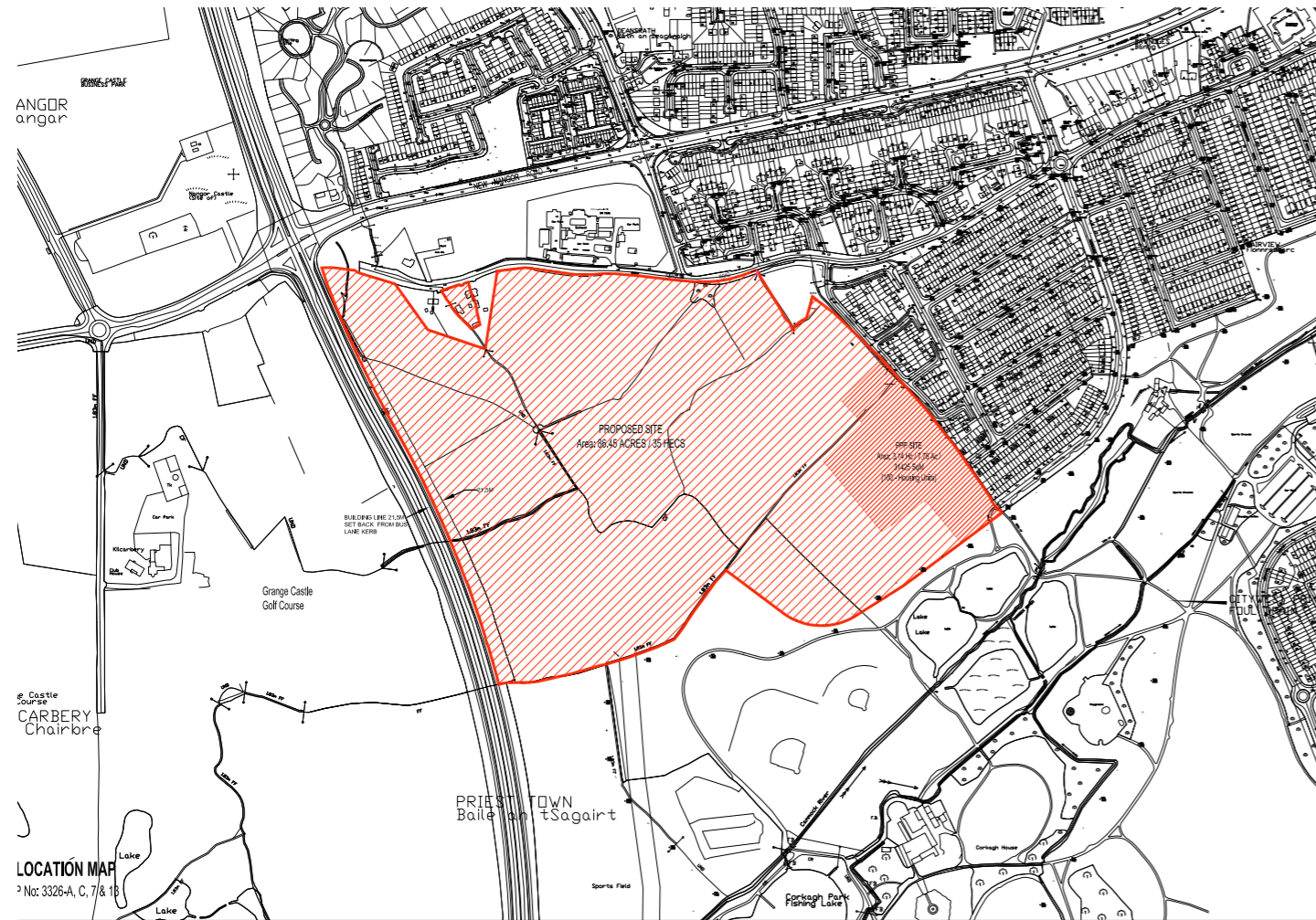
- Quality Housing for Sustainable Communities

- Urban Design Manual - A best Practice Guide

- Sustainable Urban Housing - Design Standards for New Apartments. Guidelines for Planning Authorities

- Design Manual for Urban Roads and Streets (DMURS)

- South Dublin County Council Development Plan 2016 - 2022



Site location plan 1:10000
- note location of subject site in southeast corner (PPP site)

2.0 Site Context

2.1 Brief

The main component of the brief provided by SDCC at the outset of the process was for the provision of 100 dwellings in line with the following schedule.

3 bed/ 4 person house	42
3 bed/ 5 person house	20
4 bed/ 6 person house	5
2 bed apartment	21
1 bed apartment	12
Total	100

The site is located immediately to the north of Corkagh Grange Park, Clondalkin, Dublin 22 and is bounded to the east by an existing 2-storey housing development (Kilcarbery Avenue.) The lands to the west and north of the subject site, extending to the Old Nanogor Road/ Cherrywood Avenue and R136 respectively, form part of the overall Kilcarbery - Grange masterplan lands. The Kilcarbery - Grange masterplan is analysed in further detail in the subsequent section.



Site photograph illustrating existing hedgerows/ trees in overall masterplan area



Detail view of hedgerow to northern part of subject site



Aerial photo of project site

2.0 Site Context

2.2 Kilcarbery - Grange Preliminary Masterplan

2.2.1. Masterplan overview

The vision for the masterplan is to realise a distinct high quality sustainable place with a local sense of character and community, which is closely connected to its own and its surrounding landscape and provides for a range of community needs, within an attractive, permeable and connected urban structure.

The preliminary masterplan describes the indicative integrated urban and landscape structure for the lands and the overall approach to the layout and design of development.

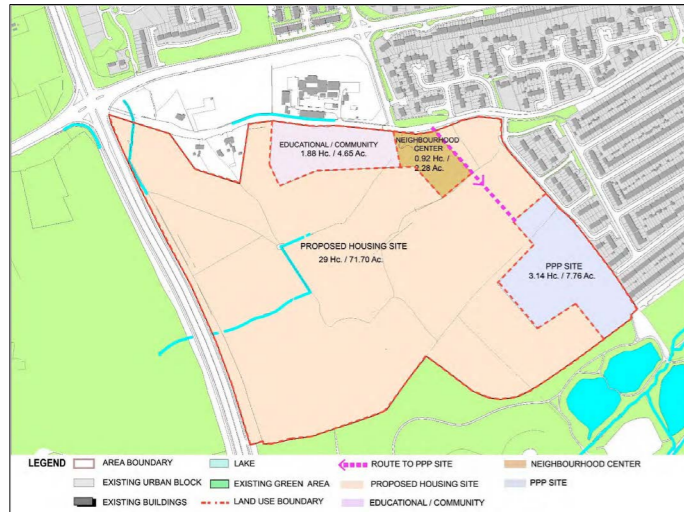
A permeable urban structure and network of spaces has been integrated with a strong landscape framework. A range of block sizes and shapes have been included to allow for a range of different building and typologies and uses.

Later planning and design stages will provide the detailed approach to all aspects of the public and private domains.

2.2.2 Development potential

Taking a conservative housing density figure of 40 units per hectare on a net development area (which excludes the main open spaces and the education and commercial blocks) a development potential of approximately 1000 units is estimated.

A maximum total figure of approximately 2000m2 would be expected for commercial development, if a single large supermarket and a small number of small unit service and retail units were to be developed at the new square. Additional commercial space could be located throughout Grange in the form of live-work or home occupation.



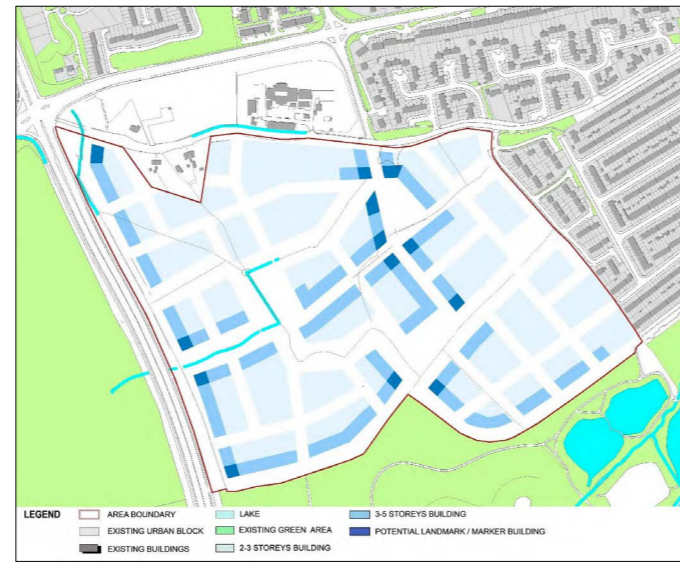
Kilcarbery - Grange Masterplan
Function - Land use



Kilcarbery - Grange Masterplan
Public Domain - Routes and spaces



Kilcarbery - Grange Masterplan
Public Domain - Landscape



Kilcarbery - Grange Masterplan
Buildings



Site photograph looking towards Corkagh Grange Park



Site photograph looking towards Corkagh Grange Park

Below
Aerial photograph of overall masterplan site



2.2 Kilcarbery - Grange Preliminary Masterplan
Final Preliminary Masterplan





2.0 Site Context

2.3 South Dublin County Council preliminary scheme for the subject site

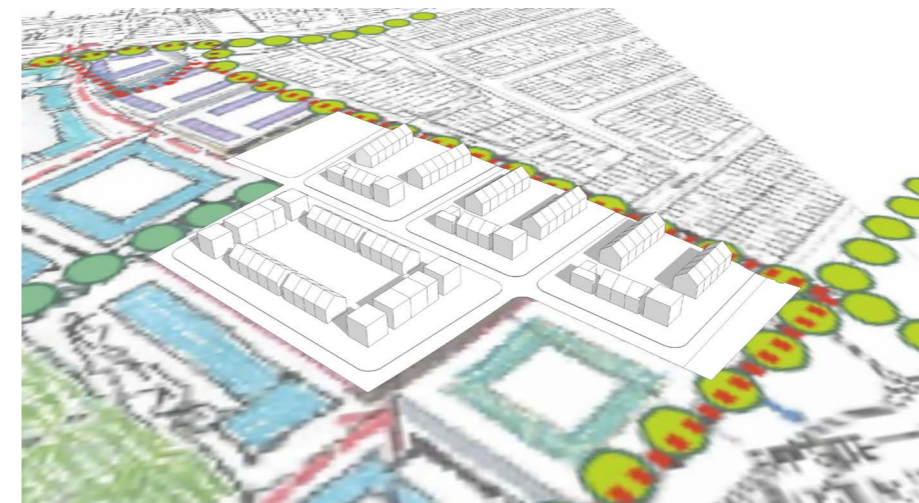
As part of the briefing process the design team were provided with a preliminary scheme for the subject site prepared by South Dublin County Council Architect's Department. The scheme layout takes its lead from the preliminary masterplan and forms the initial building blocks in the southeast corner of the masterplan site. The layout maximises permeability through possible future links through to the adjacent Kilcarberry housing development, to the rest of the masterplan site, and to Corkagh Grange Park to the south.

2.4 Revised brief

The above scheme prepared by South Dublin County Council Architect's Department provided the design team with a useful starting point for subsequent stages of design development. This is analysed in further detail in the subsequent section.

The following revisions to the brief were also agreed with the local authority that in turn influenced the development of the project.

- Increase of number of dwellings from 100 to 109 (to meet density requirements of 35 dwellings/ hectare.)
- Avoid detached and semi-detached dwellings.
- Avoid linear dispersal of 3-storey units.
- 1 bedroom apartment buildings to be grouped in standalone 3-storey buildings (one apartment per floor.)



Above
3D massing study of SDCC scheme prepared by SHA

Left
Outline scheme prepared by SDCC Architect's Dept.

3.0 Proposed Development

3.1 Proposed site layout/ design approach



The following key design aspirations have underpinned the design process of the layout to date.

- Creation of a high quality living environment for residents and enhancement of the social, environmental and visual quality of the area as a whole;
- Design of the layout to discourage anti-social behaviour, particularly by ensuring that all access ways and public areas are overlooked by dwellings;
- Maximise amenity and energy efficiency through climate sensitive design that takes account of orientation and typography, and retention of existing site features wherever possible;
- Elimination of barriers to accessibility for all users.
- Promoting the concepts of enclosure, clear separation of public/ private realm and good permeability as the means to achieve a high quality living environment.

3.1.1 Public open space
As identified in the Kilcarbery- Grange preliminary master plan document, the public open space to the north of the dwellings will ultimately form an integral part of the overall 'green ribbon' strategy and reinforces the pattern of existing hedgerows and landscaping on the site.

3.1.2 Streets, roads and footpaths
The design team have taken full cognisance of the requirements of DMURS and other relevant guidance/ legislation. Please refer to accompanying report prepared by Malone O'Regan.

All parking for the dwellings and apartments has been provided on-street and is located so as to be overlooked by the residents.

Left
Proposed site layout

3.0 Proposed Development



Eye level street view looking north

3.2 Dwelling types

A range of dwelling types and scales have been developed to avoid a monotonous arrangement lacking in character. In line with the provisions of the SDCC Development Plan and Kilcarbery - Grange Preliminary Masterplan, a series of 2 storey dwelling types have been used in combination with 3 storey apartment buildings strategically placed around the site.

The 2 storey dwellings respect the scale of the adjacent existing housing development, while the 3 storey apartment buildings mark the strategic corners of the development at the ends of all streets and vistas. The 3-storey apartment buildings have been developed to maximise passive surveillance, particularly by ensuring there are no blank gable walls at these critical locations.

The dwellings are generally arranged in terraces of between 2-5 houses, often separated by small gaps to form longer urban blocks. The use of terraced dwellings affords significant advantages in terms of security, privacy, economic use of building land and economy with regard to construction and running costs, while affording scope for Architectural expression.

Architectural expression in this instance is achieved through the 'stacked' arrangement of dwellings that, in combination with individual dwelling features such as entrance canopies, refuse storage and roof detailing, contribute to the overall terrace composition. Continuity of the dwelling facade material through to the ground floor of the apartment buildings gives an overall coherence and unity to the terraces, while still affording individual expression of the upper apartment floors at all key corner locations.

The provision of the 3-storey corner apartment buildings enables the required density of 35 dwellings per hectare to be achieved while also creating 'landmark' buildings that mark points of reference throughout the scheme.



Aerial view of typical arrangement of dwellings/ apartments



Eye level street view looking south



Aerial view of typical arrangement of dwellings/ apartments



Aerial view of typical terrace of dwellings

3.3 Dwelling Design

3.3.1 Apartment design

All apartments have been designed in accordance with the recently published 'Sustainable Urban Housing - Design Standards for New Apartments. Guidelines for Planning Authorities' document. The individual apartment floor areas are generally in excess of the minimum standards identified therein, and when considered in the context of all apartments within the development the requirement for 50% of apartments to be 10% above the minimum requirement has been fulfilled.

All apartments have been designed with well-proportioned rooms with adequate daylight, solar gain, and cross ventilation. Living spaces to all apartments enjoy dual aspect, with south, east or west facing windows in all instances. Windows to the street facing facades have been maximised, with windows to the inward facing facades limited to prevent overlooking to dwelling private gardens beyond while still maintaining oblique 'eyes on the street.'

The buildings are arranged over 3 storeys with one apartment per floor. The ground floor apartments have their own private curtilage and front door access. Entry to the upper level apartments is gained via an external staircase that is accessed from a small shared front curtilage area that also provides the way through to the associated communal open spaces. The external staircase leads to a first floor terrace at which point there are a further 2 apartment front doors providing direct access to the first floor apartment and via a private internal staircase to the second floor apartment. In essence each individual apartment has its own front door.

Storage is predominantly catered for internally within the apartment, with a further dedicated store for each apartment provided at ground floor level (accessed from the communal open space shared between the 3 apartments in each building.) Private open space to each apartment is provided either by way of a terrace or balcony accessed from the main living area.

Dedicated communal open space for the 3 apartments in each individual building is provided immediately to the east or west of the building (depending on configuration.) These communal open spaces are in excess of the minimum area requirements set out in the SDCC development plan, and all enjoy a southerly aspect. Only residents of the respective apartment buildings will be provided with access to these spaces through the dedicated pedestrian gate in the curtilage wall.

3.0 Proposed Development

3.3 Dwelling Design

3.3.2 House Design

The scheme comprises a combination of 3B/4P, 3B/5P and 4B/7P dwellings. All dwellings have been designed to the same depth to allow maximum flexibility and interchangeability along the respective terraces.

Space standards for all the dwellings are generally in accordance (and often exceed) with the requirements set out in the 'Quality Housing for Sustainable Communities' document and the relevant sections of the SDCC Development Plan. Use of natural daylight and sunlight has been maximised, with all windows sized to allow good daylight penetration. The arrangement of living/ kitchen/ dining spaces relative to the front and rear of the dwellings varies across the development providing multiple aspects of activity to the street from within the houses. Large ground floor windows to the front and patio doors to the rear, combined with an internal generously wide linking door between, ensures that dual aspect is also a key component in providing good quality and functional family orientated spaces to the ground floor of all dwellings.

Practical aspects of access and use have been considered in detail, with particular reference to part M of the Building Regulations.

Storage spaces are distributed throughout the circulation areas, living spaces and bedrooms, with kitchen cupboard spaces and worktops being provided to meet (or exceed where possible) the requirements set out in table 5.2 of the 'Quality Housing for Sustainable Communities' document.

Refuse storage is integral to the overall front curtilage design with bins being screened from view by timber doors, and all contained beneath a secure lid. The curtilage spaces provide a measure of defensible space to the front of the dwellings and avoids potential hazards for passers-by arising from opening windows and the like.

Private open spaces to each of the dwellings are provided by way of a secure garden to the rear of each house.



Detail view of dwelling entrance and curtilage arrangement



Detail view of corner apartment balcony arrangement



Detail view of dwelling entrance and curtilage arrangement

4.0 Landscaping

4.1 Main public open space

The main public open space is located to correspond to the location of 'Sycamore Green' within the Kilcarberry Grange Masterplan.

The open space is proposed to be largely soft landscaped with a network of paths creating connectivity both within the scheme and with any potential future developments to the north and west.

Low level planting and grassed mounds seeded with wildflowers also articulate the space into areas for passive and active recreation, reducing conflict between the separate uses whilst creating an attractive framework for the various uses.

A section of overgrown hedgerow located between the proposed housing and the open space. This forms the eastern extremity of a designated townland hedgerow within the CDP. This section of hedgerow is proposed for removal due to its overgrown nature, variable condition and the fact it is growing on a raised embankment, all of which mean that its retention would prevent any passive surveillance of the open space and could potential become a focus for anti-social behaviour. A line of native trees will be planted to replicate the original field boundary pattern in this area.

Additionally extensive tree and hedgerow planting throughout the scheme with a significant proportion of native species will mitigate against this loss. Refer also to the tree impact assessment and proposed planting lists for more information.



4.1.1 Play

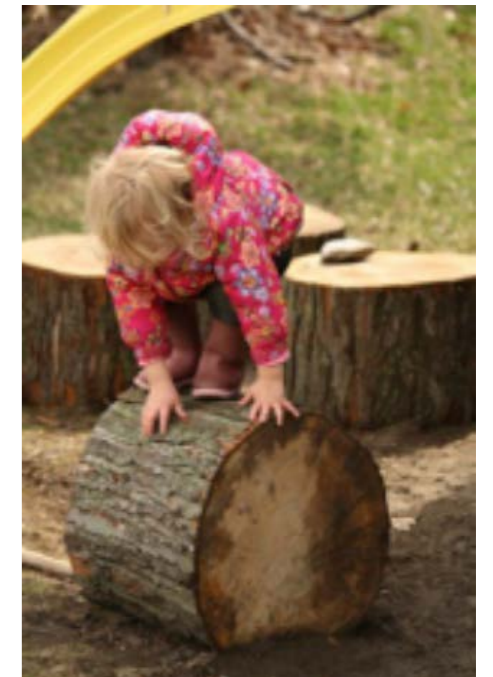
Grassed sculptural mounds seeded with wildflowers to reduce maintenance and to increase seasonal interest and biodiversity create an informal play opportunity and the potential for the location of play equipment such as slides/ climbing nets.

An area of bark chippings edged with tree planting also creates a potential location for a robust play sculpture for young children. It is proposed to re-use cut logs from any trees felled on site to create stepping stones, simple and robust informal seating and planting protection edging.

Gently sloped grass banks will frame a mown grass kick-about area to the east of the public open space providing an informal viewing area and separating ball games from the adjoining activities.

4.1.2 Passive recreation

The grassed mounds and planting separate a quieter lawn area for relaxation.



4.2 Planting Strategy

The general planting strategy throughout the scheme is for significant structure tree planting with 2 metre clear stems to provide a leafy canopy layer, softening the proposed buildings and a base layer of groundcover planting to create low level seasonal interest and colour softening the hard surfaced areas and car parking. Eye level between the two planting types is kept clear to maintain sight lines throughout the scheme.

4.2.1 Open space structure trees

Native and naturalised tree species are to be planted within the public open space to increase opportunities for native wildlife. These will ultimately be large scale trees to designate a parkland character.

4.2.2 Street Trees

Street tree planting will consist of species with fastigiate or neat forms suitable to the scale of the streetscape and those which will thrive in a streetscape environment. Street tree planting is located to avoid impacts with street lighting. Street trees will be planted into a minimum of 7m³ topsoil (or to the requirements of the local authority parks department, whichever is greater), with the use of urban tree soils and topsoil loaded rootcells to increase rooting areas outside the main tree pit area as necessary.

4.2.3 Landmark Trees

Large scale trees with strong architectural forms and vivid autumn colour will be planted at the nodal points within the streetscape to provide a landmark feature where raised traffic tables create flush pedestrian crossings.



4.2.4 Groundcover Planting

Groundcover planting will be in single species blocks taken from an overall palette of species throughout the scheme with flowers and fruits attractive to wildlife such as bees and butterflies. Species will be of maximum 1m height at maturity to maintain clear sight lines.



4.0 Landscaping

4.2.5 Garden Trees

Rear gardens will be planted with small-medium scale fruit trees or flowering trees to provide softening and punctuation of the garden landscapes.

Front gardens will be planted with small scale flowering trees/ large shrubs to provide softening of the building frontages and bin stores and to create seasonal colour within the streets.

4.2.6 Attenuation Ponds

The southeastern area of the development site will include three landscaped attenuation ponds which connect surface water flow to the River Camac.

Access to these ponds will be provided through a new gate into Corkagh Grange Park and realigned pathways within the park. Two accessible hardwood timber jetties will be built into the water surfaces.

The ponds will be of shallow built with approx. 200-500mm depth, rainfall dependent. Their banks will be gently sloped and planted with a damp meadow wildflower mix. The immediately shoreline will contain a shallow safety shelf with marginal planting while two small islands will also show marginal planting and tress which are tolerant of waterlogging. In addition, two areas of shoreline will be surfaced with rock riprap.


The further surrounds of the attenuation ponds will show predominantly woodland planting and new trees, in accordance with the existing setting and species of Corkagh Grange Park.



4.3 Boundary Treatments

A 1.5 metre wide verge is provided between the proposed development and the interim site fencing. This will be planted with a mixed native hedgerow and seeded to the front with hedgerow native wildflowers.







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CONSULTING ENGINEERS

Corkagh Grange

Compliance Report on Part L, HC 12 Building Energy Rating Assignment incorporating Energy Efficiency and Climate Change Adaptation Design Statement

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5.0 Sustainability & Energy Statement


The design strategy to ensure sustainable, energy efficient design to ensure low cost of use and consideration of climate change includes:

- all houses have been designed to have a compact and efficient form, use of terrace and semidetached houses reduce exposed envelope and reduce heat losses.
- external envelope is highly insulated to reduce heat losses.
- windows are sized appropriately to balance heat loss and potential solar gain.
- the detail design will consider the most efficient and appropriate heating system, including gas boilers and heatpumps. Provision for solar panels on each roof has been allowed for.
- materials with long life and low embodied energy are preferred to reduce impact on the environment
- the detailed design will consider watersaving measures including water saving devices and water butts for garden water use.
- storm water is attenuated on site before discharge at a limited flow rate to the public sewer.
- existing hedgerows and trees are retained where appropriate and augmented by new tree planting and variety of new planting to support greater biodiversity.

The energy performance of each house will comply with the requirements of the building regulations, achieving a BER of A3 or better. Detail of the energy performance is included in the services engineer's, Semple McKillop, energy and climate change report.

Storm water management is described in the civil engineer's, Malone O Regan, civil works report.

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PROJECT
Housing Development at Corkagh Grange

CLIENT
South Dublin County Council


CORKAGH GRANGE
Clondalkin, Dublin 22

BASELINE ENVIRONMENTAL NOISE MONITORING

28 February 2017



Report Author: Shane Armstrong
Report: DC1505-01

www.allegroacoustics.ie 

Allegro Acoustics was commissioned to undertake a day and night time baseline environmental noise survey at the site of the proposed Corkagh Grange project.

The site is located on the outskirts of Clondalkin, Dublin 22. There are a number of housing estates located towards the east and north of the site and Casement Air Base is also located nearby to the southwest of the site.

Noise monitoring was undertaken on 28 February in accordance with *ISO 1996-1:2016 Acoustics - Description, Measurement and Assessment of Environmental Noise*.

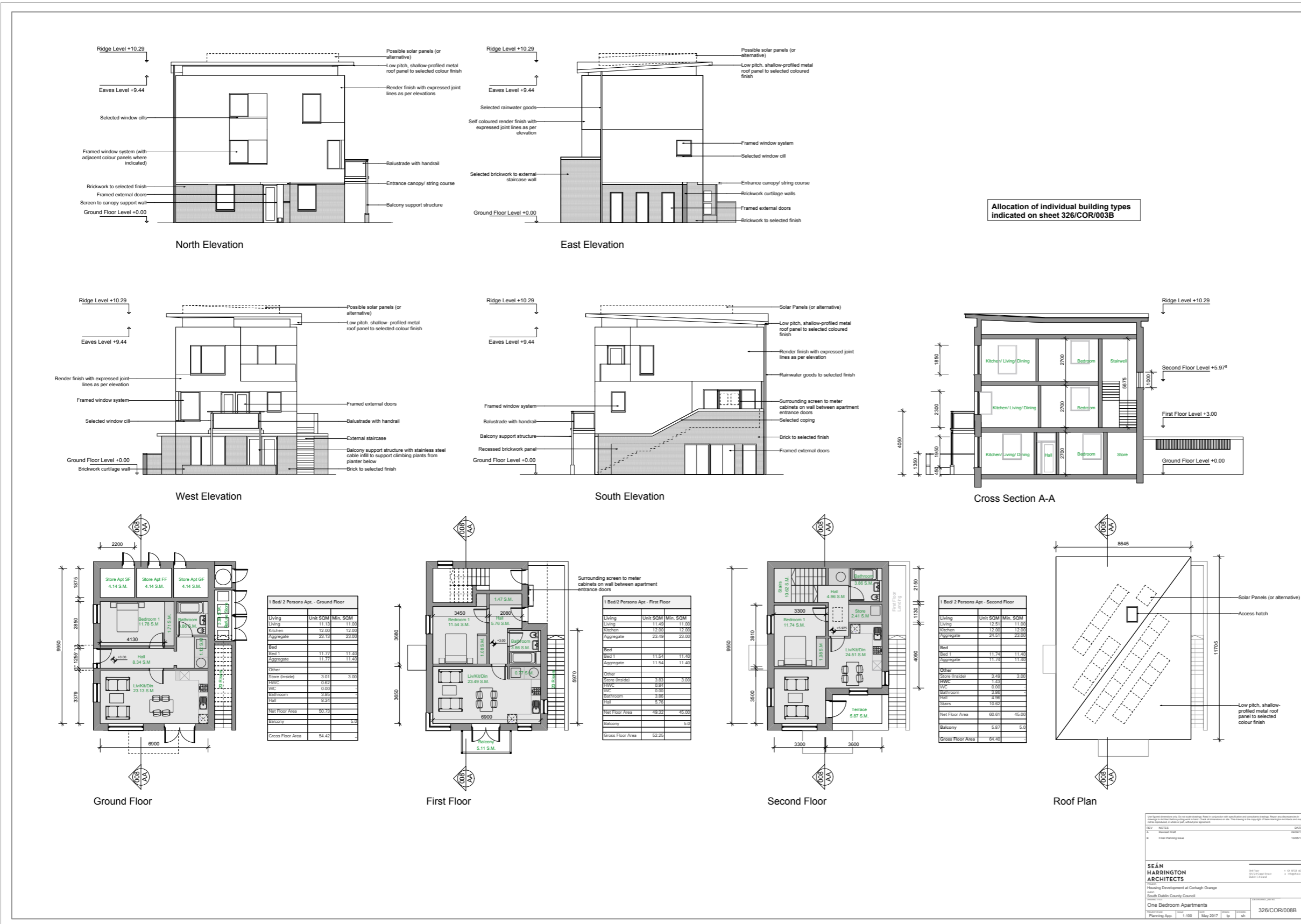
The measurement and assessment of environmental noise at the proposed Corkagh Grange site concluded that the dominant noise source during the day was observed to be road traffic along major roads nearby. It was observed that noise measurements taken at night at certain locations around the site experienced elevated noise levels due to overhead air traffic coming from Casement Air Base to the south west of the Corkagh Grange site.

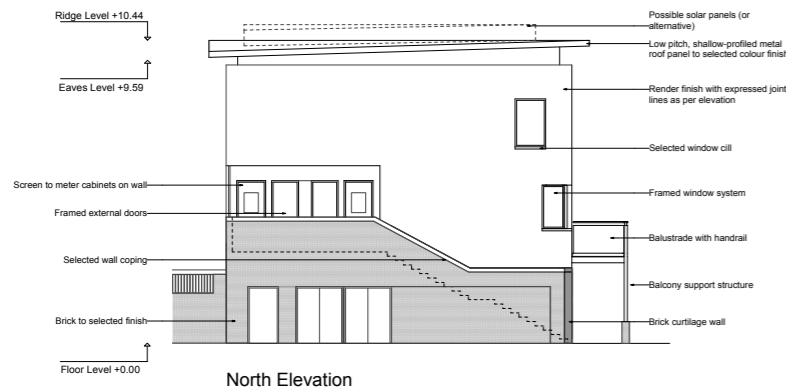
The daytime measured noise levels are below the WHO Guidelines limit value of 55dB L_{Aeq} . The night time measured noise levels are marginally in excess of the 45dB night time limit value as set out in the *WHO Guidelines*.

The report therefore recommends that the building envelope for residential units at the Corkagh Grange site is designed to ensure that the 30dB L_{Aeq} limit value for bedrooms, as outlined in the aforementioned *WHO guidelines*, is achieved.

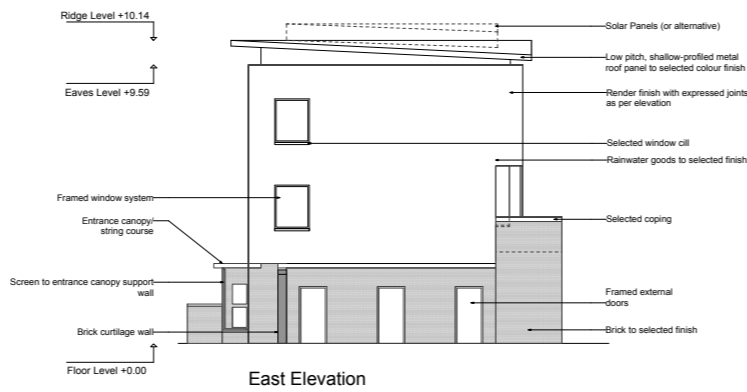
The detailed design and specification of all dwellings will ensure that the above requirements are strictly adhered to, and in particular the proposed window/ door system and any facade components of the ventilation systems will be specified to meet or exceed the aforementioned performance criteria.





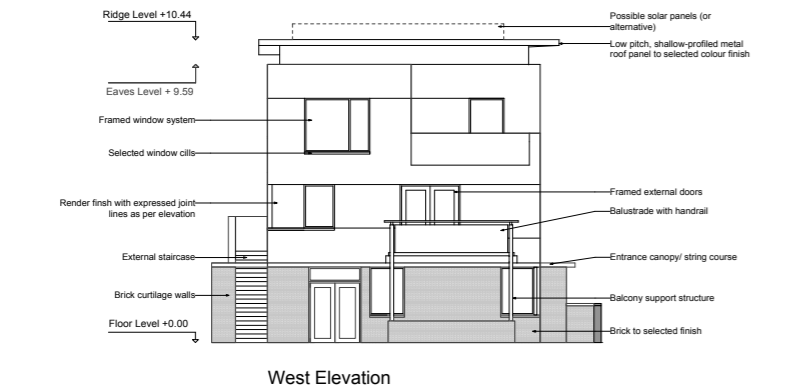


North Elevation



East Elevation

Allocation of individual building types indicated on sheet 326/COR/003B



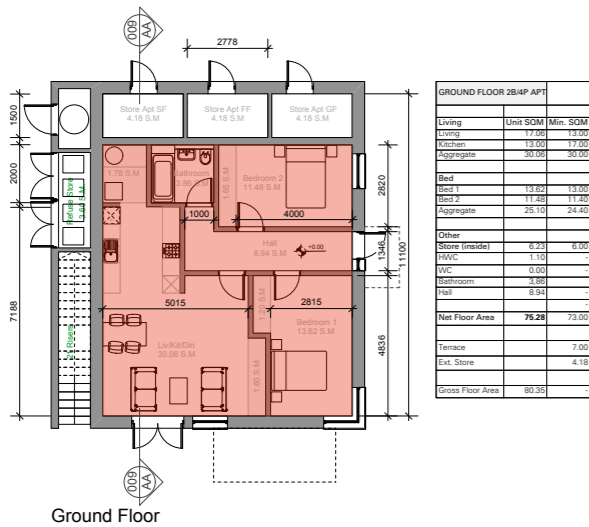
West Elevation



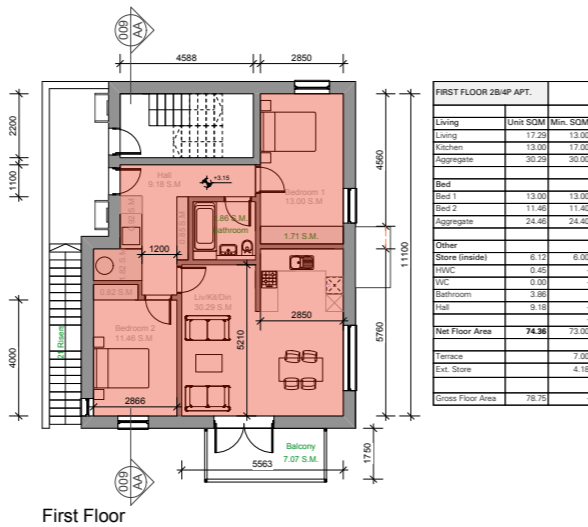
South Elevation



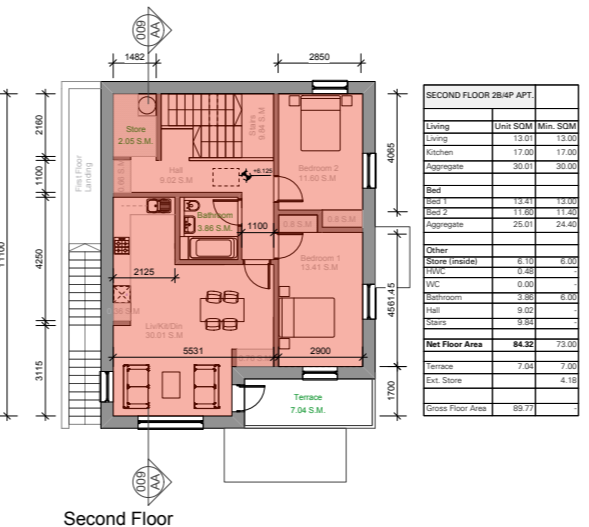
Cross-section A-A



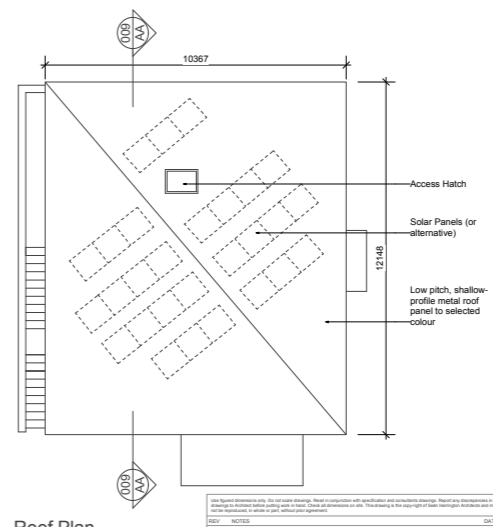
Ground Floor



First Floor



Second Floor



Roof Plan

SEÁN HARRINGTON ARCHITECTS
 Housing Development at Corkagh Grange
 South Dublin County Council
 Two Bedroom Apartments
 Planning App. 1-100 May 2107 sp sh 326/COR/009B

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