Outline Construction & Demolition Waste Management Plan

Project:

Castle Street, Bray, County Wicklow

Client:

Silverbow Limited

Doc Ref. CHC-00-XX-RP-C-00002

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The report addresses those items outlined only. In the event that there are items not covered within the report, the reader shall not infer that such extraneous items have been considered irrelevant or immaterial. Any items not covered within the report have not been investigated by the Authors and the reader should satisfy themselves that such items have been suitably investigated elsewhere.

Please note that this document is also for the purpose of setting a clear path and philosophy for the future nominated Contractor in drawing up their own final strategy for and drafting of their Construction & Demolition Waste Management Plan.

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EXECUTIVE SUMMARY

Corrigan Hodnett Consulting (CHC) have been appointed to draft an Outline Construction & Demolition Waste Management Plan (C&DWMP) in order to form part of the Strategic Housing Development planning application for the referred site.

This outline plan defines amongst other issues the physical and legal limitations within which a person or persons can carry out development works that affect the existing nature of public roads, footpaths and the surrounding environment for a duration of time. This plan also outlines the relevant requirements in relation to Environmental Management issues.

This sets out a road map and strategy for the future Contractor to adopt when drafting their own Site-Specific Management Plans.

1.0 INTRODUCTION

Corrigan Hodnett Consulting Engineers have been appointed in the role of consultant civil and structural engineers for a strategic housing development scheme at the former Heiton-Buckley site at Castle Street, Bray, County Wicklow and also includes two existing dwellings adjacent to the site which are accessed off Dwyer Park. The project is titled 'Castle Street, Bray, County Wicklow'.

This purpose of this report is to supplement this planning application and outline a strategy which is to be undertaken by the Contractor in respect of the management of waste generated during construction and demolition phases of the works.

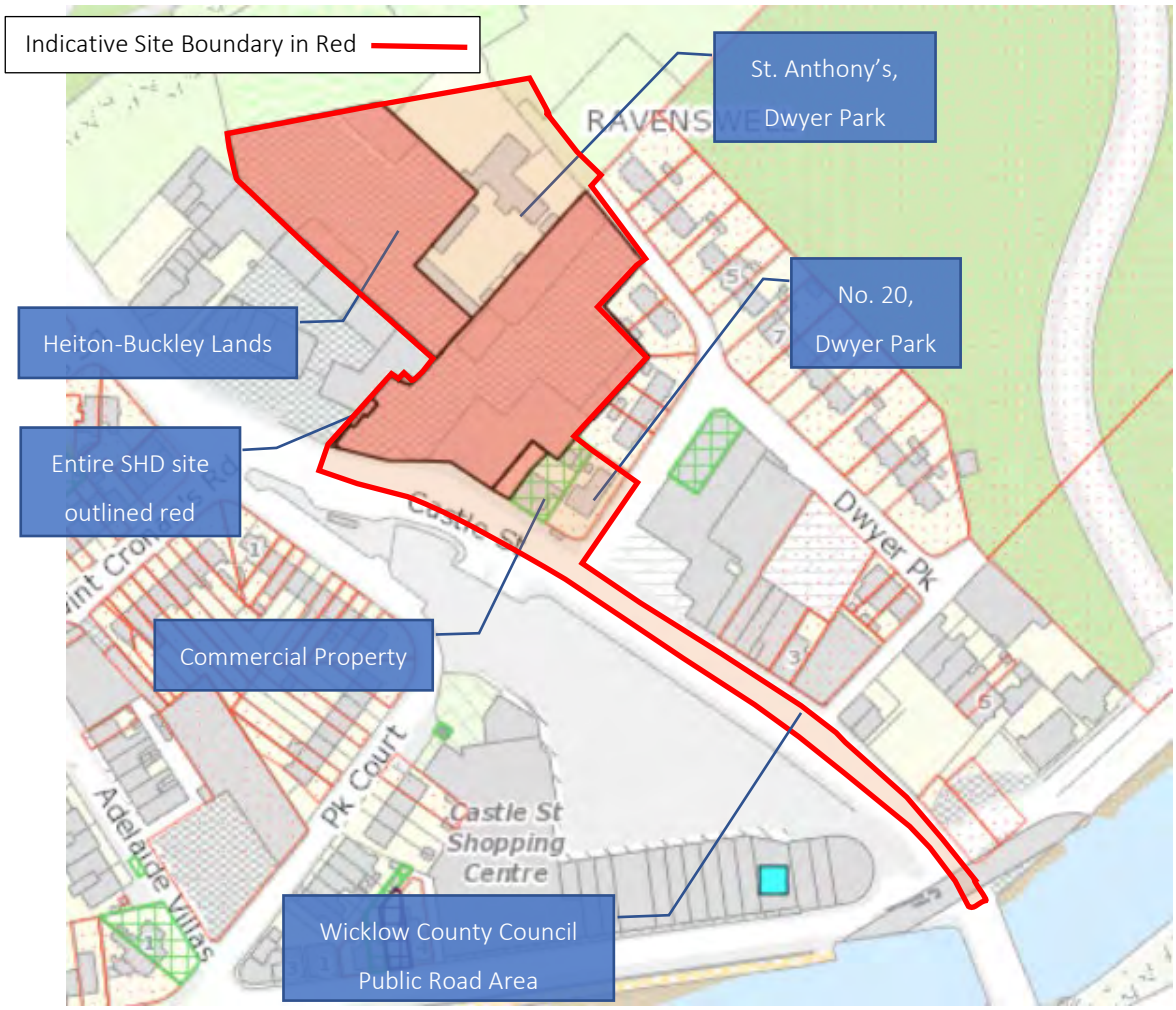
This report also outlines the strategy which can be adopted in carrying out the demolition & construction works in the form of an outline plan which covers the principals covered in DoEHLG guidance publication 'Best Practice Guidelines on the preparation of Waste Management Plans for Construction and Demolition projects' (2006) in accordance with section 9 of Wicklow County Development Plan 2016-2022.

1.1 Site Location

The subject development site under consideration is within the townlands of Ravenswell and Little Bray, off, and to the immediate northeast of Castle Street (Regional Road R761), Bray, County Wicklow; to the west of the existing Dwyer Park housing estate; to the east and north of existing Dargle Centre retail park. There are third party development zoned lands to the northwest and west of the site which are designated for the access route into the Former Bray Golf Course lands to the north of the development lands (identified as SLO 3 under the current Bray Local Area Plan).

The overall site is accessed off Castle Street via the existing access which previously served the Heiton-Buckley builder's providers on the site and two separate accesses via Dwyer Park which serves the two dwellings which form part of the site. The site is comprised of four properties, the actual Heiton-Buckley site, an adjacent commercial building to the south and two dwellings, namely St. Anthony's, Dwyer Park and No. 20 Dwyer Park as detailed in the following figure;

Figure 1-1 Site Extents



The applicant redline boundary also includes areas of public footpath and roadway along Castle Street to accommodate the necessary footpath upgrade works adjacent to the site, water services connections/outfalls and the proposed revised roadmarkings to accommodate a right turn manoeuvre into the site.

The lands to the north of the site proper are currently undeveloped greenfield lands which are zoned.

The Dwyer Park housing development to the east of the site is comprised of a mix of terraced, semi-detached, and detached single and two storey houses.

The existing buildings on the site were most recently used as a builder's providers, Heiton-Buckley but have been unoccupied for some time and are in a state of dilapidation. The existing dwelling on the site has been occupied until very recently and appears structurally sound. The external walls of a number of the existing commercial buildings also form the rear garden boundaries of the immediately adjacent houses in Dwyer Park. Similarly, the rear wall of one of the shed structures within the development forms a common boundary with several of the commercial units in the Dargle Centre retail park. It is

noted that an initial inspection of the boundaries has identified that a number of the boundaries have structural issues, some of which will result in eventual failure. A detailed structural inspection of all boundaries will be required prior to any works commencing onsite which will inform a remediation plan for those affected boundaries which are to remain in place.

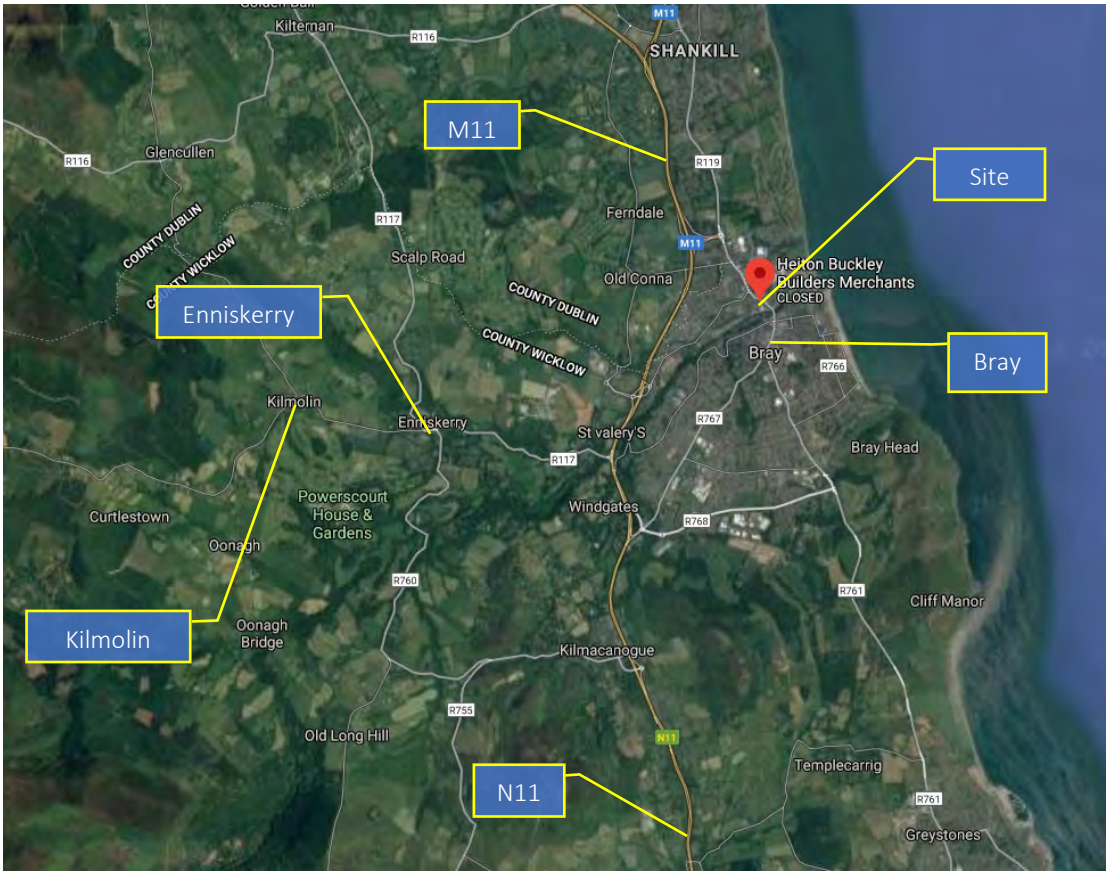
For future reference the terminology 'site' will apply to the subject development lands, i.e. the site under consideration which is identified graphically in the following pages.

The site falls under the authority of Wicklow County Council for planning, road/access and stormwater services purposes. Irish Water are the authority for potable water and wastewater in the area.

The wider surrounding lands is a mix of low/medium density residential and commercial/retail uses.

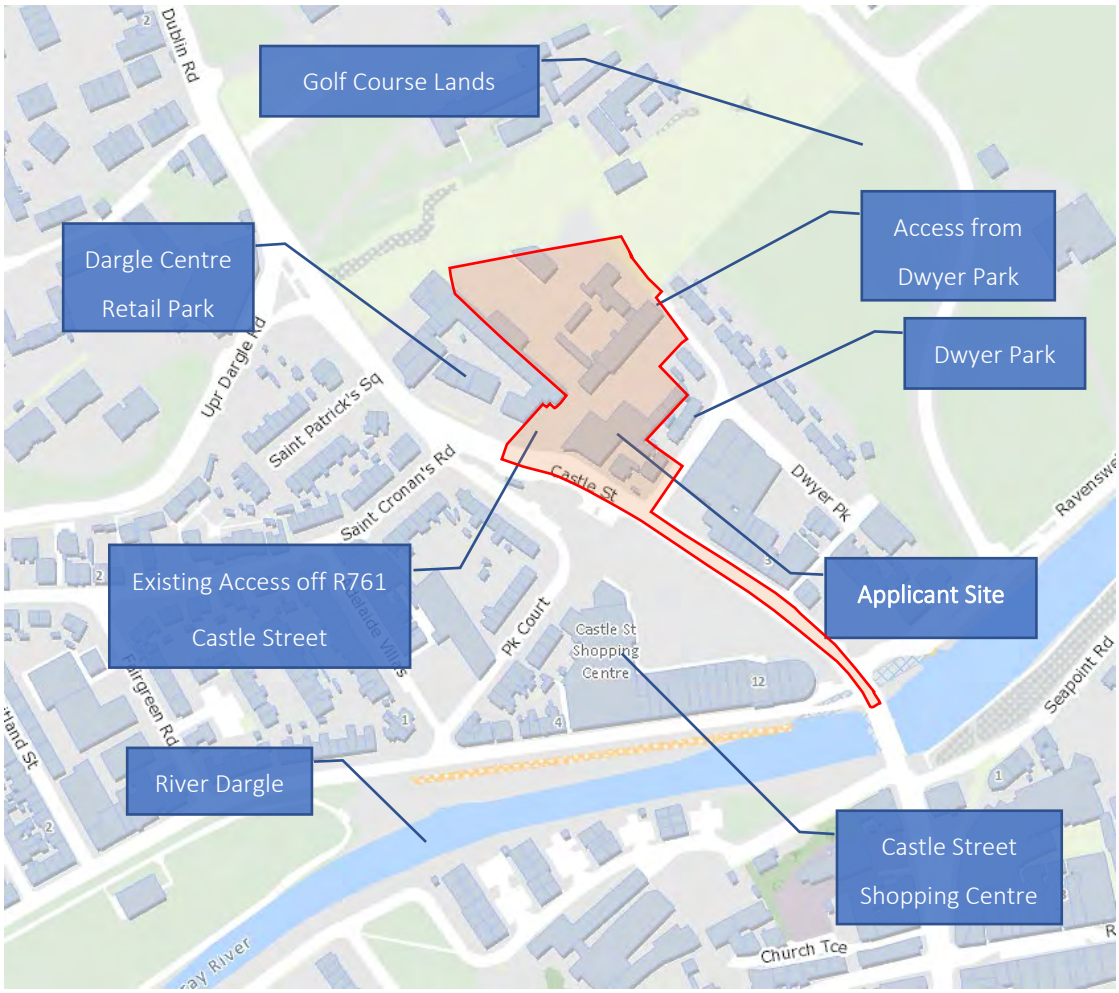
Figure 1-2 and Figure 1-3 following detail the location of the site in a regional and local context respectively.

Figure 1-2 Site Location; Regional Context[1]



[1] Source – Google Maps

Figure 1-3 Site Location; Local Context[2]



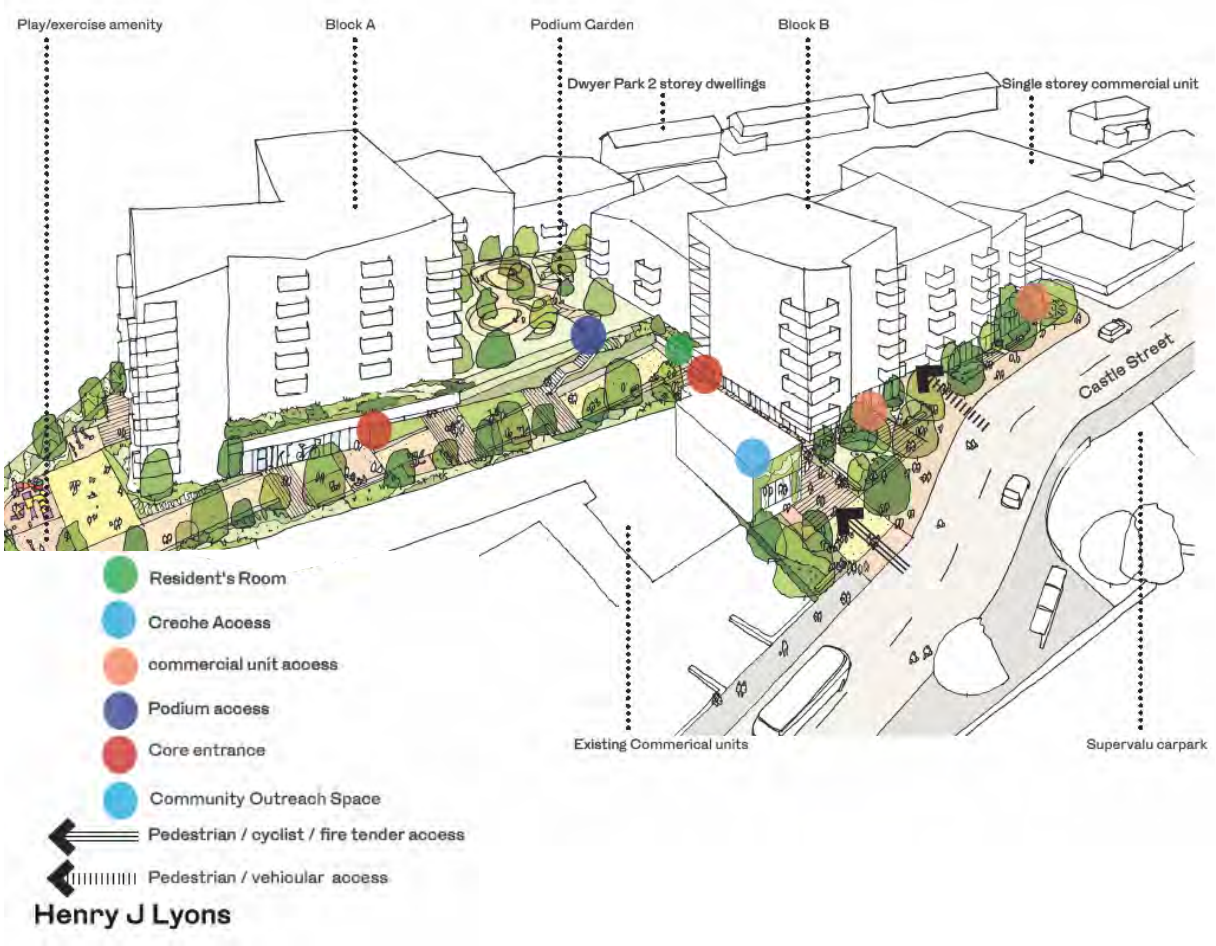
From the OS mapping provided and using the topographical survey procured for the site, the overall gross site area (redline area) amounts to approximately 1.0557 Hectares (10,557 square metres/ 2.609 Acres) which is inclusive of the area of public roads and footpaths. The nett area for development calculation purposes amounts to approximately 0.8594 Hectares (8,594 square metres/ 2.124 Acres).

[2] Source – Ordnance Survey Ireland, Geohive Mapping

1.2 Proposed Development

The proposed development is an apartment development based on a density of 162 units per hectare realising a total number of 139 apartments. The scheme will also include a creche (220 square metres) at ground floor of Block A. Block B will include two commercial units at ground floor (combined area of 688 square metres), a residents community meeting room at ground floor (74 square metres) and a separate smaller building housing a community facility (86 square metres). The accommodation is proposed in two blocks, up to seven storeys in height, with undercroft car and motorcycle parking, secure cycle parking and bin storage. There are also a number of visitor cycle parking spaces at surface level. For full details of the architectural and landscape proposals please refer to the relevant professional's reports in this regard. Refer Figure 1-4, Figure 1-5 and Figure 1-6 for details of the current proposal.

Figure 1-4 SHD Application, Context Sketch[3]



[3] Source – Henry J. Lyons Architects

Figure 1-5 SHD Application, Proposed Ground Floor Plan[4]

[4] Source – Henry J. Lyons Architects

Figure 1-6 Aerial View of proposal with podium between Block A and Block B visible[5]

Figure 1-7 following details the Schedule of Accommodation for the proposed residential elements of the development.

Figure 1-7 Schedule of Accommodation[6]

RESIDENTIAL GIA	1 BED	2 BED	3 BED	TOTAL	
TOTAL Block A	28	53	12	93	10026
TOTAL Block B	5	38	3	46	4941
TOTAL Block A&B	33	91	15	139	14967
Area of podium Carpark					1734
UNIT MIX	24%	65%	11%	100%	

Commerical/Community area (sqm):		Creche:	
Community outreach:	86sqm	Creche Area:	220sqm
Unit 01:	284sqm	No. of children:	28
Unit 02:	404sqm	External Play area:	85sqm
Community meeting:	74sqm	Creche Drop off spaces:	3

Based on land use zoning and the building types in the immediate and surrounding area, it is considered that the proposed scheme is in keeping with the Bray Municipal District Local Area Plan 2018 (LAP), the

[5] Source – Henry J. Lyons Architects

[6] Source – Henry J. Lyons Architects

Wicklow County Development Plan 2016-2022 (CDP), the National Development Plan 2018-2027 (NDP) and the Project Ireland 2040 National Planning Framework.

The planning consultant, Simon Clear & Associates, and the scheme architects, Henry J. Lyons, have prepared detailed studies relating to the architectural and planning aspects of the development site and their expertise should be consulted in this regard for a fully detailed assessment of these aspects of development.

2.0 Construction Waste & Demolition Management

Section 9 of the Wicklow County Development Plan 2016-2022 lays out the requirements in this regard as noted below;

> *Construction and demolition management. All construction sites shall be appropriately managed to ensure that environmental emissions are strictly controlled. This will be enforced by requiring (by planning condition) the agreement and implementation a 'construction and demolition management plan', which will set out detailed measures to manage waste arising from the construction activity.*
>
> *In drawing up such plans, developers should have regard to DoEHLG guidance publication 'Best Practice Guidelines on the preparation of Waste Management Plans for Construction and Demolition projects' (2006) as may be amended and revised. In particular, such plans will set out: • construction programme for the works • hours of operation • a traffic management plan • noise and dust mitigation measures (including details of a truck wheel wash at the site entrance • details of construction lighting.*
>
> *A Construction Manager will be required to be appointed to liaise directly with the various sections of the Planning Authority.*

The following section outlines construction & demolition waste management plan per the DoEHLG guidelines 2016.

Please note that this document is a draft which is intended to set a clear path and philosophy for the future nominated Contractor in drawing up their own final strategy for Construction & Demolition Waste Management Plan (C&D WMP).

2.1 Background to Construction waste & Demolition management

The purpose of the C&DWMP is to provide information necessary to ensure that the management of waste produced by the site is carried out in accordance with all current legal and industrial standards including;

- Waste Management Act 1996 & associated regulations
- Litter Act 1997
- Packaging Regulations 2003
- Waste Management Plan for Dublin Region 2005-2010.

One Priority of the plan shall be to promote recycling, reuse and recovery of waste and diversion from land fill wherever possible.

Guidance will also be given to ensure appropriate method of transportation of Waste is used to prevent littering or other serious environmental pollution.

In preparation of the C&D WMP, the following publications have been used as references.

- Best Practice Guidelines on the preparation of waste management plans for construction and demolition projects, Department of the Environment and local Government 2006.
- Construction and Demolition waste management - A handbook for contractors and site managers, FAS and the construction industry federation 2002.

In tandem with the launch of the National Construction and Demolition waste council, the Department of the Environment, Heritage and Local Government published the 'Guidelines for preparation of waste management plans for construction and demolition projects.'

These guidelines cover issues to be addressed at the preplanning stage right through to project completion and these include;

- Predicted Construction and demolition wastes;
- Waste disposal/recycling of C&D wastes at the site;
- List of sequence of operations to be followed;
- Provision of training for waste managers and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plans;
- Details of consultation with relevant stakeholders.

Section 3 of the guidelines outline the threshold to which the plans are prepared to. This particular development falls into the category of (3.1.2):

'New development other than (1) above including, institutional, educational, health and other public facilities with an aggregate floor area in excess of 1250m2.'

2.2 National, Regional and Legislation Requirements

At Regional level this development is located in the area of Wicklow County Council which is covered by the Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021, which was launched in May 2015. The Plan provides a framework for the prevention and management of waste in a sustainable manner in 12 local authority areas.

The primary objective of this plan is to achieve more sustainable waste management practices through increased recycling, use of source separation and use of industry code to regulate collection and treatment of waste including;

- 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan.
- Achieve a recycling rate of 50% of managed municipal waste by 2020.
- Reduce to 0% the direct disposal of unprocessed municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Plan's implementation is led by the Eastern-Midlands Regional Waste Office based in Dublin City Council.

Ireland achieved 68% recovery material recovery of non-hazardous, non-soil & stones C&D wastes in 2014. One of the primary objectives of the Plan is to achieve more sustainable waste management practices in the C&D sector. This requires the following actions:

- The development company must employ best practice at the design, planning and construction stage to ensure waste prevention and recycling opportunities are identified and implemented.
- Waste Collectors are required to introduce source-separation of recyclables and introduce graduated charges to incentivize better site practices.

Legislative requirements include the European waste legislation, Waste Management Act 1996 (as amended by the Waste Management (Amendment) Act 2001) and Irish legislation which is based on the principle of 'Duty of Care' and 'Polluter Pays'.

Waste contractors are typically engaged to transport waste off-site. Each contractor must comply with the provisions of the Waste Management Act 1996 and associated Regulations. A collection permit to

transport waste must be held by the relevant contractor, which is issued by the National Waste Collection Permit Office.

Current legislation implies that the waste producer is responsible for waste from the time it is generated to point of legal disposal.

Waste contractors must comply with the Waste Management Act 1996 as amended and associated regulations.

A permit to transport waste issued by Wicklow County Council must be obtained and requires contractor to handle, transport and dispose waste in a manner which ensures no adverse environmental impacts occur as a result of these activities.

Likewise, the facilities receiving waste must hold the appropriate licence under Waste Management (Facility Permit & Registration) regulations 2007 or by EPA.

This Permit will include information such as type of waste that can be received along with stored, sorted, recycled and or disposal materials at the site.

Only waste independently tested to either be inert or non-hazardous can be disposed of at landfill facilities in the Republic of Ireland with hazardous materials currently being taken abroad for disposal. This requires the Contractor to generally employ a suitably qualified environmental specialist to develop a soil management and removal plan to ensure full compliance with the above noted statutory requirements.

Annually the Environmental Protection Agency (EPA) issue a "*National Waste (Database) Reports*" detailing C&D waste generation and the level of recycling, recovery and disposal of this material, domestic and municipal waste rates, etc.

The site is located in an urban area and the surrounding areas are comprised primarily of residential developments and community use buildings such as a secondary school and retail centres of varying scale.

2.3 Demolition waste produced

The primary source of demolition waste will be related to the demolition and removal of the derelict warehouse structures. The aerial view below indicates the structures to be demolished to make way for the proposed development.

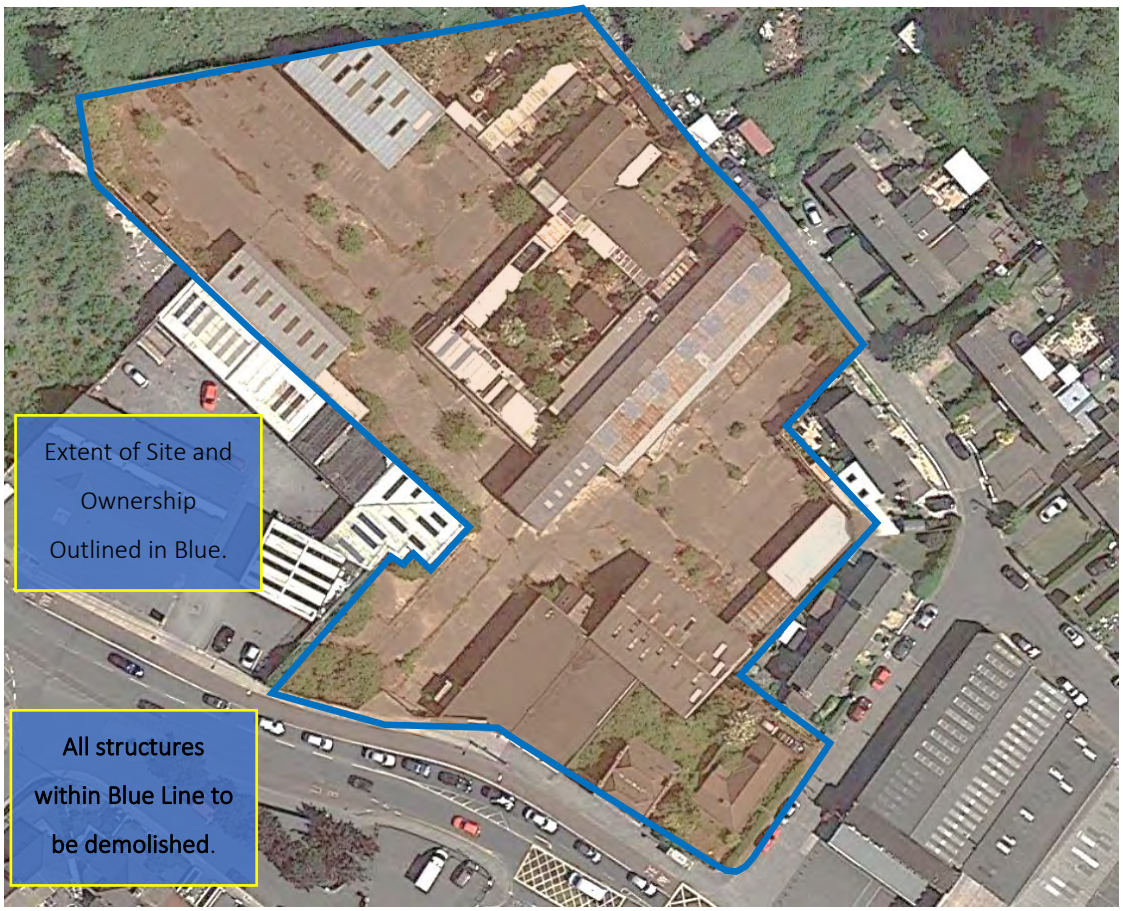


Figure 2-1 Extent of Buildings to be demolished

The majority of existing structures are of single storey construction with lightweight corrugated clad roofing supported off a grid of steel framing all supported off masonry walls with concrete ground floor slabs. The warehouse units could generally be described as being in a dilapidated unmaintained condition, reflective of the period that site has been left vacant.

It is intended that this waste be segregated and recycled as appropriate in accordance with this plan. Materials will also be subject to a reuse consideration philosophy to reduce waste quanta.

The existing buildings area gross footprint to be demolished is approximately 2,411m^2 of which circa 395m^2 is associated with some existing domestic property. The BRE Waste Benchmark Data as of June 2012 provides guidance on the demolition waste estimates based on the gross internal floor area as follows.

Project Type	Number of projects data relates to	Average Tonnes/100m2	Number of projects data relates to	Average Tonnes/£100K
Residential	256	16.8	260	12.3
Public Buildings	23	22.4	24	11.2
Leisure	21	21.6	20	10.5
Industrial Buildings	23	12.6	24	5.7
Healthcare	22	12	22	9.9
Education	60	23.3	60	11.8
Commercial Other	4	7	2	3.6
Commercial Offices	14	23.8	11	6.3
Commercial Retail	48	27.5	47	11.6
Total projects	471		470	

Table 2-1BRE Waste Benchmark Data

Therefore, the approx. buildings area of 2,411m^2 is anticipated to generate 12.6T/100m^2 of floor area for the industrial warehouse units and 16.8T/100m^2 for the residential element, all which would result in a waste quantum of circa 320 T.

The breakdown of waste generated on a typical demolition construction site is as tabled following;

Table 2-2Table 2Typical Demolition Waste Generation

Waste Types	%
Glass	3
Concrete, Bricks, Tiles, Ceramics	64
Plasterboard	4
Asphalt, Tar and Tar products	6
Metals	2
Slate	8
Timber	13
Total Waste	**100**

In order to reduce the quatums of waste, mitigation measures proposed are summarised below:

- On-site segregation of all waste materials into appropriate categories including; made ground, soil, subsoil, bedrock, concrete, bricks, tiles, ceramics, plasterboard,metals, dry recyclables e.g. cardboard, plastic, timber;

- All waste materials will be stored in skips or other suitable receptacles in a designated area of the site;
- An asbestos survey has been completed in the buildings to be demolished;
- Wherever possible, left over materials (e.g. timber off cuts) and any suitable demolition materials shall be re-used on-site;
- Any potentially contaminated soil to be removed from site will be tested to confirm its contamination status and subsequent management requirements;
- All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams where appropriate facilities are currently not available;
- All waste leaving the site will be transported by suitable permitted contractors and taken to suitably licensed or permitted facilities;
- All waste leaving the site will be recorded and copies of relevant documentation maintained.

2.4 Construction phase waste

Given the nature of the development there will be no bulk excavations required on the site to accommodate any basement structure. Localised excavations will only be required for other typical sub-structures such as shallow surface water attenuation tanks. Excavations can also be expected for installation of general site infrastructure. Excavations in this regard are situated such that they are not anticipated to have any effect on the existing surrounding boundary features.

The soils stratigraphy on site are anticipated to be soft materials to estimated rock head at approximately 8 to 10m below existing ground level. Structures are therefore anticipated to be supported of piles set into the rock layer where the augured method of low vibration piling will return some soil material for disposal during the piling process. Excavations at depth to accommodate civil infrastructure will be done so by safe appropriate construction methods including temporary works systems which will form part of Contractor safe work practice in accordance with current HSA guidance.

Material which is to be removed from the site will be tested appropriately in order to determine its suitability for disposal and handling etc. and this process will follow best practice guidance from the Department of Environment, Heritage and Local Government 2006.

Construction of new building structures is anticipated to generate waste in the form of surplus materials arising from cut-offs of various materials including concrete blocks, bricks, tiles etc.

Waste from packaging and oversupply of materials is also expected.

2.5 Categories of construction waste generated

In order to provide consistent waste and hazardous waste classifications across the EU the following were published:

- European waste Catalogue.
- Hazardous waste list.

These form the basis for national and international waste reporting obligations.

The EPA has also published a more concise guide of these.

The European Waste Codes (EWC) expected to for typical waste materials expected to be generated for this site are tabulated in the following table:

Waste types and EWC:

Waste Material	EWC
Non-Hazardous	
Concrete, bricks, tiles, ceramics	17 01
Wood, glass and plastic	17 02
Bituminous mixtures, coal tar and tarred products	17 03
Metals (including their alloys)	17 04
Soil, stones and dredged spoil	17 05
Gypsum-based construction material	17 08
Hazardous	
Electrical and Electronic Components	16 02
Batteries	16 06
Wood Preservatives	03 02
Liquid Fuels	13 07
Soil and stones containing dangerous substances	17 05 03
Insulation materials containing asbestos	17 06 01
Other insulation materials containing of or containing	17 06 03
Construction materials containing asbestos	17 06 05
Construction and demolition waste containing mercury	17 09 01

Construction and demolition waste containing PCBs	17 09 02
Other construction and demolition Wastes containing dangerous substances	17 9 03

Table 2-3EWC Codes

In order to reduce the quatums of waste, mitigation measures proposed are summarised below:

- On-site segregation of all waste materials into appropriate categories, including: top-soil, sub-soil, bedrock, concrete, bricks, tiles, ceramics, plasterboard, asphalt, tar, and tar products, metals; dry recyclables (e.g. cardboard, plastic, timber).

- All waste material will be stored in skips or other suitable receptacles in a designated waste storage area on the site;

- Wherever possible, left-over material (e.g. timber cut-offs) and any suitable demolition materials shall be reused on or off site;

- Uncontaminated excavated material (top-soil, sub-soil) will be reused on site in preference to the importation of clean fill, as soil to be reused or removed from site must be tested to confirm its contamination status and subsequent management requirements;

- All waste leaving the site will be transported by a suitably licensed/permitted contractor and taken to a licensed/permitted facility.

- All waste leaving the site will be recorded and copies of relevant documentation retained.

In summary, with a high level of due diligence carried out at the site, it is envisaged that the environmental impact of the construction phase of the proposed development will be of small scale and short duration, with respect to waste management. There is ample space on site to manage and segregate waste on site.

2.6 Anticipated hazardous waste

Fuels used during construction will be classed as hazardous and this will be stored for site machinery etc., in suitable tanks with the draw-off points bunded.

Where this is the case it is not expected that there will be any fuel wastage.

Waste mixtures contain dangerous substances classified as hazardous waste. This will not be used as fill on the site and only disposed of in licensed hazardous waste facility.

2.7 Estimated waste generated

Taken from the Irish EPA figures below is the breakdown of Construction and demolition waste type expected to be generated from a typical site such as this per m2.

Waste Materials generated on a typical Irish construction site are shown on the following table:

Waste Types	%
Soil & Stones	83
Concrete, Bricks, tiles, plastics etc	13
Asphalt, tar/tar products	1
Metals	1
Others	2
Total	100

Table 2-4Waste Materials Generated on Typical Irish Construction Sites

Although there is a basement, this structure is positioned such that it makes use of the existing site topography and therefore the quantum of excavated material will be much reduced and not reflective of the proposed sub-structure footprint/volume.

The Contractor will be required to quantify all waste per following report sections and record and audit same as necessary.

2.8 Proposed Waste Management Operation

Waste is to be segregated on site to the above table. The site waste storage area will have skips and recycling receptacles for all recyclable wastes. There is ample site are to accommodate such skip segregation areas on the site.

Collections for these will be as usage required. Non-hazardous recyclable waste will be transferred by suitable means to landfill. Each material for recycling will be segregated into suitable containers which have adequate access for collection vehicles.

Sub-soils/Topsoil's

This given previous land use and on-site observations is expected to be inert soil and subsoils which will be excavated and reused where possible but if removed from site will be taken to licenced facility.

Permits issued under the Waste Management (collection permits) regulations 2007 allow the contractor to reuse this for landscaping etc. subject to its terms.

Small amount of material excavated which are deemed hazardous will be stored separately and tested for classification in accordance with Council Decision 2003/33/E, treated if required and disposed of appropriately.

Concrete & concrete blocks and aged stone / rubble

This clean inert material will be reused where possible by on-site crushing as filling material or removed to licensed site.

Plastics / Timber / Scrap Metals / Plaster / Glass

These highly reusable and /or recyclable materials, if uncontaminated, will be cleaned, segregated, and stored in suitable covered skip for collection by licensed contractor.

Every effort will be made in the management of the site to minimize the oversupply of these material.

Hazardous Materials

Specialist contractor will be employed to carry out environmental cleanup to remove traces of contaminated materials from the site. These should be licensed under Waste Management (Collection Permit regulations 2007). This will be disposed of in a facility licensed under the Waste Management Act 1996 and waste management (Facility Permit) regulations of 2007.

2.9 Documentation

All waste will be documented prior to leaving site. Records will be kept at the site and at the relevant waste facility.

Movement of waste will be in accordance with relevant guidelines.

Construction and Demolition municipal waste will be separated and stored wherever possible and monitored / inspected by the site foreperson prior to removal to ensure that site protocol for recycling is being adhered to.

2.10 Roles and training for waste management and site operatives

Waste Manager

A dedicated waste manager will be appointed to ensure commitment, efficiency and site protocols upheld during construction stage.

The role of the waste manager will be to record, oversee and manage everyday handling of waste on the site.

Their training will be in setup and maintaining record keeping systems and how to produce an audit to ensure waste management targets are being met.

They shall also be trained in the best methods for segregation and storage of recyclables. They will also be familiar with the suitability of material reuse and know how to implement the Construction Waste & Demolition Management Plan.

Site Crew

This shall be the responsibility of the nominated waste manager and a training programme will be organised, incorporated into typical onsite inductions to give an awareness of waste segregation on the site.

This will outline the types and treatment that should be given to different materials and hazardous materials.

2.11 Record keeping

Records shall be kept for each material leaving the site for all types of use or disposal.

This shall take the following basic outline form:

- Waste taken for reuse off site
- Waste taken for recycling
- Waste taken for disposal
- Reclaimed waste materials brought to site for reuse.

For any movement of waste a docket shall be signed and recorded by waste manager, detailing type and weight of material and source or destination.

This will be readily comparable with all delivery records to site, so a waste generation percentage for each material can be determined.

This will allow ease of comparison of figures with targets established for the recovery, reuse and recycling of Construction waste. It will also highlight the source of failure in meeting these targets.

2.12 Estimated costs of waste management

Without the appointment of a contractor for the project where more information will be available on the definite methods of collection, storage and transportation are known it is difficult to estimate at this stage. Waste Management costs have also been changing significantly in the recent past.

The total cost of C&D waste management shall be measured and allow for purchase cost of materials, handling cost, storage cost, transport cost, revenue from sale of material and disposal costs etc.

The re-use of materials on site will reduce the transportation and disposal costs for waste being taken to landfill sites.

Where soil/stones cannot the re-used on the site, they may be reused as capping material for landfill sites, or reinstatement of quarries for example. For this purpose, this waste may be taken free of charge thus reducing overall Waste Management Cost.

Salvageable metals can generally be deposited free of charge a salvage yards thus only incurring cost for transport.

Timber can be recycled as chip board etc but again the cost of clean segregate waste is cheaper to dispose of compared to mixed waste.

Plasterboard, as is no longer considered inert but can now be recycled also giving a net reduction in disposal costs.

Segregate waste will generally cost less than mixed municipal waste. As noted above, the disposal of waste to landfill can be reduced by consistently re-assessing the key approaches of reduce, re-use, recover or recycle of waste materials generated.

2.13 Waste audit procedure

The waste manager shall perform audits at the site during the complete construction phase of the works.

This shall ensure that all records are being maintained for all movements of all materials.

Records shall also be readily available for comparison with the sites targets.

At completion of the Construction phase a final report will be prepared outlining the results of the Waste Management process and the total reuse, recycle and recover figures for the site.

2.14 Consultation with relevant bodies

The local authority Wicklow County Council will be consulted throughout the construction phase as deemed appropriate by the site Waste Manager to ensure that all available waste reduction, reuse and recycle and recover options are being fully explored and utilized and that compliant Waste Management is being carried out at the site.

Specialist companies, wherever required, will be contacted to determine their suitability and each company record reviewed to ensure relevant current collection permits / licenses are held.

Companies will also be contacted to gather information regarding treatment of hazardous materials, if required, although not anticipated for this site.

Appendix A

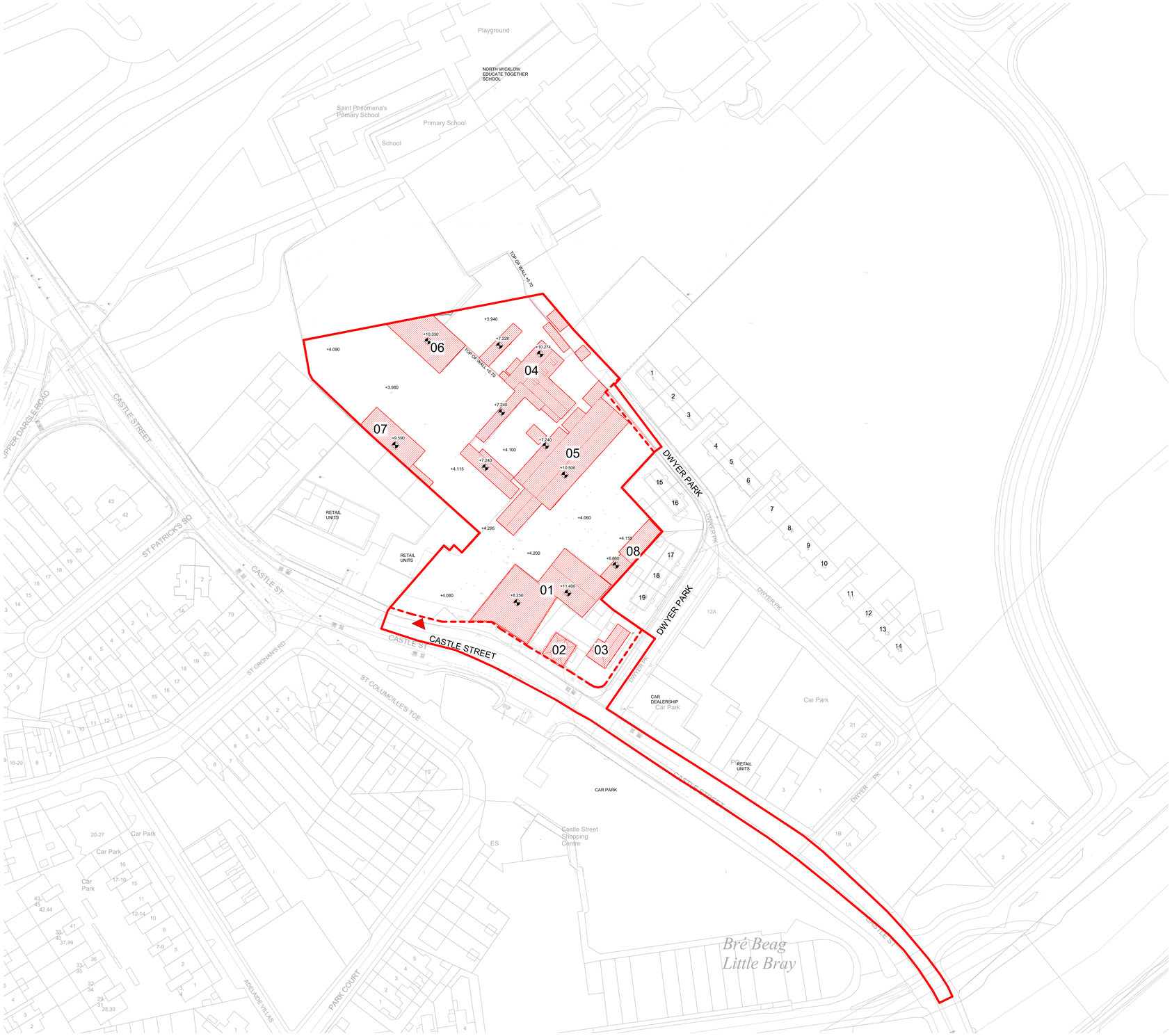
A.1 – Proposed Development Site Layout & Scope of Demolitions

ALL DIMENSIONS TO BE CHECKED ON SITE
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT CONSULTANTS DRAWINGS

N

Legend

- Site boundary
- Core site area
- Existing site entrance
- Buildings to be demolished
- Spot elevations
- + 4.00 Site levels



1 **EXISTING / DEMOLITION SITE PLAN**
1 : 500

REV	DATE	DESCRIPTION	CKH	DRN

STATUS CODE DESCRIPTION
ISSUED FOR PLANNING APPROVAL

CLIENT
SILVERBOW LTD.

PROJECT
SHD CASTLE STREET BRAY

DRAWING
EXISTING / DEMOLITION SITE PLAN

PROJECT NUMBER	DATE
960824	01/03/2022
SCALE@ A0:	DRAWN/CHECKED:
As indicated	DGI CM

STATUS CODE:	DRAWING NUMBER:	REVISION:
A1	CSB-HJL-AB-XX-DR-A-0003	

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51-54 Pearse Street
Dublin D02 KA66

ALL DIMENSIONS TO BE CHECKED ON SITE
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT CONSULTANTS DRAWINGS

1 **PROPOSED SITE LAYOUT PLAN**
1 : 500

N

Legend

- Site boundary
- Core site area
- Proposed site entrance
- Sedum roof

REV	DATE	DESCRIPTION	CKH	DRN

STATUS CODE DESCRIPTION
ISSUED FOR PLANNING APPROVAL

CLIENT
SILVERBOW LTD.

PROJECT
SHD CASTLE STREET BRAY

DRAWING
PROPOSED SITE LAYOUT PLAN

PROJECT NUMBER
90064

DATE
01/03/2022

SCALE@ A0
As indicated

DRAWN/CHECKED:
ROG/ CM

STATUS CODE:
A1

DRAWING NUMBER
CSB-HJL-AB-XX-DR-A-0005

REVISION

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