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**Proposed Part 8 Residential Development
Oldtown Mill, Celbridge, Co. Kildare**

**Resource and Waste Management Plan
(RWMP)**

KILDARE COUNTY COUNCIL

**Oldtown Mill Road, Celbridge, Co. Kildare
Resource and Waste Management Plan (RWMP)**

Document Control Sheet

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1 Introduction

This report is prepared on behalf of the NDFA and Kildare County Council to accompany a Part 8 proposal for the development of 60 no. residential units at Oldtown Mill Road, Celbridge, Co. Kildare.

The proposed development includes:

- i. 60 no. residential units including 40 no. houses and 20 no. apartments comprising 20 no. one bed units; 15 no. two bed units; 21 no. three bed units; and 4 no. four bed units; with renewable energy design measures (which may be provided externally) for each housing unit.
- ii. Landscaping works including provision of (a) open space and kick about areas; (b) natural play features; and (c) new pedestrian and cycle connections.
- iii. Associate site and infrastructural works including provision for (a) 2 no. ESB substations and switchrooms; (b) car and bicycle parking; (d) public lighting; (e) temporary construction signage; (f) estate signage; and (g) varied site boundary treatment comprising walls and fencing.
- iv. All associated site development works, including removal of existing spoil from the site in advance of construction works.

1.1 Background and Purpose

Waste created during Construction and Demolition (C&D) work is the largest waste stream in the EU, accounting for one third of all waste generated. It is therefore pertinent to outline proper management procedures for construction and demolition (C&D) waste and resources that are in line with policies that fit a circular economic model. Several steps can be taken regarding material and waste management to adhere to the circular economic model, such as:

- Reducing the use of virgin resources.
- Keeping materials in the economy as long as possible.
- Maintaining intrinsic value/quality as high as possible.
- Reducing hazardous substances in products and waste.

This Resource & Waste Management Plan (RWMP) for the proposed development will address the following points:

- Analysis of waste arisings / material surpluses, to be recorded in the Waste Register (see **Appendix A**)
- Methods proposed for prevention, reuse and recycling of waste materials
- Waste handling procedures
- Waste storage procedures
- Waste disposal procedures
- Waste auditing
- Record keeping

1.2 Supporting Documentation, Policies, and Legislation

The principles and objectives to deliver sustainable waste management for this project have been incorporated in the preparation of this report and are based on the following strategic objectives and guidance documentation:

- Environmental Protection Agency Act 1992
- Waste Management Acts 1996 to 2005
- Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)
- Waste Management (Collection Permit) Amendment Regulations 2008 (SI No. 87 of 2008), as amended.
- The Waste Framework Directive (Directive 2008/98/EC)
- Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – July 2006
- A Waste Action Plan for a Circular Economy 2020-2025
- Environmental Protection Agency Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects 2021
- Construction Environmental Management Plan (CEMP)
- Relevant Planning Conditions

In reference to the above legislation, the below hierarchy has been adapted for this site:

- Reduction of the amount of waste generated by the construction process.
- Segregation of waste will be implemented during the construction phase of the development to enable easy re-use and recycling, wherever possible.
- Recycle waste material where feasible, including the use of excess excavations as fill material, recycling of various waste fractions such as metals, packaging, etc.

1.3 Kildare County Development Management Standard

The development management standards for County Kildare are outlined in the Kildare County Development Plan (CDP) 2023-2029. Of relevance to this report is **Chapter 6 – Infrastructure & Environmental Services** which outlines policies in line with Kildare County Council waste management objectives. The policies relevant to the proposed development include:

- **IN P6:** Implement European Union, National and Regional waste-related environmental policy, legislation, guidance, and codes of practice, in order to support the transition from a waste management economy towards a circular economy.
- **IN O39:** Encourage a transition from a waste economy to a green circular economy in accordance with 'A Waste Action Plan for a Circular Economy 2020-2025' and the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less'.
- **IN O44:** Encourage waste prevention, minimisation, re-use, recycling, and recovery as methods for managing waste.
- **IN O53:** Ensure that hazardous waste is address through an integrated approach of prevention, collection and recycling and encourage the development of industry-led producer responsibility schemes for key waste streams.

Additionally, **Section 15.10.2 – Construction and Demolition Waste** outlines the overall

approach of Kildare County Council with regards to waste generated during development. It states:

“Construction & Demolition waste management is now a priority objective under the new National Waste Management Plan for a Circular Economy. Detailed waste management plans will be required to be produced and delivered on for all new development regardless of their size in accordance with the latest EPA Guidelines, where the emphasis will be on waste minimisation and reuse, followed by sustainable and environmentally friendly disposal to suitably licensed facilities.”

1.4 RWMP Review

This RWMP report serves as a live document and will be reviewed regularly to assess whether waste management practices are being adhered to. Likewise, it will be continuously updated as appropriate. Following completion of the project the RWMP will be updated with the final waste levels generated by the project. It is proposed that a review of waste management practices will form part of regular site inspection audits to be carried out by the construction contractor. This information should be forwarded to the RWM to assist in determining the best methods for waste minimisation, reduction, re-use, recycling, and disposal as the works progress.

2 Project Description

2.1 Site Location

The proposed development will be located along Oldtown Mill Road among existing residential developments to the northwest outskirts of Celbridge, County Kildare. The site access point currently consists of a metal gate located along the Oldtown Road directly opposite the entry road to The Paddock estate.

The site is bounded by The Orchard estate to the south and Oldtown Mill Road and The Paddock estate to the east. The lands directly adjacent to the west of the site consist of greenfield land used for agricultural purposes while the land immediately north of the site consists of greenfield land that is currently under development.

An approximate outline of the subject site and its environs is provided in **Figure 2.1** below.



Figure 2.1: Site location and environs (Source: Google Maps)

2.2 Site Characteristics

2.2.1 Topography

The proposed residential development is to be constructed on a greenfield site which currently varies in topography due to soil mounds formed as a by-product of other developments in the area, particularly in the western half of the site. This spoil material will be cleared to facilitate the works. At present, the topography ranges from 70.60m OD to the eastern boundary of the site near the site entrance, to 75.79m OD to the west of the site where the mounds are highest. Excluding the mounds, the remaining land is relatively flat and has a slight downward gradient from east to west ranging from 70.52m OD to 69.87m OD.

2.2.2 Site Access

The proposed construction entrance shall be located at the existing site gate located to the northeast along the Oldtown Mill Road adjacent to the entry road to The Paddock housing estate. At present the gate provides access and egress directly onto the Oldtown Mill Road. Construction traffic will approach the site entrance from the south utilising Oldtown Mill Road which connects to the Shackleton Road approximately 530m to the south.

2.2.3 Historical Maps

The GeoHive Historic map viewer was consulted to assess previous land uses or developments within or in the vicinity of the proposed site boundaries. According to the First Edition 6" maps developed between 1829-1841, the location of the proposed site previously consisted of open farmland. The nearby estates of Thornhill Gardens and Thornhill Heights to the east of the proposed site can be seen completed in black and white aerial survey maps generated in 1995, while cleared land is visible to the north to make way for the estates of Ballygoran Court and Ballygoran View. Aerial survey maps spanning from 2006-2012 show development progressing on the The Paddock estate to the east of the site and The Orchard estate to the immediate south. It can be seen that the proposed site location is used for storage of construction material during this time as a result of the neighbouring developments. These estates can be seen completed in subsequent aerial survey maps completed between 2013-2018. It should be noted that storage of this C&D material on site means that effective waste management procedures will be required prior to beginning of the proposed works.

2.3 Environmental Sensitivites

2.3.1 Geology, Hydrology & Hydrogeology

Maps generated by the Environmental Protection Agency (EPA) and featuring data from the EU Water Framework Directive (WFD) were consulted to assess the extent and quality of waterbodies present in the vicinity of the proposed development. The closest waterbody to the site consists of the Toolestown stream which runs from west to east and is located approximately 690m south of the proposed development. The Ballygoran (Kilwogan) stream also runs from west to east and is located approximately 730m north of the proposed site. These streams are both minor tributaries of the River Liffey main line.

Taking the scale and nature of the proposed development into consideration, only waterbodies within a 1.5km radius of the site were considered as potential receptors, and as such, only these waterbodies were included in this analysis. A summary of the nearest waterbodies can be found in **Table 2.1** below.

Waterbody	WFD Sub-basin Name	Code	Distance from Site	Direction from Site
Toolestown Stream	Liffey_150	IE_EA_09L011900	690 m	South
Ballygoran Stream	Liffey_150	IE_EA_09L011900	730 m	North
Liffey River	Liffey_150	IE_EA_09L011900	1500 m	Southeast
Leixlip Reservoir	Liffey_150	IE_EA_09_69	3000 m	East

The WFD runs in 6-year cycles with the most recent data being generated between 2016-2021. The Directive takes rivers, lakes, estuaries, groundwater and coastal waters into consideration and each waterbody can be awarded one of five statuses: High, Good, Moderate, Poor, and Bad. Additionally, waterbodies can be assigned a risk level (“At Risk”, “Not At Risk”, “Review”) which represents the risk of the waterbody of failing its WFD objectives by 2027.

The WFD status of the Toolestown Stream is considered to be ‘Good’ and the risk level of the stream is currently ‘Under Review’. Similarly, The Ballygoran Stream has a status of ‘Good’ and is ‘Under Review’ with regards to its risk level. The nearest major water source consists of the River Liffey which runs through Celbridge Town from southwest to northeast and follows course in an easterly direction to reach Dublin City and outflow into Dublin Bay. The source of the River Liffey begins at Kippure Mountain at Sally Gap, County Wicklow. It runs a total length 132 km and has a basin size of 1,256 sq. km. Major tributaries of the Liffey include the River Dodder, the River Poddle, and the River Camac. The course of the Liffey near Celbridge has a status of ‘Good’ and its risk level is ‘Under Review’. As the course of the Liffey passes Leixlip, however, the status of the river is deemed ‘Poor’ and is considered ‘At Risk’ of meeting WFD objectives by 2027.

The proposed site is located within WFD catchment 09, Liffey and Dublin Bay, and is located within sub-catchment “Liffey_SC_080”. The 3rd Cycle Draft Liffey and Dublin Bay Catchment Report (HA 09) published in 2021 provides a summary of the quality assessment outcomes of waterbodies within the catchment. According to this report, The Liffey is deemed “At Risk” due to urban wastewater treatment agglomerations (combined sewer overflows). The closest lake waterbody consists of Leixlip Reservoir which is located ca. 3 km west of the site. This is a heavily modified water body which serves dual purposes for power generation and drinking water supply. It possesses a WFD status of “Poor”, and its risk level is currently “Under Review”.

The site was cross-referenced with the Teagasc Soil Information System (SIS) soil profile map which states that the surface soil at the site location is classed as ‘Elton’ series. These soils are derived from dominantly limestone drift with a small admixture of shale and sandstone. Soils of this series are typically deep, well-drained, of loam texture and high base status. The profile has a dark brown to brown loamy surface. The use of the proposed site as a construction compound/ soil deposition site in the past means that the site soil composition could also be considered made ground. The subsoil of the site is classed as limestone till (carboniferous).

The underlying bedrock of the proposed site is classed as visean limestone and calcareous shale. This bedrock region extends southwest towards Straffan and eastwards to underlie Lucan, Clondalkin, Tallaght and onwards to Dublin City.

2.3.2 Groundwater Vulnerability

According to the Geological Survey of Ireland map viewer, the site is underlain by a Locally Important Aquifer consisting of the aforementioned bedrock which is moderately productive only in local zones. The groundwater vulnerability is classed as 'High'. The subsoil permeability is classified as 'Moderate'. Based off the EPA groundwater vulnerability matrix obtained from the 'GSI Guidelines for Assessment and Mapping of Groundwater Vulnerability to Contamination 2003' it can be assumed that bedrock is within 1.5-8m of the soil surface.

2.3.3 Flood Risk

The OPW Floodinfo.ie website was consulted for high level information on any potential flood risk on or near the site. The closest flood events occurred along the River Liffey ca. 1.5km southeast of the proposed site on three separate occasions. **Table 2.2** below summarises the sources of the nearest floods and their proximity to site.

Table 2.2: Flood Events in Proximity to Proposed Site				
Flood Event Code	Location	Date	Flood Source	Distance from Site
ID-1530	Clane Road, Ballymakealy, Celbridge	November 2002	Low lying land	1700 m SW
ID-1534	Oldtown Road junction, Celbridge	November 2002	Low lying land	1500 m SE
ID-9	Liffey, Celbridge	June 1993	River	1550 m SE
ID-1352	Liffey, Celbridge	November 2000	River	1600 m SE

The proposed site itself is of sufficient distance from the projected flood risk area hence the fluvial flood risk is considered to be low. The site is not located within benefitting land associated with the Arterial Drainage and District Drainage Schemes. National Indicative Fluvial Mapping (NIFM) models the extent of land that might be flooded by rivers during a theoretical flood with an estimated probability of occurrence. The proposed site is not within the range of a Medium Probability flood event (1 in 100 years) according to NIFM mapping. Based on current data available it is not foreseen that the development will present any significant increase in flooding risk either within the site or downstream of the site.

2.3.4 Archaeology

An Archaeological Impact Assessment was published by *John Purcell Archaeological Consultancy* in June 2023 in relation to the site. This report outlined any archaeological sites in the vicinity of the development and assessed the potential cultural heritage impact that development would incur on the surrounding environment. The main findings of the report were as follows:

- **Archaeological Monuments:** There are no archaeological monuments close to the

proposed site at Oldtown. The medieval settlement at Celbridge is over 1km from the site and contains the closest archaeological monuments to the site.

- **Protected Structures:** The study area does not include any structures listed in the Record of Protected Structures for Kildare of the National Inventory of Archaeological Heritage. No listed structures are located within the wider environs.

In summary, no significant impact on the archaeological landscape is predicted as a result of the proposed works. No further archaeological input will be required.

2.3.5 Ecological Receptors

According to the National Parks & Wildlife Service map viewer, the proposed site is located a sufficient distance (1.5km) from any designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) or Natural Heritage Areas (NHAs). The nearest designated sites consist of the Royal Canal proposed Natural Heritage Area (pNHA) located ca. 3.4km north of the proposed site, the Rye Water Valley/Carton SAC ca. 3.5km north and the Grand Canal pNHA located ca. 4km southwest of the proposed site.

An Appropriate Assessment (AA) Screening Report was carried out by *NM Ecology Ltd.* on behalf of Kildare County Council and has determined that a Natura Impact Statement (Appropriate Assessment) is not required in respect of this proposed development.

A Preliminary Ecological Appraisal was also carried out by *NM Ecology* to assess whether any sensitive ecological receptors were present on site. **Section 4** of this report summarises the relevant ecological assessment reports and outlines best practice measures for the mitigation of impacts to ecological receptors during the course of works.

Given the scale and nature of the proposed development, it is unlikely that any designated sites will be impacted as a result of the works.

2.4 Phasing of the Development

A construction program of 12 - 18 months serves as the agreed estimated timeline for the project. A layout plan of the development is detailed in **Figure 2.1** below. The proposed development includes the following sequence of works:

- 60 no. residential units including 40 no. houses and 20 no. apartments comprising 20 no. one-bed units; 15 no. two-bed units; 21 no. three-bed units; and 4 no. four-bed units; with renewable energy design measures (which may be provided externally) for each housing unit.
- Landscaping works including provision of (a) open space and kick about areas; (b) natural play features; and (c) new pedestrian and cycle connections.
- Associated site and infrastructural works including provision for (a) 2 no. ESB substations and switch rooms; (b) car and bicycle parking; (d) public lighting; (e) temporary construction signage; (f) estate signage; and (g) varied site boundary treatment comprising walls and fencing; and all associated site development works, including removal of existing spoil from the site in advance of construction works.

Access to the development is proposed along Oldtown Mill Road slightly north of the existing entrance to The Orchard estate and west of the entrance to The Paddock. A local road will extend south-westerly through the proposed estate. **Figure 2.1** shows the proposed site plan.



Figure 2.1: Site Plan (Cropped)

The project is to be divided into several distinct phases as follows:

Pre-Construction Phase – Site clearance and preliminary works

- Removal of existing soil mounds to a suitably licenced facility to facilitate the works. **Section 3.2.1** below outlines the estimated amount of soil removal work required.
- Site set-up, temporary services, site hoarding / fencing, staff welfare facilities.
- Ground works and landscaping.

Phase 1 – Construction

- 60 no. residential units comprising houses and apartment units.

Ancillary works – which will consist of:

- Sustainable Drainage System (SuDS)
- Surface water and foul sewer network and associated attenuation
- Car and bicycle parking spaces
- Electrical and telecom services
- Mains water supply connections
- Wastewater drainage connections
- Pedestrian access routes
- Asphalt installation and road markings
- Landscaping of public open areas

2.5 Pre-Construction Activities

The main contractor will conduct enabling works for soil removal, establish site setup, appropriate signing, hoarding, security fencing and welfare facilities.

2.5.1 Soil Removal

It is estimated that the total volume of existing soil / spoil material to be removed from site equates to approximately 35,000m³ (56,000T). Assuming the use of 30-tonne trucks operating at a schedule of 15 removals per day, an approximate timeline of removal works equates to 125 days or 21 weeks. This calculation is based upon a typical work schedule running from Monday-Friday. The designation of waste removal vehicles and appropriate facilities will be decided by the appointed Contractor. Accurate measurements of total soil to be removed from site will be provided by a suitably qualified Quantity Surveyor prior to removal and recorded in the Waste Register (**Appendix A**) by the Contractor.

2.5.2 Site Set-Up and Hoarding

Perimeter hoarding will be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access points to the site, in the form of gates or doors, will be kept locked at any time that these areas are not monitored (e.g., outside working hours).

The hoarding will be well-maintained and may be painted. Any hoardings may contain graphics portraying project information. The site hoarding may be branded using the appointed

Contractors logos, etc. Some marketing images or information boards may also be placed on the hoarding. Access to site will be controlled and monitored outside of site working hours. All personnel working on site must have a valid Safe Pass card and the relevant CSCS cards.

A suitably secure site compound will be set up, wherever the restricted confines of the site will allow and will facilitate the efficient delivery of materials and personnel to the site. This compound is to include material storage, site office and meeting room, and staff welfare facilities.

Generators or connection to electricity and water services will be set up to facilitate site works.

2.6 Construction Sequence of New Structures

The exact construction specifications of the proposed residential units and associated infrastructure are yet to be finalised. This section of the RWMP may be updated once a main contractor is appointed and a definitive construction program is established, in advance of the commencement of the project.

A summary of operations for the construction phase is listed in **Table 3.1** below.

Table 3.1: Summary of Operations Expected	
External envelope will or may require the following operations:	Internal work will or may require the following operations:
<ul style="list-style-type: none"> • Blockwork/Brickwork • Sand & cement rendering • Windows & doors • Roof Coverings – Slate and Tile • Flashing, Aprons and Tray – Leadwork/Powder coated metal 	<ul style="list-style-type: none"> • Electrical installation • Mechanical installation • Fireproofing • Partitions and ceilings – use of gypsum based products • Painting • Plastering • Stairs • Joinery • Tiling • Air Tightness sealing and testing • Metal Work • Sanitary-ware installation • Vanity units • Reinforcement works • Insulation • Plumbing • Concreting/ floor slab • Carpet installation • Timber floors • Roofing
Above ground external operations:	
<ul style="list-style-type: none"> • Landscaping • Installation of manholes • Lamp posts • Tarmac/ surfacing • Signs • Car parking and mobility compliant car parking 	
Below ground operations:	
<ul style="list-style-type: none"> • Foul sewer, surface water, rainwater, and potable water networks • Attenuation pond • Electrical ducting 	

2.7 Asbestos-Containing Materials

No asbestos-containing materials are anticipated on this project. If ACM is suspected on site, works will cease, the area will be secured, and a specialist contractor will be employed to test the material.

2.8 Other Hazardous Materials

The existing soil mounds on site are mixed through with C&D waste from other developments, as such, the mounds may give rise to hazardous material. As removal works take place, material within the mounds will be appropriately classified as hazardous or non-hazardous by a registered waste removal contractor and transported to a licensed waste facility for treatment or disposal.

2.9 Design Changes

This section shall be updated during the construction phase to reflect any changes in design or practice that have an impact on resource and waste management.

3 Roles and Responsibilities

The EPA Best Practice Guidelines for RWMP outline typical responsibilities involved in projects such as the one proposed at Oldtown Mill. This section outlines the responsibilities for stakeholders to ensure an effective RWMP is implemented over the course of development.

3.1 Contractor (TBC)

The Main Contractor, once employed, will undertake construction operations and is responsible for the following:

- Implementing and reviewing the RWMP throughout the construction phase.
- Designating a suitably qualified Resource and Waste Manager (RWM) who will be responsible for implementing the RWMP.
- Identifying and coordinating with waste removal contractors responsible for removing resources and waste off site. Hauliers should be in possession of valid Waste Collection Permits.
- Identifying suitably licensed waste facilities capable of receiving waste from the proposed site.
- Compile full records of resources and wastes accrued over the course of development.

3.2 Communication

Information regarding resource and waste management will be communicated by the Main Contractor and RWM who will ensure that staff and subcontractors are operating with best practice waste management procedures in place.

4 Design Approach

4.1 Reuse and Recycling

The national waste policy of Ireland, titled 'A Waste Action Plan for A Circular Economy – Ireland’s National Waste Policy 2020 – 2025,' aims to transition the country towards a circular economy model. This model emphasizes reducing waste disposal by promoting circularity and sustainability. The policy focuses on enhancing material value through improved design, durability, repair, and recycling practices. By prolonging the circulation of resources within the local economy, the policy anticipates both environmental and economic benefits. The implementation of the policy involves several strategies, including reusing excavated soils and stones on-site, purchasing construction materials as needed to prevent oversupply and potential damage, segregating construction waste streams for maximum reusability, minimizing waste volume through design and adopting take-back schemes for items like pallets and packaging.

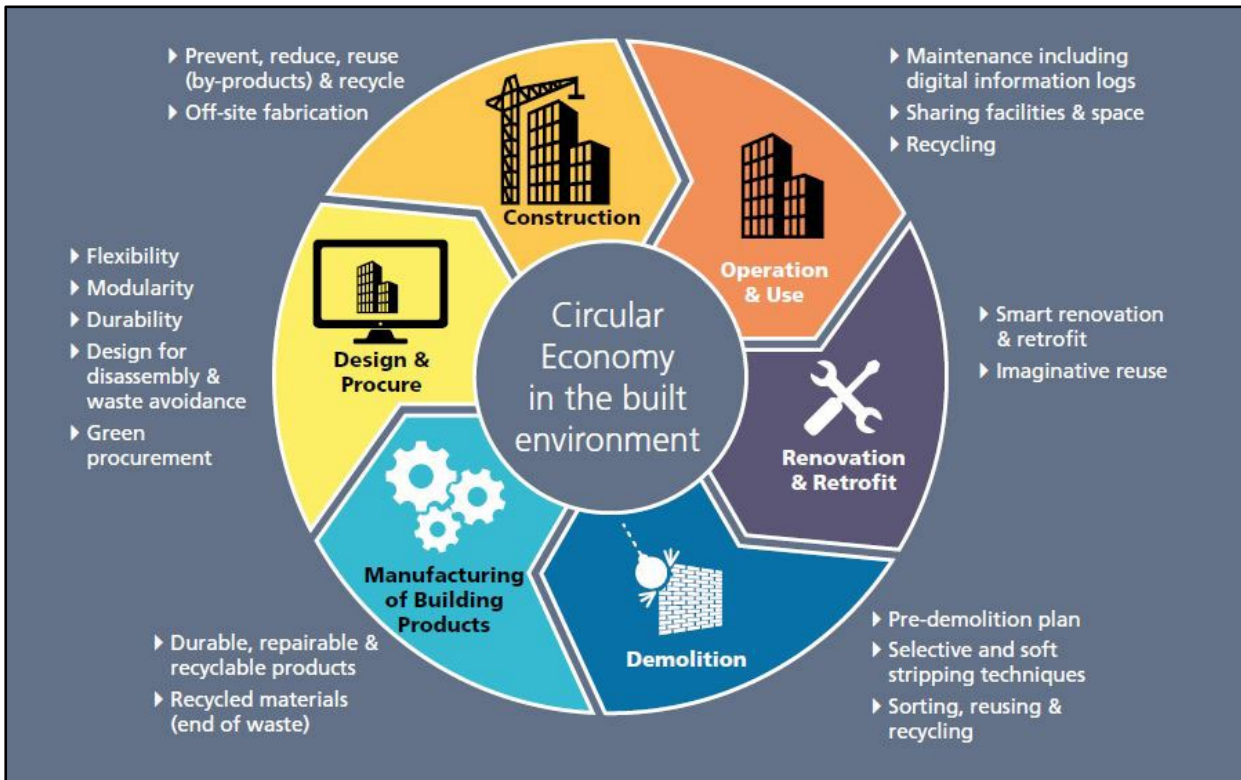


Figure 4.1: Circular Economic Model (Source: EPA Best Practice Guidelines)

4.2 Green Procurement

- The sourcing of goods and services should be conducted on an “as-needed” basis where possible which can reduce the need for packaging.
- Methods of waste prevention and minimisation shall be discussed with staff and subcontractors at an early stage of development, prior to procurement. Design solutions are to be agreed with an emphasis on sustainable practices.

- Project material specifications should consider allowing the use of reclaimed materials.
- Ordering procedures should be conducted with waste minimisation in mind, i.e., avoid over-ordering, identify take-back schemes for material surpluses and offcuts.

4.3 Off-Site Construction

- The use of precast materials (walls, concrete slabs, stairs, etc.) should be implemented where possible. The use of precast materials can have the following benefits:
 - Material quality and accuracy can be superior as factory fabrication is standardised and negative impacts from weather and site conditions are negated.
 - Over-ordering can be avoided as materials can be ordered from the factory and do not need to be produced on site.
 - The use of precast materials can lead to quicker construction times as floor levels can be established in short periods of time and facades can be closed in quickly, meaning internal works can be conducted earlier.
 - Precast materials reduce the production of waste.
 - Quality of precast materials is often better as fabrication occurs in a sheltered environment mitigating any potential environmental effects that may occur onsite.
 - Environmental contamination is reduced, particularly when precast concrete is used, as the chance of spillages is eliminated.

4.4 Materials Optimisation

- The optimisation of material use during construction will be established during the design phase. A rigorous project design will ensure that reworking and waste generation is reduced during construction.
- Effective communication between the Contractor, staff, and subcontractors will ensure that works are carried out efficiently and the use of material is optimised.
- The design of the proposed residential units is somewhat standardised, meaning the need for virgin resources is minimised.

4.5 Flexibility and Deconstruction

As the proposed development incorporates residential units, plans for deconstruction are not envisaged for the foreseeable future. As such, the flexibility of the proposed development is seen as sustainable as it will service long-to-medium term residents for years to come.

5 Key Materials and Quantities

Typical waste materials anticipated to be generated throughout the course of the project are classified under Section 17 – Construction and Demolition Wastes – of the List of Waste (LoW) as detailed in **Table 5.1** below.

Table 5.1: Description of Waste	
Description of Waste	EW Code
Concrete, Bricks, Tiles and Ceramics	17 01
Concrete	17 01 01
Bricks	17 01 02
Tiles and Ceramics	17 01 03
Mixture of concrete, bricks tiles & ceramics	17 01 07
Wood, Glass and Plastic	17 02
Wood	17 02 01
Glass	17 02 02
Plastic	17 02 03
Bituminous mixtures, coal tar and products	17 03
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02
Metals (including their alloys)	17 04
Copper, Bronze, Brass	17 04 01
Aluminium	17 04 02
Lead	17 04 03
Zinc	17 04 04
Iron and Steel	17 04 05
Tin	17 04 06
Mixed Metals	17 04 07
Cables containing oil, coal tar and other hazardous substances	17 04 10
Cables other than those mentioned in 17 04 10	17 04 11
Gypsum based construction Materials	17 08
Other Construction and Demolition Materials	17 09
Mixed Construction and Demolition Waste other than those mentioned in 17 09 01, 17 09 02, 17 09 03	17 09 04
Sewage Screenings	19 08 01
Paper and Cardboard	20 01 01
Wood containing hazardous substances	20 01 37
Wood other than that mentioned in 20 01 37	20.01 38
Soil and Stones	17 05 04
Mixed Municipal Waste	20 03 01
Paint, inks, adhesives and resins containing hazardous substances	20 01 27
WEEE	16 02
Batteries	16 06
Liquid Fuels	13 07

5.1 Waste Register

A template has been developed for summarising the names and permit numbers of the waste collectors and waste facilities which will be utilised for off-site disposal of the various waste-streams arising from the development. This document will also outline the projected weight of any waste that has to be transported off-site as well as any weight destined for reuse or recycling. This template is included in **Appendix A** and a digital copy has been sent in addition to this report. This table will be updated as the project advances and waste streams change.

5.2 Waste Removal Contractors

Appendix B includes a list of licensed waste facilities in the Kildare region which are capable of hauling the primary C&D waste streams associated with development. Coordinating with the licensed waste facilities will be the responsibility of the Main Contractor. Waste facilities shall confirm acceptance of waste prior to removal from site, ensuring that the facility is suitable and that it has sufficient capacity. This is not an exhaustive list, and liaison with other suitable waste facilities will be conducted by the Contractor as the need arises.

5.3 Estimated Construction Waste Generated

Table 5.2 below includes a breakdown of the estimated percentages of construction and demolition waste expected to be generated from a typical site such as this. Additionally, **Appendix C** outlines a list of estimated quantities of materials expected during development of housing and duplex units such as the site at Oldtown Mill Road.

It should be noted final quantities of materials and construction methodologies have yet to be confirmed so it is therefore difficult to estimate the exact materials and quantities generated with a high degree of accuracy. These materials and quantities will most likely be subject to change during the construction process.

Waste Type	%
Soil & Stones*	83
Concrete, Bricks, Tiles, Plastics, etc	13
Asphalt, Tar/Tar products	1
Metals	1
Other	2
Total Waste	100

*This estimation is based on typical quantities of soil to be removed to facilitate works. It does not include the existing soil mounds scheduled for removal prior to works.

Taking the above estimation into account, **Table 5.3** below outlines estimated target values for waste management at the site based on the batch of quantities attached in **Appendix C** and taking into account the typical waste generated on construction sites outlined in **Table 5.2**. The tonnage values for each waste type should be inputted by the contractor prior to starting on site once quantities are accurately measured.

Table 5.3: Estimated construction waste targets for the development

Waste Types	Waste (m ³)	Reuse/Recover		Recycle		Disposal	
		%	m ³	%	m ³	%	m ³
Soil & Stones*	119.0	20	23.8	0	0.0	80	95.2
Concrete, Bricks, Tiles, Plastics, etc	19.0	0	0.0	80	15.2	20	3.8
Asphalt, Tar/Tar Products	1.5	0	0.0	20	0.3	80	1.2
Metals	1.5	5	0.075	90	1.35	5	0.075
Other	3.0	10	0.3	40	1.2	50	1.5
Total	144	-	24.175	-	18.05	-	101.775

*Soil & Stone measurements do not include the quantities of soil mounds to be removed prior to construction.

5.4 Onsite Waste Reuse and Recycling Management

The national target for preparing for reuse, recovery and recycling of C&D waste (excluding soil and stone) is 70%, and the waste industry in Ireland as of 2019 was achieving 84%. The proposed development should aim to exceed the national target of 70% regarding the reuse, recovery and recycling of C&D waste (excluding soil and stone). The main contractor will be made aware of this target and will liaise with suitably permitted / licensed waste contractors that are able to commit to achieving, or exceeding, this target.

5.5 Existing Soil Mounds

There is an accumulation of ca. 35,000m³ of soil and spoil material onsite arising from other developments in the area which are arranged in several mounds. While relevant waste management policies and guidelines recommend reuse of this material in infilling and landscaping works, the aforementioned material is unsuitable for reuse/backfilling on the site due to the presence of C&D waste mixed through the mounds. As such, this material will be moved to a licensed waste facility. Such facilities will be identified prior to the construction phase by the appointed contractor and updated accordingly throughout development.

All waste soils shall be classified as inert, non-hazardous, or hazardous in accordance with the EPA’s Waste Classification Guidance – List of Waste & Determining if Waste is Hazardous or Non-Hazardous prior to being exported off site. This is to ensure that the waste material is transferred by an appropriately permitted waste collection permit holder and brought to an appropriately permitted or licensed waste facility.

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As mentioned in **Section 2.5.1** above, assuming the use of 30-tonne trucks operating 15 removals per day, the estimated time to remove soil mounds from the site equates to approximately 21 weeks/125 days.

6 Site Management

6.1 Resource and Waste Manager (RWM)

The Construction Project Manager will take on the role of RWM and shall take primary responsibility for the minimisation and prevention of waste generation. The following initiatives should be considered to assist in this task:

- Materials to be ordered on an “as needed” basis to prevent oversupply and material build up on site.
- Appropriate storage facilities should be provided to ensure materials are correctly handled and stored thus reducing damage to materials.
- Material ordering shall coincide with the program of works to reduce the need to store materials on site. However, given current industry issues with regards to labour and material shortages there may be incidents of materials needing to be stored on site to ensure continue of materials and to streamline labour productivity.
- Sub-contractors will be responsible for the management of their wastes.
- Assess existing materials that will be recycled for use on site and estimate quantities, e.g., the use of roof tile and/or brick offcuts as a crushed rock sub-base under driveways.
- Specify materials with a lower environmental impact and specify new materials that contain a recommended percentage of recycled content, provided they meet functional, performance and regulatory requirements.
- Utilise the existing topography to minimise excavation and reuse any excavated materials on site where possible, e.g., rock for drainage layers, landscape fill, planting features or levelling spoil.
- Standardise design details and specified materials and reduce the number of materials specified where appropriate to facilitate process repeatability and minimise the number of variables and bespoke elements to enable manufacturing and installation efficiencies.
- Deliver training in relation to resource management, i.e., inductions and toolbox talks.
- Update the RWMP as required to reflect new resource streams, work practices, suppliers or resource management options.

Waste auditing should be carried out at regular intervals by the Project Manager or Resident Engineer. This process will involve monitoring waste management practices and highlighting and correcting any instances of non-compliance.

6.2 Site Induction and Toolbox Talks

- Environmental requirements for the project will be outlined during the site induction for all operatives involved in the development. This briefing will include key details from the RWMP as well as the CEMP for the project.
- Environmental/waste topics shall be included once a month into site toolbox talks. These weekly talks provided to all site operatives shall cover such matters as disposal of waste within correct waste bins and skips to avoid cross contamination and to ensure recycling is completed correctly.

6.3 Identifying Waste Collectors and Licensed Facilities

- As mentioned previously, the Main Contractor is responsible for coordinating waste removal with suitable waste collectors and licensed waste facilities.
- Waste facilities must issue a letter of acceptance to the contractor indicating acceptance and sufficient capacity for wastes arising.
- A list of authorised waste collectors can be found on the following website: <https://www.nwcpc.ie/permitsearch.aspx>
- Waste facility permits and Certificate of Registrations can be found on the following website: <https://facilityregister.nwcpc.ie>

6.4 Resource-efficient Supply Chains

The Contractor will ensure that supply chain is organised in line with resource and waste best management practices. This will involve:

- Ensuring that contractors have sufficient resources to ensure supply chain competence (i.e., environmental policies and procedures, supervision, access to advice)
- Early collaboration with supply chain to avoid waste generation i.e., no over-ordering, implementing take-back schemes for pallets, packaging, etc.
- Implementing a 'continuous improvement' strategy on site by maintaining good communication with contractors in relation resource and waste management.

6.5 Record Keeping

It is the responsibility of the Construction Project Manager or his/ her delegate that a written record of all quantities and natures of wastes, including reused/ recycled, during the project are maintained in a waste file at the Project office. Details to be included are as follows:

- Contractors and subcontractors on Site every day
- All visitors (including Health and Safety procedures) and any associated reports
- Invoices showing standard of material installed adheres to specifications
- Date of waste removal
- List of Wastes and associated codes
- Waste haulage details (name, address, permit no., vehicle registration)
- Waste Treatment contractor certificate of registration
- Confirmation of waste removal
- Final destination of waste
- Safety statement and safety file
- Site programme

Much of the information outlined above will be included in the Waste Register (**Appendix A**) throughout development.

6.6 Communication with Local Authority/Stakeholders

The Contractor will communicate with relevant stakeholders throughout the construction phase, as required. This may include:

- Communicating waste statistics to the Client, management team, and subcontractors to monitor targets and objectives.
- Engaging with the local authority on any site inspection or audits required on site. Reports of any corrective actions, if necessary, will be provided to the local authority.
- Engagement with other stakeholders (public, EPA, etc.) where appropriate on matters relating to resource and waste management.
- A post-project RWMP will be compiled at project completion summarising the resource management procedures adopted, reuse and recovery figures and final destination of resources taken off site.

6.7 Inspections and Audits

- Daily checks shall be carried out by Contractor's management team to ensure compliance with the RWMP. This will involve checking waste storage areas, waste segregation measures, signage, subcontractor compliance, and review of waste documentation.
- Movement of waste transport vehicles will be monitored to ensure transfer note is signed and waste carrier is authorised.
- Formal EHS audits will be carried out by the Contractor on a regular basis.
- Findings from inspections and audits will be summarised in a monthly environmental report.

7 Site Infrastructure

7.1 Signage

It is the responsibility of the Contractor to ensure staff are aware of waste segregation by installing clear signage identifying waste collection areas and bins. Verbal instruction via training and toolbox talks will inform staff of proper housekeeping and waste management practices.

7.2 Resource Storage

A waste storage area will be established in the designated site compound (as detailed in the CEMP). The storage will provide adequate space for storage and handling of waste, with sign-posted bins/skips indicating where waste should be disposed of.

Non-Hazardous Waste

Dedicated bins/skips will be established, and potentially colour-coded, to provide storage of typical waste arising from construction including but not limited to:

- Mixed/General waste
- Bulky waste
- Metal
- Dry mixed waste
- Wood

Excavated soil material (excluding the pre-existing soil mounds on site) will be reused where possible. In the event of soil removal off site, the material shall be classified as inert, non-hazardous or hazardous in accordance with the EPA's Waste Classification Guidance. It will then be transferred by an appropriately permitted waste collector and brought to a licensed waste facility for treatment or disposal. Burning or burial of waste will not be permitted on site.

Hazardous Waste

Hazardous materials may include:

- Fuel
- Oil
- WEEE
- Construction chemicals (cement, sealant, paints, etc.)
- Sewage
- Contaminated soil (resulting from fuel or oil spills)

Chemicals will be stored in bunded areas well away from surface water sources or gullies/surface water drainage leading off site. Hazardous waste will be removed from site by a permitted waste collector.

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Appendix A: Waste Register

Waste Details		Resource & Waste Management								Waste Transfer Details			
Description of Waste	LoW Code	Volume Generated	Prevention (non-waste)	Reused (non waste)	Recycled (waste)	Recovered (Waste)	Disposed (Waste)	Unit Cost Rate	Total Cost	Waste Collector		Waste Facility	
		(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(Tonnes)	(€/Tonne)	(€)	Name	NWCP	Name	WFP/ WL No.
Concrete, Bricks, Tiles and Ceramics	17 01												
Concrete	17 01 01												
Bricks	17 01 02												
Tiles and Ceramics	17 01 03												
Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances	17 01 06*												
Mixture of concrete, bricks tiles & ceramics	17 01 07												
Wood, Glass, and Plastic	17 02												
Wood	17 02 01												
Glass	17 02 02												
Plastic	17 02 03												
Glass, plastic and wood containing or contaminated with hazardous substances	17 02 04*												
Bituminous Mixtures, Coal Tar and Products	17 03												
Bituminous mixtures containing coal tar	17 03 01												
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02												
Metals (including their Alloys)	17 04												
Copper, Bronze, Brass	17 04 01												
Aluminium	17 04 02												
Lead	17 04 03												
Zinc	17 04 04												
Iron and Steel	17 04 05												
Tin	17 04 06												
Mixed Metals	17 04 07												
Metal waste contaminated with hazardous substances	17 04 09*												
Cables	17 04 11												
Soil (including excavated soil from contaminated sites, stones and dredging spoil)	17 05												
Soil and Stones	17 05 04	56000*	0	0	0	0	56000*	TBC	TBC	TBC	TBC	TBC	TBC
Soil and Stones containing hazardous substances	17 05 03*	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
Insulation and Asbestos-Containing Construction Materials	17 06												
Insulation Material	17 06 04												
Construction Materials Containing Asbestos	17 06 05*												
Gypsum based Construction Materials	17 08												
Gypsum	17 08 02												
Other Construction and Demolition Materials	17 09												
Mixed Construction and Demolition Waste other than those mentioned in 17 09 01, 17 09 02, 17 09 03	17 09 04												
Wastes of Liquid Fuels	13 07												
Fuel Oil & Diesel	13 07 01*												
Petrol	13 07 02*												
Other Fuels	13 07 03*												
Wastes from the Manufacture, Formulation, Supply and Use of Coatings	08 01												
Waste Paint & Varnish containing Organic Solvents or other Hazardous Materials	08 01 11*												
Waste Paint & Varnish other than those mentioned in 18 01 11	08 01 12												
Waste from waste water treatment plants	19 08												
Sewage Screenings	19 08 01												
Municipal Wastes	20 01												
Paper and Cardboard	20 01 01												
Wood other than that mentioned in 20 01 37	20 01 38												
Paint, inks, adhesives, and resins containing hazardous substances	20 01 27												
Electrical and electronic components	20 01 35-36												
Batteries and accumulators	20 01 33-34												
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13/19/27-30												
Other Municipal Wastes	20 03												
Mixed Municipal Waste	20 03 01												

*To be noted that the initial figures of soil to be removed prior to construction serve as estimates only. Quantities of soil to be removed from soil mounds should be calculated by a Quantity Surveyor prior to removal, and coordinated by the Contractor.

Appendix B: Licensed Waste Facilities

Licensed Waste Facilities				
Waste Type	Waste Code	Licensed Waste Facility/Collector	Facility Code	Facility Address
Soil & Stones	17 05 04	Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
		J Ryan Haulage Ltd	COR-KE-22-0044-01	Athy Distributor Road, Athy, Co. Kildare
		Milford Quarries Ltd	WFP-KE-23-0121-01	Graney East, Castledermot, Co. Kildare
Concrete	17 01 01	Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
		J Ryan Haulage Ltd	COR-KE-23-0120-01	Hartwell Upper, Kill, Co. Kildare
		J Ryan Haulage Ltd	COR-KE-22-0044-01	Athy Distributor Road, Athy, Co. Kildare
Bricks	17 01 02	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Tiles and Ceramics	17 01 03	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Wood	17 02 01	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Glass	17 02 02	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Plastic	17 02 03	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Bituminous mixtures	17 03 02	Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
		Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		Arkil Limited	WFP-KE-23-0119-01	Drinnanstown South, Rathangan, Co. Kildare
Mixed Metals	17 04 07	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare
Mixed Construction and Demolition Wastes	17 09 04	Wilton Scrap Metals	WFP-KE-20-0105-01	Unit M1 Osberstown Industrial Estate, Caragh Road, Naas, Co. Kildare
		G & J O'Neill Enterprises Ltd	WFP-KE-21-0106-01	Unit 74A Naas Industrial Estate, Naas, Co. Kildare
		Callan Recycling Ltd	WFP-KE-20-0097-01	Drinnanstown North, Rathangan, Co. Kildare

Appendix C: Housing/Duplex Typical Quantities

Duplex Detail

Site: Oldtown Mill, Co. Kildare

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
	(1) SUB-STRUCTURES											
	(19) Sub-Structure											
	<u>Site Strip</u>											
A	Removing; site vegetation; generally	65.04	m2				63.03	m2				
B	Excavation; reduce levels site; depth 150mm	9.76	m3				9.45	m3				
C	Disposal of excavated material; off site; reduced levels	9.76	m3				9.45	m3				
	<u>Foundations 900mm wide</u>	35.00	m				25.03	m				
D	Excavation; fnd trenches; depth 700mm (assumed)	22.05	m3				15.77	m3				
E	Disposal of excavated material; off site; trenches	22.05	m3				15.77	m3				
F	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;	9.45	m3				6.76	m3				
G	Formwork; to sides of foundation; 300mm high	70.00	m				50.06	m				
H	Reinforcement Fabric; horizontal; 2 layers to foundations	63.00	m2				45.05	m2				
I	Standard blockwork; walls in trenches; 215mm high	15.05	m2				10.76	m2				
J	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	31.50	m2				22.53	m2				
	<u>Foundations 750mm wide</u>	22.00	m				10.90	m				
K	Excavation; fnd trenches; depth 700mm (assumed)	11.55	m3				5.72	m3				
L	Disposal of excavated material; off site; trenches	11.55	m3				5.72	m3				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
M	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;	4.95	m3				2.45	m3				
N	Formwork; to sides of foundation; 300mm high	44.00	m				21.80	m				
O	Reinforcement Fabric; horizontal; 2 layers to foundations	39.60	m2				19.62	m2				
P	Standard blockwork; walls in trenches; 215mm high	4.73	m2				2.34	m2				
Q	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	16.50	m2				8.18	m2				
	<u>Floor build-up:</u>	54.40	m2				57.30	m2				
R	Excavation; reduce levels to ground slab; floor build up	21.76	m3				22.92	m3				
S	Disposal of excavated material; off site ground floor slab	21.76	m3				22.92	m3				
T	Filling; hardcore sub-base to foundations; average thickness exceeding 150mm	8.16	m3				8.60	m3				
U	In-Situ Concrete; ground bearing reinforced concrete slab; 200mm thick	10.88	m3				11.46	m3				
V	Formwork; to sides of foundation; 200mm high	20.00	m				20.00	m				
W	Reinforcement Fabric; horizontal; 2 layers to foundations	58.54	m2				56.73	m2				
X	Surface Finishes; power floating; ground floor slab	54.40	m3				57.30	m3				
Y	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	51.60	m2				51.60	m2				
Z	Ironmongery, Accessories and Sundries; 200mm Kore Insulation horizontal; floor build up	54.40	m2				57.30	m2				
AA	Mastic Asphalt; DPM Radon Barriers; Radon sumps, vent outlet, drainage upstands and radon collars	1.00	item				1.00	item				
AB	Ducting; Service ducting; heat pump	1.00	item				1.00	item				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
	(2) SUPERSTRUCTURES											
	(21) External Walls											
	<u>Brickwork & Blockwork</u>											
A	Standard blockwork; external walls, inner leaf; thickness 100mm.	246.53	m2				79.35	m2				
B	Standard blockwork; external walls, outer leaf; thickness 100mm.	172.57	m2				55.54	m2				
C	Standard blockwork; selected clay brick; thickness 100mm.	73.96	m2				23.80	m2				
D	Extra over; brick soldier course brick	10.00	m				10.00	m				
E	Extra over; Precast banding & specials	10.00	m				10.00	m				
	<u>Concrete</u>											
F	Precast concrete / Composite construction / stone faced concrete panels; precast sills & thresholds	10.75	m				12.00	m				
G	Precast concrete / Composite construction / stone faced concrete panels; precast heads	10.75	m				12.00	m				
H	Precast concrete / Composite construction / stone faced concrete panels; precast parapets	35.50	m				15.00	m				
I	<u>Ancillaries to brickwork & blockwork:</u>											
J	Forming cavities between new walls; 110 Kingspan insulation board	246.53	m2				79.35	m2				
K	Steel lintels	10.75	m				12.00	m				
L	Masonry support	10.75	m				10.75	m				
M	cavity trays and lead flashing ; horizontal	35.50	m				31.00	m				
N	fire stopping & movement joints	25.00	m				25.00	m				
O	Allowance ESB / Eircom / VM utility boxes and openings	1.00	Item				1.00	Item				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)						Duplex T2 (D-1B2P_1B2P-3)				
	GIFA (m2)	112.40					116.20					
(22) Internal Walls, Partitions												
<u>Brickwork & Blockwork</u>												
A	Standard blockwork; Internal walls; blockwork 100mm thick		m2					m2				
B	Standard blockwork; Internal walls; blockwork 215mm thick	60.00	m2				54.39	m2				
C	Standard blockwork; Internal walls; blockwork 430mm thick (Party Walls)		m2				93.37	m2				
<u>Floor, Wall & Ceiling Finishes</u>												
D	Stud Partitions; Metal stud non-load bearing internal walls; 100mm internal stud walls; height 2700mm	57.00	m2				102.00	m2				
E	extra over for: angles to partitions	2.00	nr				2.00	nr				
F	extra over for: abutments to other finishes	10.00	nr				15.00	nr				
G	extra over for: forming openings: single doors	2.00	nr				8.00	nr				
H	extra over for: forming openings: double doors	2.00	nr					nr				
I	extra over for: three way intersections		nr				6.00	nr				
J	extra over for: grounds/panels for fittings	1.00	item				1.00	item				
K	extra over for: forming openings: built in wardrobe		nr					nr				
L	extra over for: fire proofing to top of internal walls		nr					nr				
(23) Floors, Galleries												
<u>Concrete</u>												
A	Intermediate floor, 200 precast hollowcore with structural topping ; powerfloat	54.30	m2				59.90	m2				
<u>Woodwork</u>												
B	Structural and first fixings; timber first floor construction to dwellings, carcassing in floors or flat roofs; 225 x 44 mm joists (@400mm c/c)		m2					m2				

Social Housing PPP - Bundle 5

Duplex Detail

Site: Oldtown Mill, Co. Kildare

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
House Type		Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
C	Boarding and Second fixings; T&G sheeting to floors, Boarding and sheeting; floors; 21mm thick		m2					m2				
D	Ironmongery, Accessories and Sundries; 150mm thick Xtratherm XT/UF insulation; horizontal between joists		m2					m2				
(24) Stairs, Ramps												
	<u>Concrete</u>											
A	Composite items: precast stairs (External) to first floor; 2 nr flights of 9 nr treads, intergal half landing, inc painting and decorating	1.00	each					each				
	<u>Woodwork</u>											
B	Composite items: straight stair flight: complete; Stairs to first floor; 2 nr flights of 10 nr treads; integral half landing, inc painting and						1.00	each				
C	Balustrade and handrails; to landing & stairs		m				10.00	m				
	<u>Metalwork</u>											
D	wall mounted handrails; to landing & stairs	20.00	m				10.00	m				
(27) Roofs												
	<u>Concrete</u>											
A	concrete flat roof structure, 200 precast hollowcore with structural topping ; graded to falls	15.00	m2				6.40	m2				
	<u>Woodwork</u>											
	Prefabricated roof construction; Carcassing in pitched roofs; 44 x 125 mm verge ladder	14.90	m				14.00	m				
C	Prefabricated roof construction; Carcassing in pitched roofs; wall bearers	29.00	m				11.83	m				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
House Type		Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
GIFA (m2)		112.40					116.20					
D	Prefabricated roof construction; Carcassing in pitched roofs; joists	43.77	m				39.00	m				
E	Prefabricated roof construction; Carcassing in pitched roofs; firrings	43.77	m				39.00	m				
F	Boarding and Second fixings; Plywood sheeting	52.59	m2				46.00	m2				
G	Boarding and Second fixings; Plywood sheeting to attics; restraint straps	14.00	nr				22.00	nr				
H	Boarding and Second fixings; Plywood sheeting to attics; backing board	29.00	m				28.00	m				
I	Boarding and Second fixings; Plywood sheeting to attics; tank bases	1.00	nr				1.00	nr				
(28) Frames												
	Metalwork											
	Fabricated steelwork (Allowance)											
A	203 x 133 x 25 UB	5.00	m				5.00	m				
B	254 x 254 x 89 UC	10.00	m				10.00	m				
C	203 x 203 x 71 UC with 12 mm x 350 top plate	10.00	m				10.00	m				
	Coatings (Allowance)											
D	fire painting steelwork	1.00	Sum				1.00	Sum				
	Concrete											
E	concrete padstones for steelwork		nr				2	nr				
(3) COMPLETIONS												
(31) External Walls: Completions												
A	Composite Items; Composite timber/aluminium windows, double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K	13.68	m2				8.28	m2				
B	Composite Items; Internal glass guarding to full height windows	1.00	nr					nr				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
C	Composite Items; Composite timber/aluminium doors: double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K;	2.00	nr				2.00	nr				
D	Composite Items; bike/bin store doors and frames	1.00	nr					nr				
E	Composite Items; Composite timber/aluminium Double doors: double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K;	2.00	nr				2.00	nr				
F	Second fixings; painted window boards; to suit wall widths	8.95	m				8.00	m				
G	Second fixings; air tightness tape and seals per window/door	75.00	m				48.00	m				
(32) Internal Walls: Completions												
A	Boarding and Second fixings; Non Fire Rated Doorsets, single, not exceeding 926 wide, including door frame, architrave, associated ironmongery, painting and decorating	3.00	each				3.00	each				
B	Boarding and Second fixings; Fire Rated Doorsets, single, not exceeding 926 wide, including door frame, architrave, associated ironmongery, painting and decorating	4.00	each				5.00	each				
C	Boarding and Second fixings; Non Fire Rated Doorsets, double, not exceeding 1800 wide, including door frame, architrave, associated ironmongery, painting and decorating		each					each				
D	Boarding and Second fixings; Fire Rated Doorsets, double, not exceeding 1800 wide, including door frame, architrave, associated ironmongery, painting and decorating		each					each				
E	extra over glazed screens		m2					m2				
F	Boarding and Second fixings; Non Fire rated Storage Doorset, single, not exceeding 500mm wide, including door frame, architrave, associated ironmongery, painting and decorating	2.00	each				2.00	each				
G	Boarding and Second fixings; Non Fire rated Storage Doorset, double, not exceeding 1000mm wide, including door frame, architrave, associated ironmongery, painting and decorating		each				1.00	each				
(33) Floors, Galleries: Completions												
	Metalwork											

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
	Fabricated steelwork											
A	galvanised mild steel balcony, 2.85m wide x 1.8m deep with mild steel balustrading to sides	1.00	nr									
B	galvanised mild steel balcony, 3.75m wide x 1.725m deep with mild steel balustrading to sides						1.00	nr				
(34) Stairs, Ramps: Completions												
	items measured previously in (24) Stairs											
(37) Roof: Completions												
A	Composite timber/aluminium rooflight windows; double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K		each					each				
B	Composite Items; Trap doors / Access hatches	2.00	each				2.00	each				
C	Safety Equipement; Fall arrest system		m					m				
D	Composite Items; entrance canopy; pressed metal canopy roof with 175mm privacy fins (aluminium or similar)	1.00	each					each				
E	entrance canopy (standard)	1.00	each				2.00					
(4) FINISHES												
(41) Wall Finishes Externally												
	Floor, Wall & Ceiling Finishes											
A	In-Situ Finishes; Sand cement render Finish; Walls; > 300 mm wide	172.57	m2				55.54	m2				
B	In-Situ Finishes; Render Finish; Walls; extra over for: special units: external angles	20.00	m				20.00	m				
C	In-Situ Finishes; Render Finish; Walls; extra over for: special units: internal angles	20.00	m				20.00	m				
D	Extra over; Brick Fascades	73.96	m2				23.80	m2				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)				
	GIFA (m2)	112.40					116.20				
E	Extra over; Specialist Timber/Rainscreen panelling		m2					m2			
F	Extra over; Zinc cladding		m2					m2			
	Paint & Decoration										
G	Painting External; one mist coats emulsion paint; walls; girth exceeding 300mm	172.57	m2				55.54	m2			
(42) Wall Finishes Internally											
	Floor, Wall, Ceiling Finishes										
A	In-Situ Finishes; Air tightness parge coat, to external walls	246.53	m2				79.35	m2			
B	In-Situ Finishes; scratch and skim coat to blockwork	246.53	m2				79.35	m2			
C	In-Situ Finishes; Dry lining; Walls; Fireline to party walls		m2				93.37	m2			
D	In-Situ Finishes; Dry lining; Walls; 60min lining to external walls (apts)		m2					m2			
E	In-Situ Finishes; Dry lining; Walls; 30min lining to external walls (houses)		m2					m2			
F	In-Situ Finishes; Dry lining; Walls; 60min lining to internal partitions		m2					m2			
G	In-Situ Finishes; Dry lining; Walls; 30min lining to internal partitions	114.00	m2				204.00	m2			
H	In-Situ Finishes; Dry lining; Walls; internal partitions& service voids, including tape and jointing, panting and decorating as necessary	120.00	m2				108.78	m2			
I	In-Situ Finishes; Dry lining; Walls; extra over above for moisture board	47.28	m2				40.50	m2			
	Woodwork										
J	Ironmongery, Accessories and Sundries; Insulation; to external walls	246.53	m2				79.35	m2			

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
K	Ironmongery, Accessories and Sundries; Insulation; to party walls		m2				93.37	m2				
L	Ironmongery, Accessories and Sundries; Insulation; to internal walls	117.00	m2				156.39	m2				
M	Ironmongery, Accessories and Sundries; Waterproof tanking; to shower areas	10.80	m2				18.00	m2				
N	Boarding and Second fixings; Timber battens, to service void	246.53	m2				79.35	m2				
	Tile, Slab & Mosaic											
O	Tiling to kitchens; less than or equal to but not exceeding 300mm wide; 300mm high	4.92	m2				6.30	m2				
P	Tiling to bathrooms; > 300 mm wide;	10.80	m2				18.00	m2				
	Paint & Decoration											
Q	Painting; one mist coat: two coats emulsion paint; Walls; girth exceeding 300mm	281.28	m2				446.65	m2				
(43) Floor Finishes												
A	acoustic membrane; to upper floors	54.30	m2				59.90	m2				
B	Waterproof tanking; to shower areas	2.00	m2				2.59	m2				
	Floor, Wall, Ceiling Finishes											
C	Flexible sheet finishes; Forbo Surestep Vinyl or similar; to kitchens; > 300mm	49.00	m2				47.10	m2				
D	Flexible sheet finishes; Forbo Surestep Vinyl or similar; to bathrooms; > 300mm		m2					m2				
E	Flexible sheet finishes; Forbo Surestep Vinyl or similar; to WC; > 300mm	9.90	m2				8.80	m2				
F	Flexible sheet finishes; Forbo Surestep Vinyl or similar; Sundries; coved skirting	18.00	m				8.00	m				
G	Fitted Carpeting/timber or the like; Approved carpeting or equivalent floor finish; Floors; to hall, living, stores and bedrooms; > 300 mm wide	53.50	m2				60.30	m2				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
H	GIFA (m2) Boarding and Second fixings; Second fixings; Painted skirting boards; 100mm high	112.40					116.20					
		82.00	m				115.00	m				
(44) Stairs, Ramps Finishes												
	Floor, Wall, Ceiling Fin											
A	Flexible sheet finishes; Forbo Surestep Vinyl or similar; to hallways		m2				6.00	m2				
B	Flexible sheet finishes; Forbo Surestep Vinyl or similar; treads		m				12.60	m				
C	Flexible sheet finishes; Forbo Surestep Vinyl or similar; risers		m				12.60	m				
D	External tiling; Non-slip external tiles of approved specification; to external staircases	12.00	m2					m2				
E	extra over for treads & risers	21.60	m					m				
	Woodwork											
G	Boarding and Second fixings; Second fixings; Nosings		m				12.60	m				
(45) Ceiling Finishes												
	Woodwork											
A	Boarding and Second fixings; air tightness membrane to ff ceiling	56.20	m2				58.10	m2				
B	Ironmongery, Accessories and Sundries; mineral wool insulation roofspace, thermal conductivity of 0.044W/m2K, thickness to be confirmed	56.20	m2				58.10	m2				
	Floor, Wall, Ceiling Finishes											
C	Board Finishes; Fireline board and skim finish, to ground floor ceilings; Ceilings; > 300 mm wide	54.30	m2				59.90	m2				
D	Board Finishes; Plasterboard and skim finish to first floor ceiling; Ceilings; > 300 mm wide, sloping under stairs to first floor ceilings	56.20	m2				58.10	m2				
E	Boarding and Second fixings; Extra over for moisture resistant board, to wet room areas	9.90	m2				8.80	m2				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
	Paint & Decoration											
F	Painting, one mist coat two coats emulsion paint; Ceilings; girth exceeding 300mm	110.50	m2				118.00	m2				
(47) Roof Finishes												
	Mastic Asphalt											
A	Mastic Asphalt, Waterproof And Gas Proof Non-Metal Flexible Sheet Coverings; Mastic asphalt finish to roof; exceeding 300mm wide	43.77	m2				45.92	m2				
	Roof, Cladding & Waterproofing											
B	Stone ballast on membrane on insulation on vcl	15.00	m2				6.40	m2				
C	Slate and tile coverings; Fibre cement slates on battens/counter battens; Coverings; sloping < 45°; exceeding 300mm wide	43.77	m2				45.92	m2				
D	Extra over; Eaves	18.70	m				11.18	m				
E	Extra over; Verge	14.90	m					m				
F	Extra over; Hip		m					m				
G	Extra over; Valley ; Secret gutter		m					m				
H	Extra over; Ridge	7.60	m				5.92	m				
I	Extra over; Wall abutment and upstand	33.70	m				11.18	m				
J	Extra over; Firestopping at party walls		m				12.20	m				
	Flexible sheet metal											
K	Lead flashings or similar; Flashings to roof; girth 150 - 300 mm; generally	33.70	m				11.18	m				
L	Lead flashings or similar; Flashings to masonry ; girth 150 - 300 mm; generally	15.00	m				15.00	m				
	Woodwork											

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
M	Ironmongery, Accessories and sundries; fascia/arge board and trims	14.90	m					m				
N	Ironmongery, Accessories and sundries; soffit board and ground	18.70	m				11.18	m				
(5) MECHANICAL												
(52) Drainage & Refuse Disposal												
	Drainage											
A	Disposal above ground; parapet wall outlet and grating	2.00	nr				1.00	nr				
B	Disposal above ground; upvc gutter	15.20	m				11.83	m				
C	Disposal above ground; upvc downpipe	13.20	m				6.60	m				
D	Disposal above ground; aluminium gutter		m					m				
E	Disposal above ground; aluminium downpipe		m					m				
F	Disposal above ground; Extra for hoppers	2.00	nr				1.00	nr				
(59) Mechanical Services Installations												
A	Composite Item Mechanical	1.00	each				1.00	each				
B	BWIC	5%					5%					
(6) ELECTRICAL												
(69) Electrical Services Installations												
A	Composite Item Mechanical	1.00	each				1.00	each				
B	BWIC											
(7) FITTINGS & FURNISHINGS												

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
(73) Culinary Fittings												
A	Prefabricated kitchen installation; high gloss painted timber doors with brushed aluminium handles; Formica worktop; 18mm carcass with 18mm back; Equipment, domestic kitchen Kitchens Duplex 1B Type 1	1.00	each				1.00	each				
(74) Sanitary, Hygiene Fittings												
Building Fittings, Equipment & Furniture												
A	Sanitary ware; Fittings; lavatory basins; generally	2.00	each				2.00	each				
B	Sanitary ware; Fittings; wash hand basins: taps etc; generally	2.00	each				2.00	each				
C	Sanitary ware; Fittings; bath, side panel, taps etc; generally		each					each				
D	Sanitary ware; Fittings; shower; generally	2.00	each				2.00	each				
Specialist fittings												
E	allowance mirrors / hot press shelving / bath panel / pipe casings	2.00	each				2.00	each				
F	allowance fire stopping per unit	2.00	each				2.00	each				
(76) Storage, Screening Fittings												
Building Fittings, Equipment & Furniture												
G	fitted wardrobes; size 820 x 2450		nr					nr				
H	fitted wardrobes; size 1820 x 2450		nr					nr				
I	fitted wardrobes; size 2135 x 2450	2.00	nr				2.00	nr				
TOTAL CONSTRUCTION COST (Ex. VAT)												

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)						Duplex T2 (D-1B2P_1B2P-3)				
	GIFA (m2)	112.40					116.20					
	Additional for gable end											
	(1) SUB-STRUCTURES											
	(19) Sub-Structure											
	Foundations 900mm wide		m				11.00	m				
A	Excavation; fnd trenches; depth 700mm (assumed)		m3				6.93	m3				
B	Disposal of excavated material; off site; trenches		m3				6.93	m3				
C	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;		m3				2.97	m3				
D	Formwork; to sides of foundation; 300mm high		m				22.00	m				
E	Reinforcement Fabric; horizontal; 2 layers to foundations		m2				19.80	m2				
F	Standard blockwork; walls in trenches; 215mm high		m2				4.73	m2				
G	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm		m2				9.90	m2				
	(2) SUPERSTRUCTURES											
	(21) External Walls											
	Brickwork & Blockwork											
A	Standard blockwork; external walls, inner leaf; thickness 100mm.		m2				90.44	m2				
B	Standard blockwork; external walls, outer leaf; thickness 100mm.		m2				63.30	m2				
C	Standard blockwork; selected clay brick; thickness 100mm.		m2				27.13	m2				
D	Ancillaries to brickwork / blockwork;											
E	Forming cavities between new walls; 110 Kingspan insulation board		m2				90.44	m2				

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	
	House Type	Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)					
	GIFA (m2)	112.40					116.20					
(31) External Walls: Completions												
A	Composite Items; Composite timber/aluminium windows, double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K		m2				10.80	m2				
B	Second fixings; painted window boards; to suit wall widths		m				5.60	m				
C	Second fixings; air tightness tape and seals per window/door		m				24.28	m				
(41) Wall Finishes Externally												
Floor, Wall & Ceiling Finishes												
A	In-Situ Finishes; self coloured render Finish; Walls; > 300 mm wide		m2				63.30	m2				
B	Extra over; Brick Fascades		m2				27.13	m2				
Paint & Decoration												
C	Painting External; one mist coats emulsion paint; walls; girth exceeding 300mm		m2				63.30	m2				
(42) Wall Finishes Internally												

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals
House Type		Duplex T1 (D-1B2P_1B2P-1)					Duplex T2 (D-1B2P_1B2P-3)				
	GIFA (m2)	112.40					116.20				
	Floor, Wall, Ceiling Finishes										
A	In-Situ Finishes; Air tightness parge coat, to external walls		m2				90.44	m2			
B	In-Situ Finishes; scratch and skim coat to blockwork		m2				90.44	m2			
C	In-Situ Finishes; Dry lining; Walls; 30min lining to external walls (houses)		m2				90.44	m2			
	Woodwork										
D	Ironmongery, Accessories and Sundries; Insulation; to external walls		m2				90.44	m2			
E	Boarding and Second fixings; Timber battens, to service void		m2				90.44	m2			
	Paint & Decoration										
F	Painting; one mist coat: two coats emulsion paint; Walls; girth exceeding 300mm		m2				90.44	m2			

Dwelling Detail

Site: Oldtown Mill, Co. Kildare

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
House Type		House 2 Bed (H-2B4P-1)					House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)					
GIFA (m2)																								
(1) SUB-STRUCTURES																								
(19) Sub-Structure																								
<u>Site Strip</u>																								
A	Removing; site vegetation; generally	48.40	m2				56.10	m2				59.40	m2				69.30	m2						
B	Excavation; reduce levels site; depth 150mm	7.26	m3				8.42	m3				8.91	m3				10.40	m3						
C	Disposal of excavated material; off site; reduced levels	7.26	m3				8.42	m3				8.91	m3				10.40	m3						
<u>Foundations 900mm wide</u>		20.00	m				21.00	m				25.00	m				34.00	m						
D	Excavation; fnd trenches; depth 700mm (assumed)	12.60	m3				13.23	m3				15.75	m3				21.42	m3						
E	Disposal of excavated material; off site; trenches	12.60	m3				13.23	m3				15.75	m3				21.42	m3						
F	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;	5.40	m3				5.67	m3				6.75	m3				9.18	m3						
G	Formwork; to sides of foundation; 300mm high	40.00	m				42.00	m				50.00	m				68.00	m						
H	Reinforcement Fabric; horizontal; 2 layers to foundations	36.00	m2				37.80	m2				45.00	m2				61.20	m2						
I	Standard blockwork; walls in trenches; 215mm high	8.60	m2				9.03	m2				10.75	m2				14.62	m2						
J	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	18.00	m2				18.90	m2				22.50	m2				30.60	m2						
<u>Foundations 750mm wide</u>		9.00	m				9.00	m				11.00	m				10.00	m						
K	Excavation; fnd trenches; depth 700mm (assumed)	4.73	m3				4.73	m3				5.78	m3				5.25	m3						
L	Disposal of excavated material; off site; trenches	4.73	m3				4.73	m3				5.78	m3				5.25	m3						
M	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;	2.03	m3				2.03	m3				2.48	m3				2.25	m3						
N	Formwork; to sides of foundation; 300mm high	18.00	m				18.00	m				22.00	m				20.00	m						
O	Reinforcement Fabric; horizontal; 2 layers to foundations	16.20	m2				16.20	m2				19.80	m2				18.00	m2						
P	Standard blockwork; walls in trenches; 215mm high	1.94	m2				1.94	m2				1.94	m2				1.94	m2						
Q	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	6.75	m2				6.75	m2				8.25	m2				7.50	m2						
<u>Floor build-up:</u>		44.00	m2				54.00	m2				52.00	m2				62.50	m2						
R	Excavation; reduce levels to ground slab; floor build up	17.60	m3				21.60	m3				20.80	m3				25.00	m3						
S	Disposal of excavated material; off site ground floor slab	17.60	m3				21.60	m3				20.80	m3				25.00	m3						
T	Filling; hardcore sub-base to foundations; average thickness exceeding 150mm	6.60	m3				8.10	m3				7.80	m3				9.38	m3						

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
GIFA (m2)																								
U	In-Situ Concrete; ground bearing reinforced concrete slab; 200mm thick	8.80	m3				10.80	m3				10.40	m3				12.50	m3						
V	Formwork; to sides of foundation; 200mm high	20.00	m				20.00	m				20.00	m				20.00	m						
W	Reinforcement Fabric; horizontal; 2 layers to foundations	43.56	m2				50.49	m2				53.46	m2				62.37	m2						
X	Surface Finishes; power floating; ground floor slab	44.00	m3				54.00	m3				52.00	m3				62.50	m3						
Y	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	51.60	m2				51.60	m2				51.60	m2				51.60	m2						
Z	Ironmongery, Accessories and Sundries; 200mm Kore Insulation horizontal; floor build up	44.00	m2				54.00	m2				52.00	m2				62.50	m2						
AA	Mastic Asphalt; DPM Radon Barriers; Radon sumps, vent outlet, drainage upstands and radon collars	1.00	item				1.00	item				1.00	item				1.00	item						
AB	Ducting; Service ducting; heat pump	1.00	item				1.00	item				1.00	item				1.00	item						
(2) SUPERSTRUCTURES																								
(21) External Walls																								
<u>Brickwork & Blockwork</u>																								
A	Standard blockwork; external walls, inner leaf; thickness 100mm.	63.49	m2				74.10	m2				110.00	m2				74.10	m2						
B	Standard blockwork; external walls, outer leaf; thickness 100mm.	47.62	m2				55.58	m2				82.50	m2				55.58	m2						
C	Standard blockwork; selected clay brick; thickness 100mm.	15.87	m2				18.53	m2				27.50	m2				18.53	m2						
D	Extra over; brick soldier course brick		m					m					m					m						
E	Extra over; Precast banding & specials		m					m					m					m						
<u>Concrete</u>																								
F	Precast concrete / Composite construction / stone faced concrete panels; precast sills & thresholds	8.00	m				9.00	m				14.60	m				9.00	m						
G	Precast concrete / Composite construction / stone faced concrete panels; precast heads	8.00	m				9.00	m				14.60	m				9.00	m						
<u>Ancillaries to brickwork & blockwork;</u>																								
H	Forming cavities between new walls; 110 Kingspan insulation board	63.49	m2				74.10	m2				110.00	m2				74.10	m2						
I	Steel lintels	8.00	m				9.00	m				14.60	m				9.00	m						
J	Masonry support	8.00	m				9.00	m				14.60	m				9.00	m						
K	fire stopping & movement joints	25.00	m				25.00	m				25.00	m				25.00	m						
L	Allowance ESB / Eircom / VM utility boxes and openings	1.00	item				1.00	item				1.00	item				1.00	item						
(22) Internal Walls, Partitions																								
<u>Brickwork & Blockwork</u>																								
A	Standard blockwork; Internal walls; blockwork 100mm thick		m2					m2					m2					m2						
B	Standard blockwork; Internal walls; blockwork 215mm thick	21.92	m2				21.60	m2				59.40	m2				54.00	m2						

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
House Type		House 2 Bed (H-2B4P-1)					House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)					
C	GIFA (m2) Standard blockwork; Internal walls; blockwork 430mm thick (Party Walls)	60.14	m2				62.84	m2				39.29	m2				77.20	m2						
<u>Floor, Wall & Ceiling Finishes</u>																								
D	Stud Partitions; Metal stud non-load bearing internal walls; 100mm internal stud walls; height 2700mm	79.46	m2				91.80	m2				67.50	m2				81.00	m2						
E	extra over for: angles to partitions	3.00	nr				2.00	nr				2.00	nr				5.00	nr						
F	extra over for: abutments to other finishes	11.00	nr				8.00	nr				10.00	nr				13.00	nr						
G	extra over for: forming openings: single doors	6.00	nr				6.00	nr				5.00	nr				5.00	nr						
H	extra over for: forming openings: double doors		nr					nr				1.00	nr				1.00	nr						
I	extra over for: three way intersections	2.00	nr				5.00	nr				3.00	nr				5.00	nr						
J	extra over for: grounds/panels for fittings	1.00	item				1.00	item				1.00	item				1.00	item						
K	extra over for: forming openings: built in wardrobe		nr					nr					nr					nr						
L	extra over for: fire proofing to top of internal walls		nr					nr					nr					nr						
(23) Floors, Galleries																								
<u>Woodwork</u>																								
A	Structural and first fixings; timber first floor construction to dwellings, carcassing in floors or flat roofs; 225 x 44 mm joists (@400mm c/c)	42.00	m2				49.00	m2				51.00	m2				61.00	m2						
B	Boarding and Second fixings; T&G sheeting to floors, Boarding and sheeting; floors; 21mm thick	42.00	m2				49.00	m2				51.00	m2				61.00	m2						
C	Ironmongery, Accessories and Sundries; 150mm thick Xtratherm XT/UF insulation; horizontal between joists	42.00	m2				49.00	m2				51.00	m2				61.00	m2						
(24) Stairs, Ramps																								
<u>Woodwork</u>																								
A	Composite items: straight stair flight: complete; Stairs to first floor; 15nr treads, inc painting and decorating	1.00	each				1.00	each				1.00	each				1.00	each						
B	Balustrade and handrails; to landing & stairs	6.60	m				6.60	m				6.60	m				4.20	m						
(27) Roofs																								
<u>Woodwork</u>																								
A	Prefabricated roof construction; Carcassing in pitched roofs; 75 x 150 mm wall plate	10.50	m				12.21	m				20.00	m				12.95	m						
B	Prefabricated roof construction; Carcassing in pitched roofs; Composite Item: 44 x 125 mm truss, bracing and metalwork	4.00	each				5.00	each				9.00	each				6.00	each						
C	Prefabricated roof construction; Carcassing in pitched roofs; 44 x 125 mm verge ladder	10.50	m				12.21	m				20.00	m				19.16	m						
D	Prefabricated roof construction; Carcassing in pitched roofs; restraint straps	8.00	nr				10.00	nr				18.00	nr				12.00	nr						
E	Boarding and Second fixings; Plywood sheetings; backing board	10.50	m				12.21	m				20.00	m				12.95	m						
F	Boarding and Second fixings; Plywood sheetings; secret gutter structure and lining	10.50	m				12.21	m				20.00	m				12.95	m						

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals				
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)					
GIFA (m2)																									
G	Boarding and Second fixings; Plywood sheetings; tank bases	1.00	nr				1.00	nr				1.00	nr				1.00	nr							
(28) Frames						-	(28) Frames						-	(28) Frames						-					
A	Frame; composite item																								
(3) COMPLETIONS							(3) COMPLETIONS							(3) COMPLETIONS											
(31) External Walls: Completions							(31) External Walls: Completions							(31) External Walls: Completions											
A	Composite Items; Composite timber/aluminium windows, double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K	15.34	m2				11.56	m2				16.80	m2				13.88	m2							
B	Composite Items; Internal glass guarding to full height windows		nr				1.00	nr				2.00	nr				1.00	nr							
C	Composite Items; Composite timber/aluminium doors: double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K;	2.00	nr				1.00	nr				2.00	nr				1.00	nr							
D	Composite Items; Composite timber/aluminium Double doors: double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K;		nr				1.00	nr				1.00	nr				1.00	nr							
E	Second fixings; painted window boards; to suit wall widths	8.00	m				9.00	m				11.00	m				9.00	m							
F	Second fixings; air tightness tape and seals per window/door	18.40	m				20.40	m				38.80	m				20.40	m							
(32) Internal Walls: Completions							(32) Internal Walls: Completions							(32) Internal Walls: Completions											
A	Boarding and Second fixings; Non Fire Rated Doorsets, single, not exceeding 926 wide, including door frame, architrave, associated ironmongery, painting and decorating	2.00	each				5.00	each				3.00	each				4.00	each							
B	Boarding and Second fixings; Fire Rated Doorsets, single, not exceeding 926 wide, including door frame, architrave, associated ironmongery, painting and decorating	4.00	each				6.00	each				6.00	each				7.00	each							
C	Boarding and Second fixings; Non Fire Rated Doorsets, double, not exceeding 1800 wide, including door frame, architrave, associated ironmongery, painting and decorating		each					each					each					each							
D	Boarding and Second fixings; Fire Rated Doorsets, double, not exceeding 1800 wide, including door frame, architrave, associated ironmongery, painting and decorating		each					each					each					each							
E	extra over glazed screens		m2					m2					m2					m2							
F	Boarding and Second fixings; Non Fire rated Storage Doorset, single, not exceeding 500mm wide, including door frame, architrave, associated ironmongery, painting and decorating		each				1.00	each				1.00	each				1.00	each							
G	Boarding and Second fixings; Non Fire rated Storage Doorset, double, not exceeding 1000mm wide, including door frame, architrave, associated ironmongery, painting and decorating	2.00	each				1.00	each				1.00	each				1.00	each							
(33) Floors, Galleries: Completions						-	(33) Floors, Galleries: Completions						-	(33) Floors, Galleries: Completions						-					
A	items measured previously in (23) Floors																								
(34) Stairs, Ramps: Completions						-	(34) Stairs, Ramps: Completions						-	(34) Stairs, Ramps: Completions						-					
A	items measured previously in (24) Stairs																								
(37) Roof: Completions							(37) Roof: Completions							(37) Roof: Completions											
A	Composite timber/aluminium rooflight windows; double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K		each					each					each					each							

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
B	Composite Items; Trap doors / Access hatches	1.00	each				1.00	each				1.00	each				1.00	each						
C	Safety Equipment; Fall arrest system		m					m					m					m						
D	Composite Items; entrance canopy	1.00	each				1.00	each				1.00	each				1.00	each						
(4) FINISHES																								
(41) Wall Finishes Externally																								
Floor, Wall & Ceiling Finishes																								
A	In-Situ Finishes; Sand cement render Finish; Walls; > 300 mm wide	47.62	m2				55.58	m2				82.50	m2				55.58	m2						
B	In-Situ Finishes; Render Finish; Walls; extra over for: special units: external angles	20.00	m				25.00	m				30.00	m				30.00	m						
C	In-Situ Finishes; Render Finish; Walls; extra over for: special units: internal angles	20.00	m				25.00	m				30.00	m				30.00	m						
D	Extra over; Brick Fascades	15.87	m2				18.53	m2				27.50	m2				18.53	m2						
E	Extra over; Specialist Timber/Rainscreen panelling		m2					m2					m2					m2						
F	Extra over; Zinc cladding		m2					m2					m2					m2						
Paint & Decoration																								
G	Painting External; one mist coats emulsion paint; walls; girth exceeding 300mm	47.62	m2				55.58	m2				82.50	m2				55.58	m2						
(42) Wall Finishes Internally																								
Floor, Wall, Ceiling Finishes																								
A	In-Situ Finishes; Air tightness parge coat, to external walls	63.49	m2				74.10	m2				110.00	m2				74.10	m2						
B	In-Situ Finishes; scratch and skim coat to blockwork	63.49	m2				74.10	m2				110.00	m2				74.10	m2						
C	In-Situ Finishes; Dry lining; Walls; Fireline to party walls	60.14	m2				62.84	m2				39.29	m2				77.20	m2						
D	In-Situ Finishes; Dry lining; Walls; 60min lining to external walls (apts)		m2					m2					m2					m2						
E	In-Situ Finishes; Dry lining; Walls; 30min lining to external walls (houses)	63.49	m2				74.10	m2				110.00	m2				74.10	m2						
F	In-Situ Finishes; Dry lining; Walls; 60min lining to internal partitions		m2					m2					m2					m2						
G	In-Situ Finishes; Dry lining; Walls; 30min lining to internal partitions	158.92	m2				183.60	m2				135.00	m2				162.00	m2						
H	In-Situ Finishes; Dry lining; Walls; internal partitions& service voids, including tape and jointing, panting and decorating as necessary	43.84	m2				43.20	m2				118.80	m2				108.00	m2						
I	In-Situ Finishes; Dry lining; Walls; extra over above for moisture board	37.80	m2				37.80	m2				38.66	m2				37.80	m2						
Woodwork																								

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals						
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)							
GIFA (m2)																											
(45) Ceiling Finishes						4,566.67	(46) Roof Finishes						5,335.92	(47) Mechanical						5,454.40	(52) Drainage & Refuse Disposal						6,590.76
Woodwork																											
A	Boarding and Second fixings; air tightness membrane to ff ceiling	43.70	m2				50.80	m2				51.90	m2				62.45	m2									
B	Ironmongery, Accessories and Sundries; mineral wool insulation roofspace, thermal conductivity of 0.044W/m2K, thickness to be confirmed	43.70	m2				50.80	m2				51.90	m2				62.45	m2									
Floor, Wall, Ceiling Finishes																											
C	Board Finishes; Fireline board and skim finish, to ground floor ceilings; Ceilings; > 300 mm wide	40.70	m2				47.80	m2				48.90	m2				59.45	m2									
D	Board Finishes; Plasterboard and skim finish to first floor ceiling; Ceilings; > 300 mm wide, sloping under stairs to first floor ceilings	43.70	m2				50.80	m2				51.90	m2				62.45	m2									
E	Boarding and Second fixings; Extra over for moisture resistant board, to wet room areas	5.00	m2				7.00	m2				7.00	m2				7.00	m2									
Paint & Decoration																											
F	Painting, one mist coat two coats emulsion paint; Ceilings; girth exceeding 300mm	84.40	m2				98.60	m2				100.80	m2				121.90	m2									
Mastic Asphalt																											
A	Mastic Asphalt, Waterproof And Gas Proof Non-Metal Flexible Sheet Coverings; Mastic asphalt finish to roof; exceeding 300mm wide	59.54	m2				76.40	m2				90.99	m2				92.33	m2									
Roof, Cladding & Waterproofing																											
B	Slate and tile coverings; Fibre cement slates on battens/counter battens; Coverings; sloping < 45°; exceeding 300mm wide	59.54	m2				76.40	m2				90.99	m2				92.33	m2									
C	Extra over; Eaves	10.50	m				13.47	m				20.59	m				13.76	m									
D	Extra over; Verge		m					m					m					m									
E	Extra over; Hip		m					m					m					m									
F	Extra over; Valley ; Secret gutter		m					m					m					m									
G	Extra over; Ridge	5.25	m				6.73	m				10.29	m				6.88	m									
Flexible sheet metal																											
H	Lead flashings or similar; Flashings to roof; girth 150 - 300 mm; generally	5.25	m				6.73	m				10.29	m				6.88	m									
I	Lead flashings or similar; Flashings to masonry ; girth 150 - 300 mm; generally	10.50	m				13.47	m				20.59	m				13.76	m									
Woodwork																											
J	Ironmongery, Accessories and sundries; fascia/arge board and trims		m					m					m					m									
K	Ironmongery, Accessories and sundries; soffit board and ground	10.50	m				13.47	m				20.59	m				13.76	m									
(5) MECHANICAL																											
(52) Drainage & Refuse Disposal																											

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals				
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)					
GIFA (m2)																									
Drainage																									
A	Disposal above ground; upvc gutter	11.33	m				13.47	m				20.58	m				13.76	m							
B	Disposal above ground; upvc downpipe	11.40	m				11.40	m				11.40	m				11.40	m							
C	Disposal above ground; aluminium gutter		m					m					m					m							
D	Disposal above ground; aluminium downpipe		m					m					m					m							
E	Disposal above ground; Extra for hoppers	2.00	nr				2.00	nr				2.00	nr				2.00	nr							
(59) Mechanical Services Installations																									
F	Composite Item Mechanical	1.00	each				1.00	each				1.00	each				1.00	each							
G	BWIC	1.00	5%				1.00	5%				1.00	5%				1.00	5%							
(6) ELECTRICAL																									
(69) Electrical Services Installations																									
																21,111.21									
(7) FITTINGS & FURNISHINGS																									
(73) Culinary Fittings																									
																13,029.23									
(74) Sanitary, Hygiene Fittings																									
																6,600.43									
A	Prefabricated kitchen installation; high gloss painted timber doors with brushed aluminium handles; Formica worktop; 18mm carcass with 18mm back; Equipment, domestic kitchen	1.00	each				1.00	each				1.00	each				1.00	each							
(74) Sanitary, Hygiene Fittings																									
																4,924.82									
Building Fittings, Equipment & Furniture																									
A	Sanitary ware; Fittings; lavatory basins; generally	2.00	each				2.00	each				2.00	each				2.00	each							
B	Sanitary ware; Fittings; wash hand basins; taps etc; generally	2.00	each				2.00	each				2.00	each				2.00	each							
C	Sanitary ware; Fittings; bath, side panel, taps etc; generally	1.00	each				1.00	each				1.00	each				1.00	each							
D	Sanitary ware; Fittings; shower; generally		each					each				1.00	each					each							
E	Specialist fittings																								
F	allowance mirrors / hot press shelving / bath panel / pipe casings	1.00	each				1.00	each				1.00	each				1.00	each							
G	allowance fire stopping per unit	1.00	each				1.00	each				1.00	each				1.00	each							
(76) Storage, Screening Fittings																									
Building Fittings, Equipment & Furniture																									
A	fitted wardrobes; size 820 x 2450		nr					nr					nr					nr							
B	fitted wardrobes; size 1820 x 2450	1.00	nr				1.00	nr				1.00	nr				1.00	nr							

Site: Oldtown Mill, Co. Kildare

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
	House Type	House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
C	GIFA (m2) fitted wardrobes; size 2135 x 2450	1.00	nr				nr					1.00	nr				3.00	nr						
TOTAL CONSTRUCTION COST (Ex. VAT)																								
Additional for gable end																								
(1) SUB-STRUCTURES																								
(19) Sub-Structure																								
	Foundations 900mm wide	8.75	m				8.75	m				5.63	m				10.61	m						
A	Excavation; fnd trenches; depth 700mm (assumed)	5.51	m3				5.51	m3				3.55	m3				6.68	m3						
B	Disposal of excavated material; off site; trenches	5.51	m3				5.51	m3				3.55	m3				6.68	m3						
C	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;	2.36	m3				2.36	m3				1.52	m3				2.86	m3						
D	Formwork; to sides of foundation; 300mm high	17.50	m				17.50	m				11.26	m				21.22	m						
E	Reinforcement Fabric; horizontal; 2 layers to foundations	15.75	m2				15.75	m2				10.13	m2				19.10	m2						
F	Standard blockwork; walls in trenches; 215mm high	3.76	m2				3.76	m2				2.42	m2				4.56	m2						
G	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm	7.88	m2				7.88	m2				5.07	m2				9.55	m2						
(2) SUPERSTRUCTURES																								
(21) External Walls																								
	Brickwork & Blockwork																							
A	Standard blockwork; external walls, inner leaf; thickness 100mm.	66.58	m2				66.58	m2				41.19	m2		15		85.72	m2						
B	Standard blockwork; external walls, outer leaf; thickness 100mm.	46.61	m2				46.61	m2				28.83	m2		30		60.00	m2						
C	Standard blockwork; selected clay brick; thickness 100mm.	19.97	m2				19.97	m2		0		12.36	m2		38		25.72	m2						
D	Ancillaries to brickwork / blockwork;																							
E	Forming cavities between new walls; 110 Kingspan insulation board	19.97	m2				19.97	m2				12.36	m2		42		25.72	m2						
(31) External Walls: Completions																								
A	Composite Items; Composite timber/aluminium windows, double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K	1.44	m2				1.44	m2				m2					1.44	m2						
B	Second fixings; painted window boards; to suit wall widths	0.90	m				0.90	m				m					0.90	m						
C	Second fixings; air tightness tape and seals per window/door	21.20	m				21.20	m				m					21.20	m						
(41) Wall Finishes Externally																								
	Floor, Wall & Ceiling Finishes																							
A	In-Situ Finishes; Sand cement render Finish; Walls; > 300 mm wide	53.26	m2				53.26	m2		5		20.60	m2		990.00		60.00	m2						

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals
House Type		House 2 Bed (H-2B4P-1)					House 3 Bed (H-3B5P-1)					House 3 Bed UD (H-3B5P-3)					House 4 Bed (H-4B7P-1)				
GIFA (m2)																					
B	Extra over; Brick Fascades	13.32	m2				13.32	m2	3			20.60	m2				25.72	m2			
Paint & Decoration																					
A	Painting External; one mist coats emulsion paint; walls; girth exceeding 300mm	53.26	m2				53.26	m2				20.60	m2				60.00	m2			
(42) Wall Finishes Internally																					
Floor, Wall, Ceiling Finishes																					
A	In-Situ Finishes; Air tightness parge coat, to external walls	66.58	m2				66.58	m2				41.19	m2				85.72	m2			8
B	In-Situ Finishes; scratch and skim coat to blockwork	66.58	m2				66.58	m2				41.19	m2				85.72	m2			2
C	In-Situ Finishes; Dry lining; Walls; 30min lining to external walls (houses)	66.58	m2				66.58	m2				41.19	m2				85.72	m2			2
Woodwork																					
D	Ironmongery, Accessories and Sundries; Insulation; to external walls	66.58	m2				66.58	m2				41.19	m2				85.72	m2			6
E	Boarding and Second fixings; Timber battens, to service void	66.58	m2				66.58	m2				41.19	m2				85.72	m2			1

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
House Type		House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
Paint & Decoration																								
F	Painting; one mist coat; two coats emulsion paint; Walls; girth exceeding 300mm	66.58	m2				66.58	m2				41.19	m2				85.72	m2						
(47) Roof Finishes																								
Mastic Asphalt																								
A	Mastic Asphalt, Waterproof And Gas Proof Non-Metal Flexible Sheet Coverings; Mastic asphalt finish to roof; exceeding 300mm wide		m2					m2					m2					m2						
Roof, Cladding & Waterproofing																								
B	Slate and tile coverings; Fibre cement slates on battens/counter battens; Coverings; sloping < 45°; exceeding 300mm wide		m2					m2					m2					m2						
C	Extra over; Verge	11.34	m				11.34	m				8.84	m				13.42	m						
Woodwork																								
D	Ironmongery, Accessories and sundries; fascia/berge board and trims	11.34	m				11.34	m				8.84	m				13.42	m						
E	Ironmongery, Accessories and sundries; soffit board and ground	11.34	m				11.34	m				8.84	m				13.42	m						
TOTAL CONSTRUCTION COST (Ex. VAT)							14																	
Additional for detached unit																								
(1) SUB-STRUCTURES																								
(19) Sub-Structure																								
Foundations 900mm wide																								
A	Excavation; rnd trenches; depth 700mm (assumed)		m3					m3				5.63	m				10.65	m						
B	Disposal of excavated material; off site; trenches		m3					m3				3.55	m3				6.71	m3						
C	In-Situ Concrete; Concrete strip foundations; 300mm deep x 900mm wide;		m3					m3				1.52	m3				2.88	m3						
D	Formwork; to sides of foundation; 300mm high		m					m				11.26	m				21.30	m						
E	Reinforcement Fabric; horizontal; 2 layers to foundations		m2					m2				10.13	m2				19.17	m2						
F	Standard blockwork; walls in trenches; 215mm high		m2					m2				2.42	m2				4.58	m2						
G	Mastic Asphalt; DPM Radon Barrier horizontal; > 300 mm		m2					m2				5.07	m2				9.59	m2						
(2) SUPERSTRUCTURES							8,970.88																	
(21) External Walls																								
Brickwork & Blockwork																								
A	Standard blockwork; external walls, inner leaf; thickness 100mm.		m2					m2					m2					m2						
B	Standard blockwork; external walls, outer leaf; thickness 100mm.		m2					m2					m2					m2						
C	Standard blockwork; selected clay brick; thickness 100mm.		m2					m2					m2					m2						
D	Ancillaries to brickwork / blockwork;																							

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
	House Type	House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
	GIFA (m2)																							
E	Forming cavities between new walls; 110 Kingspan insulation board		m2					m2					m2					m2						
(31) External Walls: Completions						-					-					-						-		
A	Composite Items; Composite timber/aluminium windows, double glazed energy efficient panes with argon gas and a warm edge spacer to provide a U-value of between 1.2 & 1.3 W/m2K		m2					m2					m2					m2						
B	Second fixings; painted window boards; to suit wall widths		m					m					m					m						
C	Second fixings; air tightness tape and seals per window/door		m					m					m					m						
(41) Wall Finishes Externally						-					-					-						-		
Floor, Wall & Ceiling Finishes																								
A	In-Situ Finishes; self coloured render Finish; Walls; > 300 mm wide		m2					m2				20.60	m2					m2						
B	Extra over; Stone cladding		m2					m2				20.60	m2					m2						
Paint & Decoration																								
C	Painting External; one mist coats emulsion paint; walls; girth exceeding 300mm		m2					m2				20.60	m2					m2						
(42) Wall Finishes Internally						-					-					-						-		
Floor, Wall, Ceiling Finishes																								
A	In-Situ Finishes; Air tightness parge coat, to external walls		m2					m2				41.19	m2					m2						
B	In-Situ Finishes; scratch and skim coat to blockwork		m2					m2				41.19	m2					m2						
C	In-Situ Finishes; Dry lining; Walls; 30min lining to external walls (houses)		m2					m2				41.19	m2					m2						
Woodwork																								
D	Ironmongery, Accessories and Sundries; Insulation; to external walls		m2					m2				41.19	m2					m2						
E	Boarding and Second fixings; Timber battens, to service void		m2					m2				41.19	m2					m2						
Paint & Decoration																								
F	Painting; one mist coat; two coats emulsion paint; Walls; girth exceeding 300mm		m2					m2				41.19	m2					m2						

Ref	Description	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals	Quantity	Unit	Rate	Sub-Total	Totals			
	House Type	House 2 Bed (H-2B4P-1)						House 3 Bed (H-3B5P-1)						House 3 Bed UD (H-3B5P-3)						House 4 Bed (H-4B7P-1)				
	GIFA (m2)																							
	(47) Roof Finishes																							
	Mastic Asphalt																							
A	Mastic Asphalt, Waterproof And Gas Proof Non-Metal Flexible Sheet Coverings; Mastic asphalt finish to roof, exceeding 300mm wide		m2					m2					m2					m2						
	Roof, Cladding & Waterproofing																							
B	Slate and tile coverings; Fibre cement slates on battens/counter battens; Coverings; sloping < 45°; exceeding 300mm wide		m2					m2					m2					m2						
C	Extra over; Verges		m					m				8.84	m					m						
	Woodwork																							
D	Ironmongery, Accessories and sundries; fascia/barge board and trims		m					m				8.84	m					m						
E	Ironmongery, Accessories and sundries; soffit board and ground		m					m				8.84	m					m						
	TOTAL CONSTRUCTION COST (Ex. VAT)				-	-				-	-													

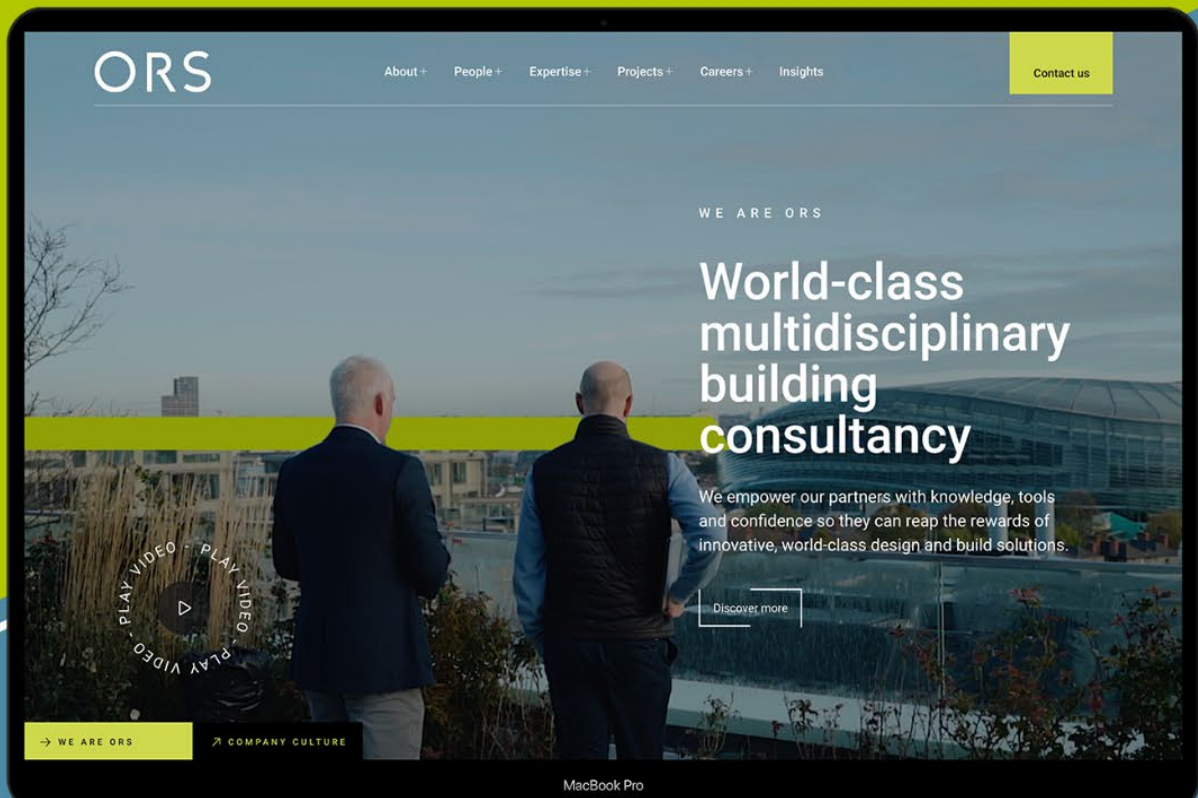
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