

Castlelake Strategic Housing Development Environmental Impact Assessment Report (EIAR)

Project No. 22461

June 2022



Appendix 1.1

CCC Opinion and Minutes



Comhairle Contae Chorcaí Cork County Council



Strategic Housing Development: Pre-Planning Consultation with An Bord Pleanála under Section 6(4)(b) of the Planning and Development (Housing) and Residential Tenancies Act (2016)

AT: Castlelake, Terrysland, Carrigtwohill

FOR: Planning Permission for the construction of a Strategic Housing Development of 706 no. residential units (239 no. houses and 467 no. apartments), crèche and associated site works at Castlelake, Terrysland, Carrigtwohill, Co. Cork.

Planning Authority's opinion on what considerations relating to proper planning and sustainable development may have a bearing on An Bord Pleanála's decision.

December 1st 2021

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1. INTRODUCTION

An initial pre-planning consultation took place with the Planning Authority on Thursday 15th July 2021 followed by a further second consultation on Thursday 16th September 2021. Cork County Council was formally notified by An Bord Pleanála on 18th November 2021 of the request for copies of all records of the S.247 consultations held with the prospective applicant in relation to the subject development proposal as well as the Planning Authority's opinion in writing (including reasons) of what considerations, related to proper planning and sustainable development of the area concerned, may have a bearing on An Bord Pleanála's decision in relation to the proposed strategic housing development, in particular, the authority's opinion on the proposed development having regard to the provisions of the relevant development plan or local area plan and any relevant planning applications in the area.

This report sets out Cork County Council's formal response to this request. The report is broken down into the following sections:

- Section 2 Minutes of the formal Section 247 meeting;
- Section 3 Planning History;
- Section 4 Sets out the issues which may have a bearing on the Board's decision in relation to the proposed development

- Section 5 Conclusion
- Section 6 Appendices

2. MINUTES OF SECTION 247 CONSULTATIONS

An initial formal Section 247 pre-planning consultation was held on 15th July 2021. This meeting was followed up by a further second consultation on 16th September 2021. The minutes of both of these meetings are set out below.

**Proposed Development at Terrysland Carrigtwohill: Council reference SHD33
Minutes of Section 247 Pre-Planning Consultation held on 15th July 2021.
Meeting held on Microsoft Teams**

In attendance:

Name	Representing
Niall O Donnabháin	Cork County Council
Kevin O' Regan	Cork County Council
Ciaran O' Callaghan	Cork County Council
Donald Cronin	Cork County Council
James Hickey	Cork County Council
Robert O'Sullivan	Cork County Council
Harry Walsh	HW Planning
Paul Kenneally	BAM
Brian Westlake	Wilson Architects
Paud O Mahony	Wilson Architects
Gary McCormack	RPS

Harry Walsh gave an overview of the proposal leading on from the density issues that had previously been raised by ABP.

Paud O' Mahony presented detail in relation to the proposed development. Noting that the hatched area under the power lines was undevelopable. He noted that an Urban Design Strategy Approach had been applied with corner units that turn the corners. There is pedestrian connectivity throughout. Public open space and landscaped space have been identified separately with passive surveillance over the public space. There are 3 story units on the distributor roads. The apartments do not have common areas, but all have own door access from ground level. The apartment blocks have a semiprivate space, with own doors where possible and generally in cul de sacs. Density is in the region of 40.5/Ha with useable open space of 18.6%.

Niall invited the Council reps to raise questions or comments.

Donald Cronin welcomed the development and noted that HIIT might have some concerns in relation to the timing, scope, and potential impact on the URDF project. He noted the Public Realm on Station Road which is at preliminary Part VIII design. The possible impact on the UAE Northern Services Link Road and the capacity of the Woodstock drainage channel and Station road upgrade works also need to be considered. He noted that a capacity assessment for surface water would be required to include all lands in the ownership of the developer. The dependence on the existing artificial pond and

potential flood risks, both up and downstream. He asked about the proposal to use the existing cattle pass for the N/S link road and noted that the depth of 7 meters at this point. He advised that Atkins are undertaking work for the Council in relation to the side slopes at this location. He enquired if there has been contact with Irish Water.

Harry Walsh advised that no contact has been made yet with Irish Water. He advised that it is proposed that works will be compatible with Council works. He advised that an EIAR is to be undertaken and the potential flood issues will be included in this.

Gary McCormack advised that the pond was designed to facilitate 7% of the entire site. A full analysis of the catchment will be undertaken. Any other sites will be dealt with separately. Following the assessment, they will amend their SUDS as and if required.

Ciaran O Callaghan noted the forthcoming Part VIII for the Greenway works at the IDA site that will run on the northern side of the railway to Ballyadam. He advised that the underpass consists of 2 bores and the proposal is for one to be used traffic and the other for a cycle connection to the interurban cycleway. He enquired if TII views on potential traffic on the N25 have been sought in relation to any possible congestion.

A discussion on the linking in and alignment of the SHD proposal and other infrastructural works, and the wider constraints of the road network followed. It was noted that issues such as local impacts from proposed school development etc need careful consideration.

Robert O' Sullivan noted that flooding can occasionally occur as far as Powers land. Issues such as future maintenance of open drains within the site need to be clarified, piped or open etc. He also raised potential concerns about junction capacity.

Niall advised that some staff were unable to attend the meeting, but he would raise the issues that had noted to them. He noted that the proposed density is appropriate for the area and that the East/West connectivity will assist the development. The potential for the junction to impact on BAM lands will need to be assessed and confirmed but it is noted that they may not have any impact.

Alan Costello had raised issues relation to the pond quality management.

Greg Collins raised concerns about useability of open space and that the masterplan will need to be fleshed out more to reference the proposed character of areas within etc. He did have concerns relation to the nature and form. It was also noted that potential noise impact from the railway needs to be considered for units adjacent. A landscape strategy to ascertain how it works and fits in will need to be developed.

It was noted that currently the Council only has funding secured for the design of the Part VIII.

Ciaran advised that there are proposals to upgrade the railway to dual track.

It was agreed to arrange another meeting.

Proposed Development at Terrysland Carrigtwohill: Council reference SHD33
Minutes of 2nd Section 247 Pre-Planning Consultation held on 16th Sept 2021.
Meeting held on Microsoft Teams

In attendance:

Name	Representing
Niall O Donnabháin	Cork County Council
Kevin O' Regan	Cork County Council
Noel Sheridan	Cork County Council
Ciaran O' Callaghan	Cork County Council
Donald Cronin	Cork County Council
James Hickey	Cork County Council
Louise Ahern	Cork County Council
Harry Walsh	HW Planning
Marcus Tia	BAM
Marcus Reid	Wilson Architects
Ciara Cosgrove	HW Planning
Gary McCormack	RPS
Paul Kenneally	BAM
Paud O Mahony	Wilson Architects

Harry Walsh outlined that they are moving towards pre-application to ABP. There has been some discussion with Ciaran O' Callaghan concerning the proposed Part VIII. The issue of concern for the developers is the delivery of infrastructure by the Council that has implications for or affects the proposed development and to ensure there is no conflict between the two projects.

Paul Kenneally outlined that the specific issue relates to the underpass, the potential impact on a high-density area of land in their development and concerns that certain elements of land could be isolated. Ciaran outlined that the Part VIII project is at preliminary design stage. Modifications can be made at this point. Part M compliance is required, and the embankment will lead to some encroachment. He noted there is TII guidance on the issue. The ground levels on site will dictate the design.

It was noted other potential solutions may involve agreement of 3rd parties but could be more desirable in relation to connectivity from West to the train station.

Harry noted the developers wish to work with the Council and noted the level constraints on what might be achievable.

Paul noted that there are potential options that they will investigate and consider.

It was noted that the underpass had been constructed with the involvement and knowledge of CIE and that prior communication with them before any works are undertaken would be advisable.

Harry Walsh advised that they would forward their proposals to Ciaran, Donald etc for consideration. Their intention is to submit to ABP on 22nd September 2021 on the basis that the developer is working

with the Council. It was noted that the time to build out the development will provide time for connectivity work to be undertaken.

A discussion on the timing of the deliverability of the Council projects followed. Niall noted that the town centre Part VIII works are the initial focus and the Council propose to publish the required Part VIII in Q4 2021. The Council is currently in discussions with TII regarding proposed interim works at Cobh Cross and their agreement is needed to include same in the Part VIII.

Niall noted that there are ongoing discussions with the Department of Education in relation to development of the school site. The inner relief road is under construction by BAM and is expected to be completed by the end of the year. Other works overlap with the proposed URDF Part VIII proposals for the town centre and with Council approval it is expected that this Part VIII will be published in Q4 2021.

This concluded the meeting.

3. PLANNING HISTORY

The following is a tabulated list of the relevant site planning history.

Subject Site

Planning Ref.	Development Description	Decision / Outcome
18/4693	Construction of a creche of 581sqm over one and two-storeys, new entrance, car parking and boundaries and all associated site development works. (BAM Property Ltd.)	GRANT
17/5399 ABP-301610-18	Construction of 277 no. residential units consisting of 43 no. detached houses, 94 no. semi-detached houses, 40 no. three storey terraced houses, 9 no. duplex houses, 9 no. duplex apartments and 82 no. 2 & 3 bedroom apartments arranged in three blocks of three stories and one block of four stories and associated site development works. The proposed development represents a change of layout and house types on part of the lands previously permitted under the overall 'Castlelake' development Ref: 00/7674 (An Bord Pleanala Ref: PL.04.131129) extended under 12/5005 and Ref: 00/7607 (An Bord Pleanala Ref: PL.04/125446) extended under 11/4857. (BAM Property Ltd)	PERMISSION REFUSED REASON: The "Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas" published by the Department of the Environment, Heritage and Local Government in May, 2009, require a high quality approach to the design and layout of new housing. Having regard to the proposed site layout, and in particular the poor disposition and quality of public communal open space and future connectivity to Carrigtwohill Train station, the proposed development would constitute a substandard form of development, would provide an inadequate standard of amenity for future occupants and, therefore, conflict with provisions of the said guidelines. Furthermore, it is considered that the proposed development, including the revised proposal submitted by the applicant on the 1 st day of October 2018 does not provide an appropriate architectural design response for the site. The proposed development is considered to be inconsistent with the proper planning and sustainable development of the area.
09/7936 PL04.237688	Construction of 4-storey 90 bed nursing home, community day centre, parking and associated site development works. (BAM Gable Developments)	GRANT PERMISSION
15/6759	Extension of Duration of 09/7936 PL04.237688. (BAM Gable Developments)	GRANT PERMISSION

<p>00/7607 PL04.125446</p>	<p>771 Dwellings comprising 52 detached houses, 152 semi detached houses, 203 terraced houses, 132 duplex units, 218 apartments and 14 serviced sites and associated site development works. Seven no commercial / retail units, hotel, shopping centre, with supermarket, 4 retail units with café diner, creche, recreational amenities and reservation of site for potential school development. The development comprises Phase One of a development at Terrylands. (Gable Holdings and Blandcrest Ltd)</p>	<p>GRANT PERMISSION</p> <p>Conditions of note included condition 2 which required that prior to the commencement of development, a revised phasing programme for development shall be submitted to the planning authority for agreement and that development shall be carried out in two main phases - 1A and 1B. Under clause (f) of this condition, it stated that Phase 1A shall include completion of the spine road, from the junction with Main Street (new roundabout junction), through the site up to the junction with Station Road.</p> <p>Condition no. 17 stated that a temporary football pitch shall be provided to serve the development, in a location to be agreed with the Planning Authority.</p>
<p>07/5921</p>	<p>Extension of duration of 00/7607. (BAM Gable Developments Ltd., John F. Supple Ltd)</p>	<p>GRANT</p>
<p>11/4857</p>	<p>Extension of Duration of 00/7607. (BAM Gable Developments Ltd., John F. Supple Ltd)</p>	<p>GRANT</p>
<p>00/7674 PL04.131129</p>	<p>813 Residential Units comprising 101 detached houses, 118 semi detached houses, 205 terraced houses, 168 duplex units, 221 apartments and, Reservations of sites for Potential Railway Station and Park and Ride Facility, Post Primary School Campus and associated Active Recreational Uses. (Gable Holdings Ltd & Blandcrest Ltd)</p>	<p>GRANT</p> <p>Condition 17 of this permission also required the provision of the temporary football pitch.</p>
<p>12/5005</p>	<p>Extension of Duration of 00/7674. (BAM / Gable Ltd (Formerly Ascon Gable)</p>	<p>GRANT</p>
<p>08/7493</p>	<p>Extension of Duration of 00/7674 (Ascon Gable Ltd)</p>	<p>GRANT</p>

There were a number of amendment applications pertaining to the permitted development including 05/862, 05/4357, 05/7728, 06/8004, 07/75745, 11/5087, 11/5088, 14/4308.

OTHER RELEVANT KEY PROJECTS / PART VIII PROPOSALS / CONSENTS IN CARRIGTWOHILL

There are a number of key infrastructure projects and developments either recently completed, currently under way or at preliminary design stage in Carrigtwohill which are relevant to this development proposal which are summarised below.

19/5836 Internal road upgrades, IDA Business Park. Recently completed upgrade of existing internal access roads to provide a dedicated shared use cycleway and footpath, pedestrian and cycle crossing point, bus lane, bus shelter and traffic safety barrier. The development includes the provision of a cycleway and footpath adjacent to the L-3616 public road to connect into the L-3615 at the north eastern corner of the IDA Business Park.

Carrigtwohill URDF – Public Realm Infrastructure Bundle: Part 8 proposal for Main Street and Station Road Public Realm Works including footpath widening, road re-alignment, resurfacing, signalisation, traffic calming measures, street lighting, demolition of buildings at the junction of Main Street and Station Road along with other small scale demolition works, and provision of new public spaces, upgrade of Wisers Road junction, additional capacity measures at N25 Junction 3 (Cobh Cross) including widening and realignment of approach roads to the roundabout. It is expected that the proposed development will be advertised before year end 2021.

19/5707 Station Road Schools Campus: Permission granted for construction of three no. new school buildings and the construction of a main link road with roundabout from Castl lake Housing Estate to Station Road and an additional link from the roundabout to Station Road. This campus comprises of two primary schools and one post-primary school. The link road is currently under construction. There were conditions attached to the permission requiring either the delivery / implementation of the required upgrades and / or junction signalisations or payment of a special contributions towards same.

Bury's Bridge Cycleway: Part 8 consent for strategic cycleway scheme connecting Bury's Bridge at Dunkettle with Carrigtwohill. The cycleway enters the west side of Carrigtwohill to the north of Cobh Cross (N25 Junction 3) and runs parallel to Carrigtwohill Main Street before turning north and running along the Castl lake Access Road where it then joins the link roads associated with the new schools campus permitted under 19/5707.

Carrigtwohill – Midleton Inter-Urban Cycleway Phase 1: Part 8 strategic cycleway scheme proposal extending from Wisers Road, north of the Cork to Midleton railway line at the western end of Carrigtwohill to the east of the Carrigane Road bridge at the eastern end of Carrigtwohill. The scheme will pass through the Carrigtwohill UEA, cross Wisers Road, Station Road, Leamlara Road and Carrigane Road. It will connect to the Carrigtwohill Train Station and the new school campus on Station Road. The scheme will provide connectivity between the existing IDA Business Park to the west of Wisers Road and the industrial zoned lands to the south of the Carrigane Road. It is expected that the proposed development will be advertised before year end 2021.

4. ISSUES WHICH MAY BE CONSIDERED BY AN BORD PLEANÁLA

COMPLIANCE WITH CORE STRATEGY AND LOCAL AREA PLAN

The site policy context is informed at a local level by the Cobh Municipal District Local Area Plan (2017) and the Cork County Development Plan (2014-2020). At a national level, relevant policy guidance is provided by the *Sustainable Residential Development in Urban Areas* (2009) guidelines, the accompanying *Urban Design Manual* (2009) and the guidelines on *Sustainable Urban Housing: Design Standards for New Apartments* (2020).

The site is within the settlement boundary Carrigtwohill which is designated a 'Metropolitan Town' within Metropolitan Cork under the 2017 Cobh Municipal District Local Area Plan. The Plan outlines the vision for Carrigtwohill as a 'Metropolitan Town' but also its strategic role in Metropolitan Cork up to the year 2023 and beyond.

The LAP recognises the ability of the town to provide a strong supply of housing and business land and the availability of a commuter rail service will make this a particularly sustainable settlement. There are no water supply constraints and deficits in waste water infrastructure have recently been addressed. As a consequence of the provision of this infrastructure, Carrigtwohill is well placed to facilitate rapid yet sustainable growth and development.

Carrigtwohill's target Population for 2022 under the current CDP is 11,618 which is an increase of 7,076 people over the 2011 population. This population target gives rise to an additional 3,195 households in Carrigtwohill. The Draft CDP proposes a population of 13,486 for 2028 which is an increase of 8,406 people over the 2016 population. The Draft CDP proposes provision for a further 3,445 dwellings up to 2028 with 3,216 housing units delivered on residentially zoned land and the balance of 229 delivered within the built footprint of the town.

As per the Cobh MD LAP (2017), the site is subject to Policy Objective **CH-R-01** to provide for *Medium density (A & B) residential* development and where Flood Risk Objective IN-01 of the LAP applies. Medium density A residential development is defined by the County Development Plan as 20-50 no. units per hectare (net density) while Medium density B residential development has an upper limit of 25 no. dwellings per hectare creating an overlap with the lower limit to Medium Density A category with no lower limit.

There are other smaller pockets of development proposed which are located within the *Existing Built Up Area* and the site of the proposed childcare facility is subject to policy objective **CT-T-03** Town Centre development which requires the submission of a TIA and RSA and where Flood Risk Objective IN-01 of the LAP applies.

There is also a specific policy objective **CT-U-01** for provision of a new link road connecting Castle Lake to Station Road with underpass and **CT-U-02** for provision of new link roads to access development lands. (Road lines on map are indicative only) This **CT-U-01** link road is currently under construction as recently permitted as part of the new school campus development, planning ref. 19/5707.

The principle of residential development on these lands has already been established under CCC Planning Ref. 00/7607 / Appeal ref. PL04.125446 and CCC Planning Ref. 00/7674 / Appeal Ref. PL04.131129, as outlined under the planning history in Section 3 of this report. The site forms part of this unfinished residential scheme, which detracts from the visual qualities of the settlement. The Planning Authority fully supports and welcomes the completion of this development.

There is a site specific objective, **CH-R-01** to provide for medium density A & B residential development on the main part of the site and **CT-T-03** for Town Centre development on the site where the childcare facility as well as a number of residential units are proposed. Policy objective **ZU 3-8** of the 2014 CCDP outlines appropriate uses in Town Centres which includes residential development. The proposed development provides for a net density of 46 no. units per hectare. The proposed density is consistent with the provisions of the Cork County Development Plan 2014 and the Cobh MD LAP 2017 and is considered appropriate at this central location.

As detailed above, Carrigtwohill benefits from being located on the suburban rail link. The importance of the role of land use planning in underpinning the efficiency of public transport services by sustainable settlement patterns with higher densities on lands within existing transport corridors such as this is recognised. Cognisance is also given to Objective 33 of the National Planning Framework which seeks to prioritise the provision of new homes at locations that can support sustainable development and at an appropriate scale of provision relative to location.

Objective 7 of the NPF recognises the legacy of rapid unplanned growth by facilitating amenities and services catch-up, jobs and/or improved sustainable transport links to the cities, together with a slower rate of population growth in recently expanded commuter settlements of all sizes.

The proposed development is located on land which is zoned for residential development and Town Centre development at the site of the childcare facility. The proposed development conforms generally with Cork County Development Plan 2014, and the zoning detailed in the Cobh Municipal District Local Area Plan 2017.

DRAFT CORK COUNTY DEVELOPMENT PLAN 2022

The Draft Cork County Development Plan was issued on Wednesday 21st April 2021. It is intended that the new Cork County Development Plan 2022 will be the first consolidated Plan for the entire functional area of Cork County Council and relates to the new administrative boundary of the county. The new County Development Plan will replace not just the current County Development Plan (as varied) but also the current eight Municipal District Local Area Plans made in 2017 as well as the existing Town Plans.

The Draft Plan proposes high density residential development on the subject site, **CT-R-01**. High quality pedestrian and cycle connectivity, particularly to the adjoining school campus and station quarter, is to be provided. It should be noted that the Draft Plan, in order to align the Plan with Government Guidelines, proposes the minimum threshold being increased from 35 to 50 units / ha with no upper limit. This zoning category is applicable to suitable lands adjoining existing or planned high frequency public transport stations or bus stops within Metropolitan Cork. **CT-U-12** seeks completion of the

Northern Spine Link Road linking the Western Spine Link Road via the underpass to lands south of the railway and **CT-U-07** identifies existing castle underpass for provision of pedestrian / cycling link to Interurban Greenway (**CT-U-03**).

DENSITY

The scheme in this pre-planning submission to An Bord Pleanála is for 706 residential units with a net density of 46 per hectare.

Site Area	18.13 ha
Developable Area	15.43 ha
Density	46 no. units per ha
Site Coverage	0.23
Public Open Space	53,110 sq m

The Section 28 Guidelines recommend increased densities be promoted within 500m walking distance of a bus stop, or within 1km of a light rail stop or a rail station along transport corridors. The capacity of public transport (e.g. the number of train services during peak hours) should also be taken into consideration in determining appropriate densities. In general, the Guidelines recommend minimum net densities of 50 dwellings per hectare along public transport corridors, subject to appropriate design and amenity standards.

The Department's Circular letter on residential density (NRUP 02/21) is also noted. This is a relatively flat greenfield site which is contiguous to the existing built up area of the settlement and is less than 1km from the town centre and train station. Having regard to the site's location within the settlement, the character of the surrounding area and the Objectives in the LAP for the site and surrounding area, it is considered that the proposed density of development accords with the provisions of the Cork County Development Plan 2014 and the Cobh Municipal District Local Area Plan 2017.

HOUSING MIX

In summary, the proposed development will provide:

- Block 1 4 storeys comprising 34 no. apartments
- Block 2 4-5 storeys comprising 42 no. apartments
- Blocks 3 to 6 4-5 storeys comprising 60 no. apartments
- Block 7 5 storeys comprising 81 no. apartments
- 35 no. three-storey building comprising 250 no. duplex units
- 239 no. two-storey houses.

The following table provides an indicative breakdown of the proposed residential content:

HOUSES		
Unit Type	No. of Units	Gross Floor Space (m²)
1 bed	0	0
2 bed	70	6,737.40m ²
3 bed	143	14,872.00m ²
4 bed	26	3,705.30m ²
4+ bed	0	0m ²
Total	239	25,315m²

APARTMENTS		
Unit Type	No. of Units	Gross Floor Space (m²)
Studio	0	0m ²
1 bed	142 (incl. 65 duplex units)	7,647.70m ²
2 bed	235 (incl. 122 duplex units)	22,244.80m ²
3 bed	90 (incl. 63 duplex units)	9,750.40m ²
4 bed	0	0m ²
4+ bed	0	0m ²
Total	467	39,643m²

The proposed housing mix and the guidance for housing mix from the Joint Cork Housing Strategy are detailed as follows:

House Type	No. of Units	Proposed (%)	Joint Housing Strategy Guidance (%)
1 bed	142	20%	5%
2 bed	305	43%	20%
3 bed	233	33%	40%
4 bed	26	4%	25%

Objective HOU 3-3 of the County Development Plan seeks to secure the development of a mix of house types and sizes throughout the county as a whole to meet the needs of the likely future population in accordance with the guidance set out in the joint Housing Strategy and the Guidelines on Sustainable Residential Development in Urban Areas.

The proposal is dominated by smaller 1-bed and 2-bed units (63%) and the provision of 4-bed units (4%) is notably low. A key consideration in assessing the proposal will be to determine if the mix of house types and sizes is appropriate for the subject location and the extent to which it satisfies the requirements of HOU 3-3 of the Cork County Development Plan 2014 and the provisions of the Section 28 *Guidelines on Sustainable Residential Development in Urban Areas*. Objective HOU 3-3 requires the submission of a Statement of Housing Mix with all applications for multi-unit residential development in order to facilitate the proper evaluation of the proposal relative to this objective. The housing mix should be presented in the context of the wider area. It is also important that houses are future proofed for future expansion e.g. attic conversions etc.

URBAN DESIGN, LAYOUT, VISUAL AND RESIDENTIAL AMENITY

Key considerations for the Board will be the acceptability of the proposed development in terms of National, Regional and Local Guidelines in relation to design principles for residential neighbourhoods with regard to achieving qualitative, sustainable, liveable, people centred neighbourhoods.

Another key consideration in assessing the proposal will be to determine if the proposed apartments are in compliance with the *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities* (2020).

The design could be improved around the need to create a better sense of community living (see report of the Council's Senior Executive Architect in the appendix). In particular, the arrangement of green open spaces features large areas of open space and does not integrate very well with the housing areas. There is scope for smaller more localised and safer green areas which are better overlooked. The arrangement of most of the housing of the family type dwellings face onto standardised internal roadways. This is repetitive and provides little or no opportunity for the introduction of localised home zones with supporting green infrastructure to provide for good residential amenity, safe play areas for smaller children with added variety, distinctiveness and pleasantness within the overall scheme.

The close proximity between the existing railway line and the nearest dwellings along the northern boundary is of concern, particularly in the north west corner where rear private amenity spaces are quite shallow and directly adjoin the railway line.

It is suggested that there be less emphasis on long cul-de-sacs with improved connectivity to open space / play areas. There could be scope for home zone play areas supported with opportunities for the creation of small type courtyards with less emphasis on standardised parking layouts in front of many house types.

In terms of the individual building designs and in particular the external modelling and elevational designs there is a lot of consistency and repetitiveness across the various building blocks. There could be more variation and visual embellishment in many of the elevational treatments where the introduction of more variation could reinforce a better sense of place and contribute more to the creation of the character areas. Most of the images show the same fenestration design and the same type and colour of facing brick and the various apartment blocks look and feel the same. From an urban design layout perspective, visual monotony should be avoided particularly given the scale and quantum of development proposed.

PUBLIC OPEN SPACE

In accordance with the Cork County Development Plan 2014 public open space should generally be at least 12-18% of a site. The Cork County Development Plan 2014 promotes the provision of high quality, accessible and suitably proportioned areas of public open space including linkages to other open spaces. (CDP Objective SC 5-2 Quality Provision of Public Open Space) Open spaces within residential areas should in general be suitably overlooked/ passively supervised by surrounding residential areas and provide opportunities for informal children's play and passive amenity.

A statement indicating how the recreational needs of different age groups / users have been taken into account in the design / layout and provision of open space and recreational facilities shall be submitted by the developer as part of any planning application for residential development for schemes of 25 units or more. The statement should address how it has taken this interim policy into account. For schemes of 100 units and greater, developers will be expected to make greater provision for on-site recreational facilities to cater for the needs of the development including play areas for young children and facilities for older age groups, which may typically include some or all of the following:

- Neighbourhood / Local Play Areas
- District Play Areas / Ball Courts / Multi Use Games Areas (MUGAs)
- Recreational walks / jogging routes
- Alternative facilities, other than those outlined, can be considered for substitution for the items listed.

Table 1: Indicative thresholds for recreational facilities on schemes of 100 houses or greater	
Type of Facility	Indicative threshold
Neighbourhood play areas	1 per 100 units
Local play areas	1 per 100 units
Recreational walks/jogging routes	May be considered where they can be suitably integrated into the design and are of sufficient length as to provide a useable route, or enhance connectivity to adjoining residential areas/nearby recreational infrastructure/ local services.
District Play Areas/Ball Courts	Suitable in larger schemes / sites where they can be appropriately sited – 250 houses minimum.
Multi Use Games Areas (MUGAs)	Suitable in larger schemes / sites where they can be appropriately sited – 250 houses minimum.

CCC Interim Recreation and Amenity Policy (June 2019)

The proposed development provides for 27% public open space within the developable site area. A further 8,718sqm has been provided to the west of the site however this has been excluded from the calculation of public open space due to the presence of existing ESB infrastructure (non-developable area). A statement of compliance with the CCC Interim Recreation & Amenity Policy (June 2019) is required including clear details indicating precise recreational needs, a clear hierarchy of well distributed spaces as well as proposed means of management of open spaces.

The arrangement, distribution and placement of the open green space features large swathes of open space and does not integrate properly into and around the various housing districts. The creation of large over-scaled open green spaces can promote a sense of anonymity leading to anti-social behaviour undermining the success of the scheme.

There are a number of open green spaces within the development that poorly relate to their surroundings and other than providing separation spaces between certain blocks, they offer little or no contribution and ideally should be re-assessed. The master plan design could have a better integrated open green space strategy which should avoid the long exposed rear boundary of the existing Maple Close in order to reinforce the overall defensibility of the design.

In accordance with Objective GI 3-2 of the County Development Plan, the applicant should submit a green infrastructure plan identifying environmental assets, including proposals to protect, manage and develop green infrastructure resources in a sustainable manner.

CHILDCARE FACILITY

County Development Policy SC 4 – 2 addresses the Provision of Education Facilities in Large Residential Developments. The policy requires that proposed new large scale residential developments include an assessment of the demand for school places likely to be generated by the development and proposals to address any identified increase in demand which may arise.

The Guidelines on Childcare Facilities require 20 creche spaces per 75 units, therefore 188 creche spaces are required for the proposed development. The applicant proposes a two-storey creche building (1,088sqm) with capacity for 181 no. children across all age groups of to 6 years old with associated play areas and staff car parking. The proposed creche building is on a separate site to the bulk of the housing directly adjoining the new school campus. There is an extant permission on the same site for a creche facility of smaller scale, planning ref. 18/4693.

The appropriateness of the size and location of the proposed childcare facility should be considered given the scale and quantum of housing proposed and whether it should be more centralised and better integrated into the housing scheme. Details of any phasing of the development will need to be sought, including clarification of which phase the proposed creche will be provided.

PHASING PLAN

A phasing plan along with an associated construction management plan should be provided at application stage. The phasing plan should consider the timing of the delivery of key infrastructure projects, including the measures being addressed in the Part 8 for the Carrigtwohill URDF public realm infrastructure works, including the upgrade to Cobh Cross Interchange on the N25 (see report of the Housing Infrastructure Implementation Team in the appendix).

Phasing should also address the delivery of the creche facility.

TRAFFIC & TRANSPORTATION

A TTA is required in accordance with TII TTA guidelines. This should include impact on TII infrastructure, as appropriate.

No scoping has been carried out with the CCC Traffic and Transportation Section to date. Existing congestion issues include N25 Cobh Cross, N25 Barryscourt Interchange and Main Street. Other areas to consider include the permitted schools campus area during starting and finishing times.

The layout to the south of the underpass, in particular, will need some redesign to address concerns of the Council Traffic & Transport Section.

The proposed layout in the north east area of the application site appears to conflict with the permitted Bury's Bridge to Carrigtwohill pedestrian and cycle route and will need to be addressed.

The proposed access junction to the north-south link road (Blandcrest Main Road 1) is not considered appropriate for safety reasons associated with both the carriageway and the cycleway.

The proposed vehicle access to apartments A7 is inappropriate as shown and potentially undeliverable without significant changes.

There are multiple accesses proposed to the Schools Link roads which would downgrade the pedestrian and cycle facilities.

The layout could result in higher than desirable speeds due to long straights including the Castlake Street 04, which appears to connect to the existing 'Maple Lane Road'. This could also result in rat-running.

ROADS AND CAR PARKING

All roads, footpaths, cycleways and shared surfaces should be constructed in line with current DMURS requirements.

There are long cul-de-sacs within the development without turning facilities. All turning areas shall be adequately sized and suitable for heavy vehicles such as refuse trucks and fire engines.

Car parking shall be provided in accordance with County Development Plan standards and where possible spaces should be located adjacent to the associated dwelling/structure for which they are required. The County Development Plan states that *A reduction in the car parking requirement may be acceptable where the planning authority are satisfied that good public transport links are already available and/or a Transport Mobility Plan for the development demonstrates that a high percentage of modal shift in favour of the sustainable modes will be achieved through the development.* In this regard, there may be scope for some reduced parking.

HOUSING INFRASTRUCTURE REQUIREMENTS FOR CARRIGTWOHILL

The report of the HIIT team (see appendix 4) identifies key infrastructural upgrades to support residential development in Carrigtwohill. This includes public realm works and infrastructure associated with the Urban Expansion Area. It also includes an upgrade to the N25 Cobh Cross interchange. The County Council are engaging with TII in respect of the latter and will include the project in the forthcoming Part 8 development proposal. It is envisaged that it will be funded from contributions from developments such as the subject proposal. Other aspects of the public realm infrastructure works will benefit this development and it may be appropriate to levy contributions in respect of these.

The width of the 18-25m corridor to be provided by the applicant along Station Road (northern and southern sites) is necessary to deliver a design cross section layout of the upgrade of Station Road. The HIIT request the agreement of the applicant to cede the land to the Council.

The proposed cross section for the Northern Services Corridor Link Road is not consistent across all documentation. The applicant must demonstrate compliance with URDF proposals. The applicant is required to engage with the HIIT in relation to the MR01 road design proposals submitted. MR01 is CT-U-11 (northern services corridor link road) from the LAP 2017. This is included in the URDF initiative

design brief and while the applicant's proposal seems compatible, it will require some clarification and possibly some change.

Development of the Apartment Block 7 (A7) may impinge on road embankment side slopes and connection to existing service crossing the underpass serving the UEA to the north of the rail line. The applicant needs to demonstrate how the proposals for the apartment block can be compatible with the delivery and connection of services at the existing underpass.

CONNECTIVITY

The connectivity of the scheme to Carrigtwohill Train Station appears to be dependent on the permitted Bury's Bridge Part 8, current Part 8 scheme for the inter-urban greenway and/or potential future planning applications. Direct connection to the nearby train station is not provided.

Cork County Council is currently in the public consultation phase of a Part 8 Planning process for a new pedestrian/ cycle route that will significantly enhance connectivity to the development. The layout as proposed is at variance with the Part 8 layout in progress and may compromise elements of same.

The green area within the site appears to result in severance and longer than desirable journeys, particularly for pedestrian and cycle trips. For example, the north west area would not have a direct link to the train station.

Additional pedestrian/cyclist connectivity should also be provided under the railway to the UEA north as per objective in draft CDP (CT-U-07).

AIR QUALITY / NOISE

An Bord Pleanála will need to be satisfied that that the CEMP adequately addresses the potential impacts and any mitigation required with regards to air quality and noise.

A noise impact assessment of the rail line on the development should be undertaken to ensure rail traffic does not adversely impact enjoyment of properties in proximity, in accordance with EPA guidelines and the Cork Agglomeration Noise Plan 2018-2023. L_{DEN} and L_{Night} contours should be established for the site with mitigation measures identified for properties at risk.

ECOLOGY / BIODIVERSITY

Consideration shall be given to the preparation of an **Ecological Impact Assessment** Report. The report of the CCC Ecology Officer contained in Appendix 2 of this report outlines the issues to be considered.

The Engineering Services Report refers to the planned culverting of two streams, East-West and "North-South", two tributaries of the Woodstock Stream. The Ecology Office is not in favor of the realignment and/or culverting of watercourses and strongly encourages the site to be designed around any naturally occurring watercourses onsite. It is recommended that the applicants are advised to have regard to [Inland Fisheries Ireland Planning for Watercourses in the Urban Environment Guidelines](#) in providing for the design and should the applicants wish to bridge, drain or alter etc. any watercourse on site then the applicant should liaise with Inland Fishers Ireland.

A fisheries and biodiversity impact assessment should be undertaken to determine the loss to local biodiversity from this proposal, with mitigation measures proposed to ameliorate the effective destruction of an aquatic habitat.

Where removal of hedgerows or treelines is unavoidable, landscape planting should be used to compensate for loss or damage to these valuable habitats.

Where trees are required to be removed, it is recommended that a summer bird breeding survey and bat survey should be carried out to support the application which can form part of the EclA.

The applicant should be encouraged to explore opportunities for biodiversity enhancement and utilise Nature Based Solutions for surface water drainage systems when and where possible. Notwithstanding their ecological value, given the amenity value of a watercourse, greater consideration should be given to incorporating these into the landscape plan and/or their incorporation as a SUDS resource. The biological value of the Castlelake lake should be determined, and evidence that the feature's hydrological balance will not be adversely affected by the proposed development.

Given that the site appears to contain valuable habitat/seed sources that could be lost as result of the proposal, it is recommended that applicant provide for the retention and reuse of topsoil i.e. the seed bank, on site through landscaping.

Consideration should also be given to the presence of invasive species on site and associated management measures if required.

At formal application stage the Board may wish to consider if the proposal complies with Heritage policy objectives outlined in the County Development Plan 2014 such as Policies HE 2-1, HE 2-2, HE 2-3, HE 2-4, HE 2-5, HE 2-7, GI 3-2, WS 5-1, WS 5-2 and WS 5-3 and Cobh MD LAP Policies CT--GO--03, CT---GO---15, CT--GO--16 and LAS---01. and also that it complies with [CCC Guidance - Biodiversity and the Planning Process](#).

OTHER ENVIRONMENTAL ISSUES / CEMP

It will be very important to ensure that construction methods do not pose any risk of release of potentially toxic contaminants into the SAC and SPA. To that end, it is recommended that the planning documents would include a Construction and Environmental Management Plan which would include all of the necessary details relating to the measures and environmental controls which are to be employed to protect the SAC and SPA and environmental resources/ecological resources generally. The plan should be prepared by a qualified and experienced person and should accord with recommended best practise in this area. In the event that it is deemed necessary to prepare an Invasive Alien Species Management Plan for this development, the provisions of same should be integrated into the CEMP.

A site-specific Dust Management Plan should be incorporated into the CEMP, identifying sensitive receptors, detailing wind speed and direction monitoring measures, establishing visual trigger values for the implementation of dust suppression measures to obviate risk of nuisance, along with measures to demonstrate the effectiveness of these measures, either by way of dust deposition monitoring, or continuous real time air quality monitoring for the duration of the construction phase.

WATER SERVICES

The applicant has submitted a letter from Irish Water. Irish Water have confirmed that subject to a valid connection agreement being put in place the proposed connection to the Irish Water network(s) can be facilitated.

FLOOD RISK / DRAINAGE

The majority of the site is located within Flood Zone C – low risk from pluvial flooding. To alleviate risk, FFL's have been determined to have a freeboard available throughout, with a segment at Station Road North, that a freeboard of 0.5m is provided. The applicant's submission states that any potential flooding issues will be addressed in the EIAR.

The applicant is proposing to pump surface water from the underpass. It is recommended that the pumping system is omitted and a gravity system should be examined and provided as a pump station will not be taken in charge.

The surface water drainage design submission is unclear/disaggregated and involves discharge of attenuated flows through the amenity pond and further attenuation and construction of another private attenuation tank outside of this planning application area. Discharge rates are not noted on the drawings. The applicant should provide a robust analysis of the attenuation capacity within the existing amenity pond and how drainage will be dealt with adequately. The applicant should also examine the possibility of utilising the capacity within the proposed trunk 1050 diameter sewer extension under the URDF as it could reduce the flood risk associated with the discharge to the amenity pond and ultimately to the Woodstock stream.

A surface water drainage trunk sewer is being designed under the URDF from the existing underpass to an existing manhole at Station Road (near St. Mary's Church). The applicant needs to demonstrate that the route of this sewer will be accommodated within the development proposals.

Two watercourses flow from the UEA north of the railway, through culverts under the railway and into the proposed development lands. The capacity of these watercourses/ drains will need to be maintained and there should be no increased flood risk.

TAKING IN CHARGE

The area and facilities proposed with all buildings should be clearly defined on a site layout plan, identified under "areas not considered for taking in charge". Associated facilities such as car parking, bin storage, bike storage etc should be clearly defined and included within same. A management company/companies should be formed to maintain same.

PART V

The applicant proposes a total of 107 no. Part V units to meet Part V obligations in accordance with the *Affordable Housing Act 2021 – Amendments to Part V of the Planning and Development Act 2000*. A “*Part V Cost Methodology*” breakdown has been provided in line with regulatory requirements. The applicant should consult with Cork County Council’s Housing Department regarding the proposed mix and internal design specifications of the proposed Part V dwellings.

NIS / EIAR

The applicant proposes to prepare a NIS and an EIAR.

The focus of the NIS will be likely to be on the Cork Harbour SPA and the Great Island Channel SAC. Possible risks to these sites which could be linked to this project and should be addressed in the NIS are outlined in the Ecology Officer’s report in Appendix 2 of this report. The NIS should be prepared by a qualified and experienced ecologist with a good understanding of coastal wetland systems and avian ecology.

5. CONCLUSION

Cork County Council was informed by An Bord Pleanála that it had decided to accept the request to enter into pre planning consultation in relation to a proposed strategic housing development for 706 no. residential units and crèche facility at Castl lake, Terrysland, Carrigtwohill. The Planning Authority was requested to furnish An Bord Pleanála with this report in order to help inform the pre-planning discussions.

Section 2 of this report sets out the record of the formal Section 247 consultations held with the prospective applicant.

Section 3 details the relevant planning applications on the site and surrounding area.

Section 4 details the Planning Authority’s opinion on what considerations may have a bearing on An Bord Pleanála’s decision, in particular, the Authority’s opinion on the proposed development having regard to the Cork County Development Plan 2014, the Cobh Municipal District Local Area Plan 2017, as well as other relevant considerations. In this regard, the proposed development is consistent with the Council’s overall plans and policies for the area and the Planning Authority welcomes the completion of the existing residential development at Castl lake, Terrysland, Carrigtwohill as well as other relevant considerations. Key considerations for ABP will be:

- Whether the proposed density of 46 no. dwellings per hectare is appropriate.
- Compliance with Core Strategy and Local Area Plan.
- The performance of the proposed development in terms of the 12 Principles of Urban Design as set out in the *Sustainable Residential Development in Urban Areas, Urban Design Manual* –

Best Practice Guide (May 2009). Some key aspects of the layout which are likely to be significant considerations in determining the suitability of the proposal include:

- The distribution of and integration of smaller green spaces to add defensibility and an improved sense of residential amenity.
- A statement from the applicant indicating how the recreational needs of different age groups / users have been taken into account in the design/ layout and provision of open space and recreational facilities.
- Consideration of introduction of a suitable buffer with the railway line.
- Relationship of finished house levels / to avoid opportunity for noise pollution and over-looking from passing trains.
- less emphasis on long cul-de-sacs with improved connectivity to open space / play areas.
- more emphasis on home zone play areas
- improved variation in external building designs
- Whether the mix of house types and sizes is appropriate for the subject location and the extent to which it satisfies the requirements of HOU 3-3 of the Cork County Development Plan 2014 and the provisions of the S.28 Guidelines for *Sustainable Residential Development in Urban Areas*.
- To determine if the proposed apartments are in compliance with the *Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities*.
- Compatibility with other adjoining key infrastructure projects, in particular HIIT and T&T Part 8 developments.
- TTA including impact of proposed development on TII infrastructure and existing road network in terms of vehicular/pedestrian/cyclist traffic movement and addressing existing congestion issues at N25 Cobh Cross, N25 Barryscourt Interchange, and Main Street.
- Phasing plan for different 'pockets' of development and timing of delivery of the childcare facility.
- Location of childcare facility relative to housing.
- Adequacy of Public Open Space in terms of quality and quantity, compliance with CCC Interim recreation and amenity policy and adequate passive supervision.
- Connectivity to train station.
- Noise impact assessment of rail line.
- Surface water management.
- Green Infrastructure
- Site-specific Dust Management Plan should be incorporated into the CEMP.
- The acceptability of the Part V provision on site.

- The levying of contributions towards the delivery of key infrastructure projects which will directly benefit the proposed development.
- Appropriate Assessment
- EIA matters

APPENDICES

CCC INTERNAL CONSULTEE REPORTS

Appendix 1 Report of Council's Environment Department

1. Engineering Services Report refers to the planned culverting of two streams, East-West and "North-South", two tributaries of the Woodstock Stream. Notwithstanding any Arterial Drainage Act implications or hurdles, there is no fisheries value or ecological assessment of the existing ecological services provided for these water courses, only a proposal to encase them in concrete. A fisheries and biodiversity impact assessment should be undertaken to determine the loss to local biodiversity from this proposal, with mitigation measures proposed to ameliorate the effective destruction of an aquatic habitat. The applicant should support their conclusion with evidence of having consulted with Inland Fisheries Ireland (IFI) and incorporating any IFI comments/observations into their final proposal.

Statement of Possible Effects on the Environment is surprisingly silent on this aspect of the proposal and should be reviewed to include this element of the development.

Notwithstanding their ecological value, given their amenity value of a watercourse, greater consideration should be given to incorporating these into the landscape plan and/or their incorporation as a SUDS resource.

2. The biological value of the Castlake lake should be determined, and evidence the feature's hydrological balance will not be adversely affected by the proposed development. Proposed SUDS measures in the catchment of this artificial lacustrine waterbody should have regard to minimizing the impact on baseflow though greater use of soil infiltration measures to mimic greenfield subsurface base/flow rather than replacing with a "flashier" urban drainage network. If the lake is lined and fed entirely by urban surface-water drainage, there is no need for this assessment. Applicant to confirm.
3. The draft CEMP is satisfactory. A site-specific Dust Management Plan should be incorporated into the CEMP, identifying sensitive receptors, detailing wind speed and direction monitoring measures, establishing visual trigger values for the implementation of dust suppression measures to obviate risk of nuisance, along with measures to demonstrate the effectiveness of these measures, either by way of dust deposition monitoring, or continuous real time air quality monitoring for the duration of the construction phase.
4. A noise impact assessment of the rail line on the development should be undertaken to ensure rail traffic does not adversely impact enjoyment of properties in proximity, in accordance with EPA guidelines and the Cork Agglomeration Noise Plan 2018-2023. L_{DEN} and L_{Night} contours should be established for the site with mitigation measures identified for properties at risk.

Alan Costello
Senior Executive Scientist
Environment Directorate

Appendix 2 Report of Council's Ecology Office

CCC Ecology Office Pre-Planning Report

The following report sets out general recommendations relating to ecological issues associated with the above development.

Issues Relating to Appropriate Assessment

This site is hydrologically connected to the Cork Harbour Special Protection Area and Great Island Channel Special Area of Conservation via a number of drainage channels / watercourses which connect to the Anngrove Stream (EPA name) which flows to the southeast of the site and discharges into the waters of Slatty Pool. It is recommended that a Natura Impact Statement would be prepared in respect of planning documents, the focus of which, in the case, will be likely to be on the Cork Harbour SPA and the Great Island Channel SAC. Possible risks to these sites which could be linked to this project and should be addressed in the NIS include *inter alia* the following:

- **Surface Water:** How is surface water to be managed? Will there be surface water discharges during either construction or post construction phases which could pose a water pollution risk in Cork Harbour which could have impacts on the SPA or the SAC?
- **Hydraulic Processes:** Consideration shall be given to flooding on site and anything that might alter hydrological process on EU sites downstream.
- **Wastewater:** How is wastewater to be managed and where is it to be conveyed to? Does the receiving WWTP have capacity to take loading to be generated by this development? Could the increased loading contribute to negative impacts on water quality in Cork Harbour which could have impacts on the SPA or the SAC?

The NIS should be prepared by a qualified and experienced ecologist with a good understanding of coastal wetland systems and avian ecology.

Ecological Issues Generally

Aerial imagery of the site indicate that site holds potentially high valued habitats from an ecological perspective. These ecological features associated with this site would appear to be semi natural grassland, scrub woodland and the field boundaries, which support mature treelines and hedgerows and associated drainage channels / watercourses which connect to the Anngrove Stream. It is also noted that based on imagery of the site that possible wetland features occur.

Consideration shall be given to the preparation of an **Ecological Impact Assessment** Report which should consider the following;

- A description of the habitats and species occurring at the site, and an assessment of possible implications of what is proposed for protected species and / or for any habitats of high natural value identified to be occurring within the zone of influence of the proposed works area. Particular attention shall be given to the field boundaries, semi natural grassland, wetland habitats and areas scrub / woodland on site.

- Consideration shall also be given to the presence of protected species (EU Habitats Directive and/or Wildlife Acts) such as bats, badger and amphibians, avian species of conservation concern, along with plants listed on the Flora (Protection) Order 2015.
- An assessment of the proposed development on the aquatic environment of the Anngrove Stream and any other open drainage channels/ wetland areas on site.
- The EclA should be prepared to accord with CIEEM Guidelines and provide details of ecological survey methods and techniques used for habitats and species surveys completed for this project. Detailed results shall also be submitted. Relevant experience of consultant ecologist(s) should also be cited within the report.

Watercourses: I would note the Cork County Council Ecology Office is not in favor of the realignment and/or culverting of watercourses and we strongly encourage the site to be designed around any naturally occurring watercourses onsite. It is recommended that the applicants are advised to have regard to [Inland Fisheries Ireland Planning for Watercourses in the Urban Environment Guidelines](#) in providing for the design. Should the applicants wish to bridge, drain or alter etc. any watercourse on site then the applicant should liaise with Inland Fishers Ireland.

Trees and Hedgerows: From an ecological perspective it would be desirable that these would be retained and enhanced as part of any landscaping proposals. Where removal of hedgerows or treelines is unavoidable, landscape planting should be used to compensate for loss or damage to these valuable habitats. It is recommended that native species would be used in landscaping plans. This approach could have benefits from an ecological / biodiversity perspective generally but should also have positive benefits in terms of landscape and amenity value.

Where trees are required to be removed, then it is recommended that a summer bird breeding survey and bat survey should also be carried out to support the application which can form part of the EclA.

Biodiversity Enhancement: It is recommended that the applicants would be encouraged to explore opportunities for biodiversity enhancement while designing their scheme. Use of native and pollinator friendly species in landscape planting is one example where such opportunities can be explored. It is recommended that applicant would get input from the appointed ecologist in relation to site planting.

It is recommended that the applicant utilise Nature Based Solutions for surface water drainage systems when and where possible. Should the applicant wish to tie into any pre-existing nature-based water retention basins in the surrounding environment, then it is recommended that these areas should also be enhanced and developed to represent a more naturally occurring wetland feature which incorporates native landscape planting both within the feature and its riparian zone.

In the interest of preventing a no net loss biodiversity onsite it is recommended that the applicants explore and be encouraged to development wild refuges onsite (e.g. Green roofs, wetland systems, Habitat/Green walls, wildflower meadows – generated from existing seed bank etc.) and incorporate artificial nest boxes, with particular reference to Swifts into the design of structures onsite of which there appears to be numerous opportunities to do this. See [Saving Swifts](#).

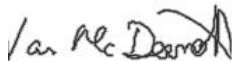
With reference to open / green spaces, given that the site appears to contain valuable habitat/seed sources that could be lost as result of the proposal, it is recommended that applicant provide for the retention and reuse of topsoil i.e. the seed bank, on site through landscaping.

Invasive Species: Consideration should also be given to the presence of invasive species on site and associated management measures if required.

Planning Policies/Objectives: It is recommended that applicants would have regard to CDP Policies HE 2-1, HE 2-2, HE 2-3, HE 2-4, HE 2-5, HE 2-7, GI 3-2, WS 5-1, WS 5-2 and WS 5-3 and Cobh MD LAP Policies CT--GO--03, CT---GO---15, CT--GO--16 and LAS---01. Consideration shall also be given to [CCC Guidance - Biodiversity and the Planning Process](#) in the development of the scheme and completion of required assessments.

Other Issues

It will be very important to ensure that construction methods do not pose any risk of release of potentially toxic contaminants into the SAC and SPA. To that end, it is recommended that the planning documents would include a **Construction and Environmental Management Plan** which would include all of the necessary details relating to the measures and environmental controls which are to be employed to protect the SAC and SPA and environmental resources/ecological resources generally. The plan should be prepared by a qualified and experienced person and should accord with recommended best practise in this area. In the event that it is deemed necessary to prepare an Invasive Alien Species Management Plan for this development, the provisions of same should be integrated into the CEMP.



Ian McDermott
Assistant Ecologist

Appendix 3 Report of Council's Traffic & Transportation (T&T) Section

SHD at Carrigtwohill

A TTA is required in accordance with TII TTA guidelines. This should include impact on TII infrastructure, as appropriate. HIIT is undertaking significant modelling in the area and may be better placed to confirm the traffic/ transport impact of this proposal.

Other comments from Traffic and Transportation are as follows:

The site is well placed for sustainable transport close to the train station, permitted schools' campus, and pedestrian/ cycle links being progressed by Cork County Council. These links including NTA and DTTAS funded schemes, and those being progressed through development management and LIHAF funding.

No scoping was carried out with the Traffic and Transport Section to date. Existing congestion issues include N25 Cobh Cross, N25 Barryscourt Interchange, and Main street. Other areas to consider include the permitted schools' campus area during starting and finishing times. This note doesn't constitute scoping.

Cork County Council is currently in the public consultation phase of a Part 8 Planning process for a new pedestrian/ cycle route that will significantly enhance connectivity to the development. The layout as it is proposed is at variance with the part 8 layout in progress and may compromise elements of same. The layout to the south of the underpass, in particular, would need some redesign to address CCC T&T concerns.

The proposed access junction to the north-south link road (Blandcrest Main Road 1) is located immediately south of the underpass and crosses the proposed pedestrian and Cycle Route (Part 8). This route is not considered appropriate for safety reasons associated with both the carriageway and the cycleway.

The proposed vehicle access to apartments A7 is inappropriate as shown and potentially undeliverable without significant changes.

The applicant's proposed northbound cycle track on the west side of north-south link road (Blandcrest Main Road 1) terminates abruptly.

There are multiple accesses proposed to the Schools Link roads which would downgrade the pedestrian and cycle facilities. These may need to be reduced to maintain the standard of the sustainable transport measures (Schools Link Roads' pedestrian/ cycle facilities).

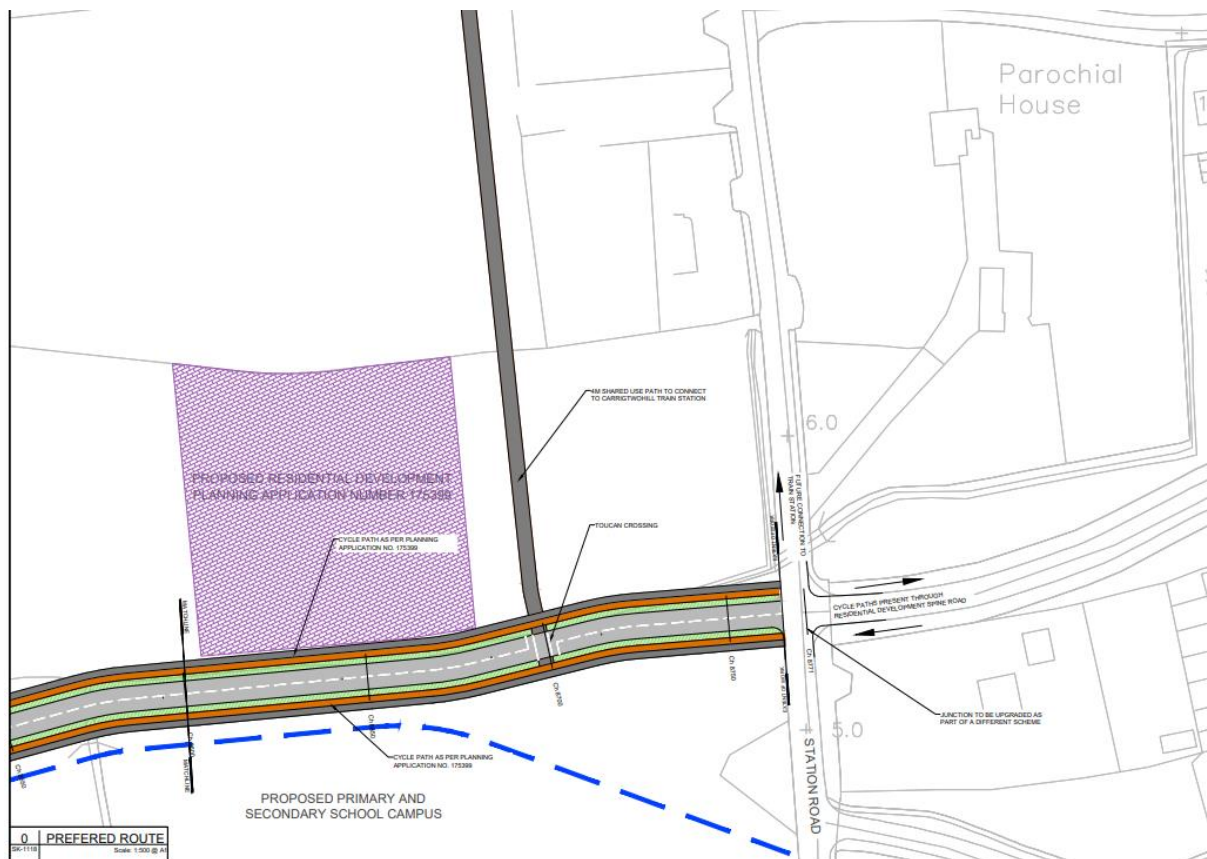
The connectivity of the scheme to Carrigtwohill Train Station appears to be dependent on the permitted Bury's Bridge Part 8, currently advertised Part 8 scheme and/or potential future planning applications. No direct connection appears to be proposed to the train station.

There are long cul de sacs within the development without turning facilities, particularly for refuse vehicles.

The layout could result in higher than desirable speeds due to long straights including the Castlelake Street 04, which appears to connect to the existing 'Maple Lane Road'. This could result in rat-running through and existing estate. It is an objective of CCC to avoid retro-fitting ramps to reduce speeds, which should be 'designed-out' using more passive measures, particularly in new developments.

The green area within the site appears to result in severance and longer than desirable journeys, particularly for pedestrian and cycle trips. For example, the north west area would not have a direct link to the train station.

The proposed layout in the north east area of the application site appears to conflict with the permitted Bury's Bridge to Carrigtwohill Pedestrian and cycle route, as indicated in the figure below.



Ciaran O'Callaghan
A/Senior Executive Engineer
Traffic & Transportation Section

Appendix 4 Report of Council's Housing Infrastructure & Implementation Team (HIIT)

Housing Infrastructure Implementation Team (HIIT) – Pre-application Consultation Report

Application No:	Terrysland SHD 33
Applicant:	Bam Property Limited
Reference:	Proposed Construction of a Strategic Housing development of 706 no. residential units, creche and ancillary resident amenity at Castl lake, Terrysland, Carrigtwohill, Co. Cork
Date:	26 th November 2021

General

HIIT attended the formal pre-planning discussions with the Developer and has drawn attention to the ongoing design work under the Carrigtwohill URDF Initiative and the need to ensure a compatible, integrated and coordinated approach, so that the development proposals do not adversely impact on the future optimal design layouts. The Developer has addressed some issues, but further work is needed. The Developer should engage with HIIT about the proposals (in relation to this SHD).

Cork County Council secured funding under the Urban Regeneration Development Fund (URDF) for the design of significant public realm improvements of Main Street and Station Road as well as infrastructure associated with the Carrigtwohill UEA. Atkins Consulting Engineers have been appointed and the project design work is being delivered in two bundles: Public Realm and UEA. The Housing Infrastructure Implementation Team (HIIT) is currently finalising Part 8 planning documentation for the Carrigtwohill URDF - Public Realm Infrastructure bundle. This also includes a proposal for an interim upgrade of the Cobh Cross Junction at J3 on N25 which will cost c. €5m. This upgrade has been recommended due to capacity concerns at the junction. Cobh Cross Interim measures are NON URDF and funding from contributions will have to be considered.

It is important to note that there is no URDF funding certainty in relation to the construction stage. A separate application is required for URDF construction stage funding which may or may not be successful. URDF funding for implementation will be dependent on the success of the future planning process.

Refer to the Traffic & Transport for comment on all traffic and transport related matters. The Carrigtwohill URDF Initiative project includes for a substantial traffic and transport modelling/assessment. This has identified an additional capacity interim upgrade measure at J3, N25, Cobh Cross. The quantum of overall development proposed at this site is much greater than that envisaged in previous planning applications on this site. The quantum of development here would have significant impacts the existing road network in terms of vehicular/pedestrian/cyclist traffic movement.

Given the scale of school's campus development and the quantum of this development, there should be some certainty on the delivery of a significant portion of the public realm infrastructure works bundle prior to grant of planning. Junction upgrades such as at Castl lake Avenue/ Main Street, Wise's Road/ Main Street and upgrade of Station road should be in place prior to commencement of

development. Consideration should also be given by the planning authority to levying a portion of this cost on the Applicant/Developer.

ISSUES

CT-U-13 (Station Road Upgrade)

The Applicant's proposal to set back development from the roadside boundary acknowledges the need to facilitate the future improvement/upgrade of Station Road (CT-U-13). The width of the 18-25m corridor to be provided by the Applicant/Developer along Station Road (northern and southern sites) is necessary to deliver a design cross section layout of the upgrade of Station Road. The Developer should be requested to confirm agreement to cede the land the Council.

CT-U-11 (Northern Link Road including Underpass, as denoted MR01)

The proposed cross section for the Northern Services Corridor Link Road is not consistent across all documentation.

As per the Cobh MD LAP 2017 and Carrigtwohill North Masterplan Framework 2015, the northern link road CT-U-11 (including underpass), denoted MR01, is a key infrastructural objective that will provide "vehicular, pedestrian and cycle links" to the land south of the railway. The Applicant's proposal must be compatible with the URDF design proposals for this infrastructure. The Applicant needs to demonstrate compliance with URDF proposals.

The Developer should engage with HIIT in relation to the MR01 road design proposals submitted. MR01 is CT-U-11 (northern services corridor link road) from the MD LAP 2017. This is included in the URDF initiative design brief and while Applicant's proposal seems compatible, it will require some clarification and possibly some change. For example, access onto this road at the apartment block immediately south of the underpass should be removed. Issue is the compatibility of the proposals with URDF designs/project.

Subject to meeting technical standards and cross-sectional/alignment requirements, the proposals for MR01 are similar to the URDF proposal and should be agreeable.

Development of the Apartment Block 7 (A7) may impinge on road embankment side slopes and connection to existing service crossing the underpass serving the UEA to the north of the rail line. The Applicant needs to demonstrate how the proposals for the apartment block can be compatible with the delivery and connection of services at the existing underpass.

The Developer/Applicant includes proposals for the construction of the segment of CT-U-11 benefitting his site south of the railway. The specification of this should be agreed and finalised to the satisfaction of the Planning Authority. Issue is delivery by Developer of URDF Road.

While the inter urban cycleway is still under URDF design brief, T&T is managing this project element and it should be referred to T&T for comment.

Traffic and Transport

Refer to T&T for comment.

Surface Water

The Applicant is proposing to pump surface water from the underpass. A gravity drainage system should be examined and provided. This would be better practice from both an environmental perspective and flood risk viewpoint.

The surface water drainage design submission is unclear/disaggregated and involves discharge of attenuated flows through the amenity pond and further attenuation and construction of another private attenuation tank outside of this planning application. Discharge rates are not noted on the drawings. During pre-planning discussions, the Applicant was asked to provide a robust analysis of the attenuation capacity within the existing amenity pond and how drainage will be dealt with adequately. This should be provided, and based on their current submission, the Applicant should also be asked to examine the possibility of utilising the capacity within the proposed trunk 1050 diameter sewer extension under the URDF as it could reduce the flood risk associated with the discharge to the amenity pond and ultimately to the Woodstock stream.

A surface water drainage trunk sewer is being designed under the URDF from the existing underpass to an existing manhole at Station Road (near St. Mary's Church). The Applicant needs to demonstrate that the route of this sewer will be accommodated within the development proposals. A 10m wide wayleave around the north and east of Apartment Block 7 (A7) will be required to facilitate the extension of the 1050mm sewer. The Applicant should be requested to engage with HIIT on this matter.

Two watercourses flow from the UEA north of the railway, through culverts under the railway and into the proposed development lands. The capacity of these watercourses/ drains will need to be maintained and there should be no increased flood risk. The Developer needs to demonstrate no increase in flood risk.

Any discharges to the Woodstock tributaries should be limited to Qbar Greenfield runoff rates.

Foul Sewer

The proposals allow for a future foul flow of 141l/s from lands to the north of the rail line. The manhole to which these flows will connect (FMH3) is located south of the Woodstock Tributary culvert below the railway line. It is shown to have a cover level of 7.200m and an invert level of 4.403m. The URDF foul sewer proposals for the UEA is ongoing and the Developer may have to facilitate additional connection points for the foul sewer from the UEA, where reasonable.

Connectivity

There is inadequate pedestrian and cycle connectivity demonstrated between the proposed SHD site and the Train Station and Main Street. Additional pedestrian/cyclist connectivity should also be provided under the railway to the UEA north as per objective in draft CDP (CT-U-07).

Other General Issues

The existing roadways in Castlelake are not public roads. Most of this development is dependent on roadways not yet TIC. The inclusion of the roads within the red line boundary of this application should be considered to ensure an integrated approach.

This development shall benefit substantially from any future URDF project works and this needs to be recognised with a capital contribution.

Upgrades of Wisers Roads junctions should also be considered to cater for pedestrian and cycle traffic from the SHD.

The Developer/Applicant proposes to set back the roadside boundary along Station Road to facilitate a future widening/realignment of Station Road and provide the space to widen Station Road. This should be undertaken to the satisfaction of the Council.

James Hickey
Executive Engineer
HIIT

Donald Cronin
Senior Executive Engineer
HIIT

Appendix 5 Report of Council's Estates Section

Application for 706 no. residential units (239 no. houses, 467 no. apartments), creche and associated site works at Castlelake, Terrysland, Carrigtwohill, Co. Cork.

Estates Department Comments:

1. DMURS:

All roads, footpaths, cycleways and shared surfaces should be constructed in line with current DMURS requirements. The application notably the "Landscaping masterplan" identifies Homezone Streets with traffic calming elements. These traffic calming elements should be clarified prior to the grant of permission.

2. PHASING OF CONSTRUCTION:

The proposed site layout plan identifies random "pockets" of development. A phasing plan along with an associated construction management plan should be submitted for comment. No area should be occupied until that immediate area is fully serviced and the PL is available.

3. MANAGEMENT COMPANY REQUIREMENT:

7 number apartment blocks and a large creche complex area are also proposed. The area and facilities proposed with all buildings should be clearly defined on a site layout plan, identified under "areas not considered for taking in charge". Associated facilities such as car parking, bin storage, bike storage etc should be clearly defined and included within same.

A management company/companies should be formed to maintain same. Agreement should be sought prior to the granting of permission.

4. PARKING:

Adequate car parking shall be available and where possible adjacent to the associated dwelling/structure for which it is required.

5. OPEN SPACES:

All open spaces for public use should be adequately overlooked.

Dedicated zones of play for younger children offering secure and safe play should be considered by means of local play areas and neighbourhood play areas. Play areas are referenced to within the "landscape masterplan". These areas should be clearly defined and given a clear purpose of use.

6. TURNING AREAS:

All turning areas shall be adequately sized and suitable for heavy vehicles such as refuse trucks and fire engines, especially within the homezone area.

7. SURFACE WATER:

A Flood Risk Assessment has been submitted. It is noted that the majority of the site is located within Flood Zone c – low risk from pluvial flooding. To alleviate risk, FFL's have been determined to have a freeboard available throughout, with a segment at Station Road North, that a freeboard of 0.5m is provided.

Yvonne O'Brien
Executive Engineer
Estates Section

Appendix 6 Report of Council's Architect

SHD: Construction of a Strategic Housing Development of 706 no. residential units, creche, ancillary residential amenity and site development works at Castllake, Terrysland, Carrigtwohill, Co. Cork.

From my examination of the latest submitted documents which are very comprehensively presented, I note that this development proposes to add a large scale residential development of 706 residential units close to the Town of Carroigtwohill comprising of a large mix of unit types in detached, semi-detached, duplex's and apartments layouts which also includes provision for space for community facilities and a two-storey creche facility. I note the development has two large central open green spaces which are illustrated as village greens.

I also note the development is spread across 6 different sites where three of the sites effectively join up with the existing Castllake Estate and are located off the main access spine road which connects on further to the larger site which adjoins the existing Midleton railway line to the North of the site. I see no strategy regarding around pedestrian linkage / mobility between the sites in terms of footpaths design / road crossings / green infrastructure.

I note the master plan tends to located the larger apartment and duplex blocks to the more Southerly part of the overall development, closer to the town and adjacent to the main access roads which are being constructed separately to serve this portion of the Carrigtwohill Urban Expansion Area. To the North of the site in the direction of the railway line, the remainder of the development steps down to a 2 – storey nature where the majority of the family type housing located in more conventional linear blocks fronting onto a series of inner estate roadways which tend to be laid out is a series of long cul-de-sacs which undermine the opportunity for most of dwellings to face onto a green space. Between the various cul-de-sacs, I see a lack of defined space for any green infrastructure.

The documents present clear design objectives and reference all relevant statutory guidance documents and make clear reference to the need to provide for an enhanced quality of life for all and amongst other objectives, it references the need also to sustainable growth patterns, a quality built environment, a network of enhanced natural resources, creating places capable of providing high quality of life as well as environmental protection.

In setting out the site design strategy around the urban design objectives with site context, connectivity, inclusivity, variety, efficiency, distinctiveness, layout, adaptability, privacy & amenity and public realm all highlighted, the document also references the creation of a sequence of external amenity spaces with interconnected permeability, the primacy of pedestrian and cycle permeability, traffic calming in full compliance with DMURS, having many active frontages with own doors to all houses and duplex's and new connectivity to the adjacent Carrigtwohill railway station. A detailed proposal of a pallet of materials and various building precedents types similar to the ones proposed is also outlined to give a sense of atmosphere and imagery of the scheme as proposed.

Whilst I'm fully in agreement with the principle of the development and the fact that the overall design offers much needed residential accommodation to meet the growing housing demand in this expanding and growing area close to the metropolitan green belt and an area of high employment, I

do however think that the design could be much improved around the need to create a better sense of community living where the image and physical layout of the design could do much better to deliver a more people centred, safer, defensible and more creative living environment where mixed tenure and multi-generational living patterns should thrive and flourish in a safe and healthy manner.

From an architectural and spatial design perspective, the arrangement, distribution and placement of the open green space is not appropriate in my view with it's current large swathes of open space as it fails to integrate properly into and around the various housing districts / blocks where it could provide for smaller localised and safer green areas which could be better overlooked to cater for better defensible play areas and would be more likely to promote a better sense of robust community living. Instead of the creation of large over-scaled open green spaces as indicated and not been properly integrated into the grain of the design, this only promotes a sense of anonymity which in some cases can lay the seeds for anti-social behaviour which then undermines the success of the scheme.

Despite the reference to building character areas within the scheme design, the arrangement of most of the housing of the family type dwellings face onto standardised internal roadways which is quite repetitive and provides little or no opportunity for the introduction of localised home zones with supporting green infrastructure to provide for good residential amenity, safe play areas for smaller children with added variety, distinctiveness and pleasantness within the overall scheme.

I see a number of open green spaces within the development that poorly relate to their surrounding and other than providing separation spaces between certain blocks, they offer little or no contribution and ideally should be re-assessed. The master plan design could have a better integrated open green space strategy which should avoid the long exposed rear boundary of the existing Maple Close in order to reinforce the overall defensibility of the design. The close proximity between the existing railway line and the nearest dwellings adjacent dwellings is of concerns as the level of the railway line will overlook the dwellings in this location ?

I see no reference in the documents regarding the integration of any step down / life time housing and how the considered placement of this type of housing in a more strategic planned way could make a significant contribution to the idea of robust multi-generational living.

I think the proposed Creche could be more centralised and better integrated into the mix of the development where some of the allocation of the proposed community facility space could be joined up with the proposed Creche. I appreciate that it's quite a modest sized Creche which might have a wider appeal to other neighbourhoods but I would have concerns that it's too remote from the main part of the scheme its designed to serve and that it may attract unnecessary car journeys.

In terms of the individual building designs and in particular the external modelling and elevational designs, I think that there is too much consistency and repetitiveness across the various building blocks. (seen more in the apartments and duplex blocks) From the CGI'S, I think there could be far more variation and visual embellishment in many of the elevational treatments where the introduction of more variation could reinforce the a better sense of place and contribute more to the creation of the character areas. I note, most of the images show the same fenestration design and the same type and colour of facing brick and the various apartment blocks look and feel the same.

From a urban design layout perspective, resistiveness and visual monotony must be avoided.

Compliance with DMURS has been applied with various measures to slow down internal traffic movements.

In conclusion, from the information presented in the drawings and the other supporting documents, I have no hesitation in supporting this proposed development from an architectural design perspective. I do think however, the following items need further consideration in the further design development process.

- better quality of spatial planning with more distribution of integrated smaller green spaces to add more defensibility and an improved sense of residential amenity.
- Introduction of a suitable buffer with the railway line. Some dual aspect housing could face a cycle / walkway path located between the houses and the railway line.
- Relationship of finished house levels / to avoid opportunity for noise pollution and over-looking from passing trains ?
- less emphasis on long cul-de-sacs with improved connectivity to open space / play areas.
- more emphasis on home zone play areas supported with opportunities for the creation of small type courtyards with less emphasis on standardised parking layouts in front of many house types.
- Introduction of more space for better standard of green infrastructure into the cul-de-sac streets and related streets.
- Improved variation in external building designs with less receptiveness and more attention to variation in detail in fenestration design / external materials and colours of same.
- More strategic thinking about the placement of step down housing / housing for the aged community where universal design standards should apply.
- Re-location of the proposed creche building to a more central location and integration / joining up of community facilities in the same location.
- Provision of small scaled retail – perhaps a living over the shop concept could be applied here.

For now, subject to the aforementioned being addressed, I commend the design and look forward to seeing it being further developed.

Greg Collins
Senior Executive Architect

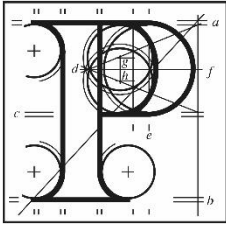
Appendix 7 Report of Area Engineer

I have one concern regarding a storm water pumping system as shown on one of the layouts for Storm water Infrastructure drainage Layout 2 of 8. This pumping system should be omitted and a gravity system should be installed, Cork County Council will not take the pump station in charge.

Robert O'Sullivan
Executive Area Engineer
Cobh MD Area Office

Appendix 1.2

ABP Minutes, Opinion and Inspector's Report



An
Bord
Pleanála

Record of Meeting ABP- 311855-21

Case Reference / Description	706 residential units, creche and site works at Castlelake, Terry's-land and Carrigtohill (townlands), Carrigtwohill, Co. Cork.		
Case Type	Section 5 Pre-Application Consultation Request		
Date:	3 rd February 2022	Start Time	14.30
Location	Via Microsoft Teams	End Time	15.50
Chairperson	Stephen O'Sullivan	Executive Officer	Ashling Doherty

Representing An Bord Pleanála:

Stephen O'Sullivan, Assistant Director of Planning
Fiona Fair, Senior Planning Inspector
Ashling Doherty, Executive Officer

Representing Prospective Applicant:

Olive Ryan, BAM
Harry Walsh, HW Planning
Ciara Cosgrave, HW Planning
Aine Ryan, Malachy Walsh Engineers
Seamus Quigley, Malachy Walsh Engineers
Peter Barry, Malachy Walsh Engineers
Lucy Carey, Cunnane Stratton Reynolds
Gary McCormack, RPS
Marcus Reid, Wilson Architecture
Paul O'Mahony, Wilson Architecture

Representing Planning Authority

Noel Sheridan, Senior Planner
John Lalor, Assistant Senior Executive Planner

Louise Ahern, Area Planner
Ciaran O'Callaghan, Traffic & Transport
Greg Collins, Senior Executive Architect
Ian McDermot, Assistant Ecologist
Alan Costello, Senior Executive Scientist
Robert O'Sullivan, Area Engineer
Donald Cronin, Senior Executive Engineer - LIHAF

Introduction

The representatives of An Bord Pleanála (ABP) welcomed the prospective applicant, Planning Authority (PA) and introductions were made. The procedural matters relating to the meeting were as follows:

- The written record will be placed on the pre-application consultation file and will be made public once the Opinion has issued,
- ABP received a submission from the PA on 1st December 2021 providing the records of consultations held pursuant to section 247 of the Planning and Development Act, 2000, as amended and its written opinion of considerations related to proper planning and sustainable development that may have a bearing on ABP's decision,
- The consultation meeting will not involve a merits-based assessment of the proposed development,
- The meeting will focus on key site-specific issues at strategic overview level, and whether the documents submitted require further consideration and/or amendment in order to constitute a reasonable basis for an application.
- Key considerations will be examined in the context of the statutory development plan for the area and section 28 Ministerial Guidelines where relevant,
- A reminder that neither the holding of a consultation or the forming of an opinion shall prejudice ABP or the PA concerned in relation to any other of their respective functions under the Planning Acts or any other enactments and cannot be relied upon in the formal planning process or in legal proceedings.

The ABP representatives acknowledged the letter dated 4th November 2021 formally requesting pre-application consultations with ABP. The prospective applicant advised of the need to comply with the definition of SHD as set out in the (Housing) and Residential Tenancies Act of 2016, as amended, in relation to thresholds of development. The representatives of ABP advised that the Inspector dealing with the pre-application consultation request would be different to the Inspector who would deal with the application when it was submitted. Recording of the meeting is prohibited.

Agenda

- 1. Compliance with CDP Policy, Local Area Plan and Carrigtwohill URDF.**
 - Density, core strategy, mix of tenure.
 - Integration with the wider area; to the north, to existing residential to the west, to the train station, to the school site and to the 'TC' zoned site.
- 2. Urban Design Approach**
 - Layout, visual impact
 - Overhead power line
 - Residential amenity
 - External building design
 - Childcare facility
- 3. Public open space quantum and quality, landscaping and ecology.**
- 4. Traffic, Transport and Connectivity.**
 - Compatibility with other adjoining key proposed and existing infrastructure, road network initiatives and projects.
 - Delivery of public realm infrastructure
 - Phasing plan
- 5. Noise Impact Assessment and railway line.**
- 6. Issues raised in the CE Report incl. Environment Department, Ecology Department, Traffic and Transportation Section, Housing Infrastructure & Implementation Team (HIIT), Estates Section, Architect's Report, Area Engineer.**
- 7. AOB**

- 1. Compliance with CDP Policy, Local Area and Carrigtwohill URDF.**
 - Density, core strategy, mix of tenure.
 - Integration with the wider area; to the north, to existing residential to the west, to the train station, to the school site and to the 'TC' zoned site.

ABP Comments:

- Further justification of the density and mix of tenure proposed, in light of, core strategy and policy set out in the Cork County Development Plan (2014-2020), the Local Area Plan (LAP).
- Further justification that the reason for refusal on the previous ABP-301610-18 (Dec 2018) has been overcome
- Further consideration and justification with respect to integration with the wider area, to the north, to existing residential to the west, to the train station, to the school site and to the 'TC' zoned lands.
- Further consideration and justification that the proposal is compatible with other adjoining key infrastructure and the existing road network in Carrigtwohill.
- Further justification of deliverability of connections, in particular, to Carrigtwohill train station.
- Further consideration of the draft development plan timelines. Should a new draft plan be adopted while any application is under consideration by the Board it would be subject to compliance with the new plan.
- A material contravention statement should refer to the development plan/ LAP at the time the application is made.

Prospective applicant's Comments:

- The scheme design has cognisance to northern station road and southern station road, school site and the town centre site.
- School within the school campus in the area are reaching completion; with timeframe of 2022 / 2023. Ongoing discussion with the department of Education.
- In the previous history application on a portion of this site the density was lower.
- The proposed development will contain 46 units per hectare – upper end of the 20 – 50 u/ha set out in the CDP.
- The strategy of the development is to go from west to east, in attempt to integrate with the existing Castle Lake Development.
- The proposed developments aim to have more conventional housing to the western end of the site.
- The higher density of the apartments is more appropriate when fronting onto the roads.
- Density increases in the proposed development further east towards the train station.
- Provision made for connectivity to the train station.
- Since the consultation has been lodged PA have published details of the Carrigwohill/Milltown interurban cycle way, which when delivered will provide the shortest accessible route to the proposed development.
- Cork Co. Co. wayleave over the last piece of the link. It is hoped that a Part b this last piece of the pedestrian and cycle link would be delivered to the train station.
- In any event there is a pedestrian and cycle route along the northern station road to the train station.
- The proposed development is within easy walking distance of the train station.

Planning Authority's Comments:

- Planning authority considers density appropriate and in compliance with the County Development Plan.
- Further discussions to be held in relation to the quality of the layout of the proposed development, but no concerns have been raised in relation the density, considered appropriate.

2. Urban Design Approach

- **Layout, Visual Impact**
- **Overhead power line**
- **Residential amenity**
- **External building design**
- **Childcare facility**

ABP Comments:

- Justification that the proposal provides a high-quality approach to the design and layout of new housing. Strong justification at application stage for the architectural design approach chosen. Justification of the housing and open space layout and connectivity in the context of the existing pattern of development in the area.

- Further consideration of the long cul-de-sacs layout proposed and consideration of improved connectivity to open space / play areas for all future residents.
- Further consideration of inclusion of home zone play areas.
- Further consideration of variation in external building designs.
- Further consideration and justification for non under grounding of the overhead power line.
- Justification for the disposition and quality of public and communal open space.
- Further consideration of the proposal in terms of residential amenity afforded to future residents. Clarification that the proposed apartments are in compliance with the sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2018).
- Clarification required with regard to % of dual and single aspect units proposed within the development and clear identification of any north facing single aspect units.
- Further consideration of the childcare facility in light of the planning authority comments with respect to same.
- Further consideration of visual impact in terms of views within and across the site.
- Further consideration of additional cross sections showing the proposed development, including impact upon the existing dwellings to the west and surrounding existing development.

Prospective Applicant's Comments:

- The urban design principles applied to the proposed development have cognisance of distributor roads and connectivity to the underpass. The layout is based on higher density on wider roads and closer to the train station, buildings turn corners and open spaces are well overlooked and supervised. Strategy to place duplexes at corners.
- There is quiet a significant amount of residential development at this location already.
- The long cul de sac's tend to respond to what is there already.
- Propose to preserve hedgerows which run through the development site.
- It is being proposed that all green communal areas will be overlooked and supervised.
- Possible opportunities to create pocket parks in the development, due to PA's concerns that the proposed development contains long cul-de-sacs.
- The proposed development will contain a large park in the centre.
- Accept the PA's concerns on layout and design and will look to address issues further.
- The power line is a constraint. There has been no thought given to removing it. Planting and landscaping plan proposed seeks to detract the eye from the pylons.
- Native planting of up to 4 m high will be used to create an avenue effect.
- The area is an exclusion zone and existing residential units back on to it, the strategy is to plant vigorously along the boundaries of the existing houses to ensure it does not become an area for anti-social behaviour issue, that it is attractive, well landscaped and used.
- Similar planting has been used in other similar parkland situations of developments e.g., Knocklyn Park/Stocking Lane.
- The proposed development will be further reviewed in light of PA comments.
- The creche location is considered to be appropriately located, it is located within the town centre zoned lands, closer to the train station and will serve a wider population than the subject development given it's size. It will easily serve people travelling to and from

the train station. Station road will have appropriate footpaths and cycle paths to serve the wider community.

Planning Authority's Comments:

- Understand the constraints in relation to the practicalities of undergrounding the overhead power line.
- Greater integration needed in terms of the building blocks and open spaces.
- Defensibility and height strategy, breaking it down to pocket parks, making the layout more attractive, home zones to play areas.
- Concerns raised in relation to the cul-de-sac and communal areas, and the prospective applicants will need to look at smaller pocket parks.
- The proposed development should be aiming to provide smaller communities within bigger communities.
- Learn lessons from the past mistakes.
- Need for the architecture to work harder
- Further consideration in relation to residential amenity, permeability, there is a need to integrate the creche into the development. Its location is isolated.
- Need for robust high end people centred development.
- Connectivity and pedestrian mobility within the proposed development is paramount.

3. Public open space quantum and quality, landscaping and ecology.

ABP Comments:

- Further consideration and demonstration of adequacy of POS in terms of quality and quantity, compliance with Cork County Council Interim recreation and amenity policy and adequate passive supervision.
- Further consideration of the distribution and integration of smaller green spaces to add defensibility and an improved sense of residential amenity.
- Further justification and assessment indicating how the recreational needs of different age groups / users have been taken into account in the design/ layout and provision of open space and recreational facilities.
- Green Infrastructure Plan / Landscaping Plan / Arboriculture drawings, landscape plan and engineering plans to take account of one another.
- Justification that relevant survey work has been carried out and up to date in relation to biodiversity and ecological issues.
- The Board will consider the proposal in terms of residential zoned lands.

Prospective Applicant's Comments:

- The proposed development is above the EIAR threshold.
- An NIS is being prepared to be submitted with the application.
- The PA's comments have been noted and will be taken into consideration.
- AN EIAR will be submitted
- The diversity chapter will incorporate all aspects of any ECIA including assessment of terrestrial, aquatic and fishery ecology.
- Consultations being held with Inland Fisheries Ireland (IFI), which have provided advice on the proposed development site.

- Liaising with landscaping architects who have identified native species as specified by the PA.
- The NIS and EIAR will assess the cumulative impacts.
- Consider that Stage II AA is required, will be carrying out an NIS, cognisant that the bar may be raised. However, given cumulative impact and hydrological impacts from the amount of development in the area, it is considered appropriate.
- Most of the water courses are categorised as drains or ditches – Woodstock Stream is of higher ecological value, it joins the stream south of the pond.

Planning Authority's Comments:

- PA satisfied public open space and landscaping concerns being raised under Item 2 above.
- The proposed development should demonstrate compliance with the Recreation Amenity Policy.
- No loss of biodiversity, mitigation by way of avoidance.
- A recommendation for an ECIA be prepared based on the scale of the development.
- It is recommended that landscaping and open space it is managed in a biodiversity led friendly way.
- SeminatURAL and high value habitats be maintained as much as possible.
- Arboriculture Impact Assessment Report, 7 high quality oak trees recorded. It is recommended that these trees be protected and incorporated in the proposed development.
- Great scope within the proposed development for the incorporation of swift boxes and green roofs, input of an ecologist recommended.
- If there are water courses they should be the scheme should be designed around them, using native species.
- It is considered that Stage 2 Appropriate Assessment is required, with consideration focused on cumulative impacts on the area.

4. Traffic, Transport and connectivity.

- **Compatibility with other adjoining key proposed and existing infrastructure, road network initiatives and projects.**
- **Delivery of public realm infrastructure.**
- **Phasing plan.**

ABP Comments:

- Compatibility with other adjoining key proposed and existing infrastructure, road network initiatives and projects.
- Delivery of public realm infrastructure
- Phasing plan
- The site is zoned for development and transportation issues such as URDF proposals which is not at Part 8 stage yet is a wider planning authority issue.

Prospective Applicant's Comments:

- Part 8 Project will be had regard to. The pre-application was lodged in advance of the Part 8 publication.

- Concerns and issues raised by the PA have been noted and will be addressed.
- Further decision will be held with the PA in relation to the issues that have been raised.
- No objection was submitted from the prospective applicant in relation to the Part 8 project.
- Full TTA assessment in accordance with the guidelines will be submitted with the application.
- Housing agency lands link across to the train station and link to the school lands.
- Section of the layout abutting station road would be needed to accommodate connectivity to the rail station from the NE.
- A phasing plan will be submitted.

Planning Authority's Comments:

- URDF and TIA related matters. Clarity that the proposal is compatible with the URDF project. The distributor road is an important connection to the UEA.
- The introduction of the Part 8 Project was raised, the timeframe of Part 8 – finished consultation process in January 2022 and it is intended to go before the council in March 2022.
- The Part 8 proposal is important, key north south route high quality route to connect the schools complex to housing.
- Safety is of concern, geometry of levels, how it will work and connect with the proposed development, needs further consideration.
- Concerns raised in their report is in relation to the interaction of the proposed development with the interurban cycle route, the section within part 8 connects to the IDA from the west of the proposed development site along to the north side of railway line, which ultimately connects to Middleton.
- High quality 4 metre wide bicycle route connecting to the city boundary at Dunkettle, which includes a link to the school's campus.
- There are concerns as to how the apartment block A7 would interact with the 4m wide cycle route proposed in the Part 8 scheme. Concern that the proposal currently presented changes the alignment of the route, impinges upon it or compromises it.
- High quality pedestrian walkway is proposed within the Part 8, which the apartment block in the proposed development may compromise.
- Sustainable transport by the active travel measures mentioned the development will be well served overall.
- Direct link from the apartment block to the railway station.
- Consideration must be given to the Cove Cross Junction, due to the size of proposed development.
- Have regard to the traffic impact the proposed development would have on the area, this would need to be addressed in the application.
- Overall, the proposed development will be well served by public transport.
- Pumping station under the railway line is compromised and a solution needs to be found to resolve this matter.
- Happy to have further discussions with the applicant regarding vehicular connection, location / access of Apartment block 7, road link level and cycle link. Details need to be further thrashed out.

5. Noise Impact Assessment and railway line.

ABP Comments:

- Further consideration and clarity with respect to possible future upgrade to the railway line, possible dualling of the line and how any reservation in place would impact the proposed layout.
- Further consideration that the application will be referred to Iarnród Éireann for comments.
- A noise impact assessment report is required to be submitted with any future application.
- Further consideration and justification in relation to separation distances of housing units to the railway line and boundary treatments.
- Cognisance that there is limited scope for further information to be submitted in SHD cases and therefore consideration that there is no errors or inaccuracies in any of the application documentation submitted. Clear, accurate and easily understood information required.

Prospective Applicants Comments:

- A precedent has been set for houses backing onto the railway line. The approach taken has cognisance to this.
- The house type has been created to have windows in the east and south only, which would prevent windows facing the railway line.
- The proposed development will have a larger area of private open space to deal with the constraints of the railway line
- Semi-private space has been created which is located between the gable of the house and the railway line, which the occupiers will maintain.
- Proximity between the house back of the house and the railway line will be no less than 7 metres
- All house occupiers will benefit from the semi-private space which they will maintained.

Planning Authority's Comments

- Issues raised in the report in relation to double tracking objectives by Iarnród Éireann of the railway line need to be addressed.
- Noise impact assessment needs to be robust and information clear and easily understandable – non technical summary.

6. Issues raised in the CE Report incl. Environment Departments, Ecology Department, Traffic & Transportation Section, Housing Infrastructure & Implementation Team (HIIT), Estates Section, Architects Report, Area Engineer.

ABP Comments:

- Noted that the items raised in PA reports have been previously discussed throughout the meeting.
- Requirement for a Habitats Directive Screening Report which identified possible risks to any Natura sites.
- A report on surface water drainage, surface water management strategy and flood risk which deals specifically with quality of surface water discharge.

- Analysis and assessment of the proposed development in terms of a construction method statement.
- Further clarification and justification that the documentation submitted draws a clear distinction between local ecology and Natura 2000 sites, in relation to any future Natura Impact Statement.
- Further consideration and justification that issues around AA and any possible NIS issues are considered.
- Clarification that all items raised by the PA in their report submitted to the Board are addressed.

Prospective Applicants Comments

- Concerns in relation to surface water have been noted.

Planning Authorities Comments:

- Surface water, the flood mapping has been amended in the Draft Development Plan and the Flood Risk Assessment needs to have cognisance to same.
- Highlight maintenance requirements of the attenuation lagoon, along with the stream and all water bodies.
- Query the use of attenuation tanks and how the developer proposes to maintain same.

7. AOB

ABP Comments:

- No further comments

Prospective Applicants Comments:

- The PA concerns have been noted and further discussions will take place before an application is submitted.

Planning Authorities Comments:

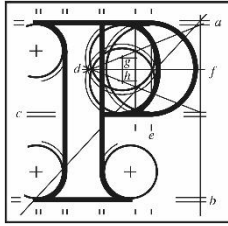
- No further comments

Conclusion

The representatives of ABP emphasised the following:

- There should be no delay in making the planning application once the public notice has been published.
- A Schedule of Documents and Drawings should be submitted with the Application.
- Sample notices, application form and procedures are available on the ABP website.
- Irish Water would like prospective applicants to contact Irish Water at cdsdesignqa@water.ie **between the Pre-Application Consultation and Application stages**, to confirm details of their proposed development and their proposed design.
- The email address to which applicants should send their **applications** to Irish Water as a prescribed body is spatialplanning@water.ie.

Stephen O'Sullivan
Assistant Director of Planning
February, 2022



An
Bord
Pleanála

**S. 6(7) of Planning and
Development (Housing) and
Residential Tenancies Act 2016**

**Inspector's Report on
Recommended Opinion
311855-21**

Strategic Housing Development

The construction of 706 no. residential units (239 houses, 467 no. apartments, a creche and associated site works).

Location

Castlelake, Terry-land and Carrigtwohill (townlands) Carrigtwohill, Co. Cork

Planning Authority

Cork County Council.

Prospective Applicant

Bam Property Limited

Date of Consultation Meeting

03. 02. 2022

Date of Site Inspection

22.12. 2021

Inspector

F. Fair

1.0 Introduction

- 1.1.1. Having regard to the consultation that has taken place in relation to the proposed development and also having regard to the submissions from the planning authority and the documentation received from the prospective applicant, the purpose of this report is to form a recommended opinion as to whether the documentation submitted with the consultation request under section 5(5) of the Planning and Development (Housing) and Residential Tenancies Act 2016 - (i) constitutes a reasonable basis for an application under section 4, or (ii) requires further consideration and amendment in order to constitute a reasonable basis for an application under section 4.

2.0 Site Location and Description

- 2.1.1. The application site comprises six parcels of greenfield lands, with a stated area of some 18.126 ha, located at Castlelake, Terrylands and Carrigtwohill, Co. Cork. Carrigtwohill is located approx. 16 Km east of Cork city. The lands are bounded to the north by the railway tracks, to the east by station road and to the west by existing residential development. Carrigtwohill train station is located to the north of Station Road. There is a landscaped park with a lake located to the south with Main Street, Carrigtwohill located further to the south.
- 2.1.2. An east-west link road is currently under construction and will abut the southern boundary of a significant portion of the subject lands.
- 2.1.3. There are no buildings on the subject lands and are largely characterised by overgrown scrub. There are existing power lines located along the western edge of Castlelake North, that do not form part of the developable site area. There are 2 no. existing under passes beneath the train tracks, on the northern portion of the lands, identified as Blandcrest.

3.0 Proposed Strategic Housing Development

3.1.1. The subject proposal comprises 239 no. houses, 250 no. duplexes and 217 no. apartments in 7 number blocks ranging in height from 4 to 5 no. storey, a two storey creche and resident amenity space. Ancillary site works includes; public and communal open space, hard and soft landscaping, car parking, cycle parking, bin storage and lighting.

3.1.2. The following development parameters are noted: **Table 1**

Parameter	Site Proposal
Site area	18.13 ha Gross / 15.43 net
No. Of Units	706 no. units comprising: <ul style="list-style-type: none"> - 239 no. two storey houses - 250 no. duplexes - 217 no. apartments
Other uses	A Creche – 1088 sq. m
Density	46 u / ha
Height	Apartments 4 – 5 storey Duplexes - 3 storey Houses - 2 Storey
Dual Aspect Apartments	Not Stated
Public Open Space	53,110 sq. m
Car Parking	1,270 no. spaces. (ratio 1.8 per unit)
Bicycle Parking	1,908 spaces
Part V	107 units (15%)

Housing Mix	No. of Units
1 bed	142 (20%)
2 bed	305 (43%)
3 bed	233 (33%)
4 bed	26 (4%)
Total	706

4.0 National and Local Planning Policy

4.1.1. National

Project Ireland 2040 - National Planning Framework

Chapter 4 of the Framework addresses the issue of ‘making stronger urban places’ and sets out a range of objectives which it is considered will assist in achieving same. National Policy Objective 4 sets out to ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.

The directly relevant National Policy Objectives as contained within the NPF include: National Policy Objective 3a: Deliver at least 40% of all new homes nationally, within the built-up footprint of existing settlements.

National Policy Objective 3b: Deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs of Dublin, Cork, Limerick, Galway and Waterford, within their existing built-up footprints.

National Policy Objective 11: In meeting urban development requirements, there will be a presumption in favour of development that can encourage more people and generate more jobs and activity within existing cities, towns and villages, subject to development meeting appropriate planning standards and achieving targeted growth.

National Policy Objective 13: In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected. National Policy

Objective 35: Increase residential density in settlements, through a range of measures including reductions in vacancy, re-use of existing buildings, infill development schemes, area or site-based regeneration and increased building heights.

National Policy Objective 57 sets out to enhance water quality and resource management, this includes the requirement to ensure that flood risk management informs place making by avoiding inappropriate development in areas at risk of flooding in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities. Relevant Section 28 Ministerial Guidelines:

- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas' (including the associated 'Urban Design Manual')
 - Design Manual for Urban Roads and Streets (Interim Advice Note Covid -19, May 2020)
 - Guidelines for Planning Authorities on Urban Development and Building Heights, 2018
 - Sustainable Urban Housing: Design Standards for New Apartments (2020),
 - The Planning System and Flood Risk Management (including associated Technical Appendices).
 - Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities (2009).
 - The Architectural Heritage Protection Guidelines for Planning Authorities (2011).

4.1.2. **Regional Policy**

4.1.3. **Local Policy**

Cork County Development Plan 2014

The site is within the settlement boundary of Carrigtwohill which is designated a 'Metropolitan Town' within Metropolitan Cork under the 2017 Cobh Municipal District Local Area Plan. The Plan outlines the vision for Carrigtwohill as a 'Metropolitan Town' but also its strategic role in Metropolitan Cork up to the year 2023 and beyond.

The LAP recognises the ability of the town to provide a strong supply of housing and business land and the availability of a commuter rail service will make this a particularly sustainable settlement. There are no water supply constraints and deficits in wastewater infrastructure have recently been addressed.

Carrigtwohill's target Population for 2022 under the current CDP is 11,618 which is an increase of 7,076 people over the 2011 population. This population target gives rise to an additional 3,195 households in Carrigtwohill. The Draft CDP proposes a population of 13,486 for 2028 which is an increase of 8,406 people over the 2016 population. The Draft CDP proposes provision for a further 3,445 dwellings up to 2028 with 3,216 housing units delivered on residentially zoned land and the balance of 229 delivered within the built footprint of the town.

As per the Cobh MD LAP (2017), the site is subject to Policy Objective CH-R-01 to provide for Medium density (A & B) residential development and where Flood Risk Objective IN-01 of the LAP applies. Medium density A residential development is defined by the County Development Plan as 20-50 no. units per hectare (net density) while Medium density B residential development has an upper limit of 25 no. dwellings per hectare creating an overlap with the lower limit to Medium Density A category with no lower limit.

There are other smaller pockets of development proposed which are located within the existing built up area and the site of the proposed childcare facility is subject to policy objective CT-T-03 Town Centre development which requires the submission of a TIA and RSA and where Flood Risk Objective IN-01 of the LAP applies.

There is also a specific policy objective CT-U-01 for provision of a new link road connecting Castle Lake to Station Road with underpass and CT-U-02 for provision of new link roads to access development lands. (Road lines on map are indicative only) This CT-U-01 link road is currently under construction as recently permitted as part of the new school campus development, planning ref. 19/5707.

There is a site specific objective, CH-R-01 to provide for medium density A & B residential development on the main part of the site and CT-T-03 for Town Centre

development on the site where the childcare facility as well as a number of residential units are proposed. Policy objective ZU 3-8 of the 2014 CCDP outlines appropriate uses in Town Centres which includes residential development.

DRAFT CORK COUNTY DEVELOPMENT PLAN 2022

The Draft Cork County Development Plan was issued on Wednesday 21st April 2021. It is intended that the new Cork County Development Plan 2022 will be the first consolidated Plan for the entire functional area of Cork County Council and relates to the new administrative boundary of the county. The new County Development Plan will replace not just the current County Development Plan (as varied) but also the current eight Municipal District Local Area Plans made in 2017 as well as the existing Town Plans.

The Draft Plan proposes high density residential development on the subject site, CT-R-01. High quality pedestrian and cycle connectivity, particularly to the adjoining school campus and station quarter, is to be provided. It should be noted that the Draft Plan, in order to align the Plan with Government Guidelines, proposes the minimum threshold being increased from 35 to 50 units / ha with no upper limit. This zoning category is applicable to suitable lands adjoining existing or planned high frequency public transport stations or bus stops within Metropolitan Cork. CT-U-12 seeks completion of the Northern Spine Link Road linking the Western Spine Link Road via the underpass to lands south of the railway and CT-U-07 identifies existing castle underpass for provision of pedestrian / cycling link to Interurban Greenway (CT-U-03)

5.0 Planning History

Subject Site

Planning Ref. 18/4693

Permission Granted for Construction of a creche of 581 sqm over one and two-storeys, new entrance, car parking and boundaries and all associated site development works. (BAM Property Ltd.)

Planning Ref. 17/5399 ABP-301610-18 Permission Refused for Construction of 277 no. residential units and 82 no. 2 & 3 bedroom apartments arranged in three blocks of three stories and one block of four stories and associated site development works. The proposed development represents a change of layout and house types on part of the lands previously permitted under the overall 'Castlelake' development.

REASON: The "Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas" published by the Department of the Environment, Heritage and Local Government in May, 2009, require a high quality approach to the design and layout of new housing. Having regard to the proposed site layout, and in particular the poor disposition and quality of public communal open space and future connectivity to Carrigtwohill Train station, the proposed development would constitute a substandard form of development, would provide an inadequate standard of amenity for future occupants and, therefore, conflict with provisions of the said guidelines. Furthermore, it is considered that the proposed development, including the revised proposal submitted by the applicant on the 1st day of October 2018 does not provide an appropriate architectural design response for the site. The proposed development is considered to be inconsistent with the proper planning and sustainable development of the area.

09/7936 PL04.237688 Permission Granted for Construction of 4-storey 90 bed nursing home, community day centre, parking and associated site development works. (BAM Gable Developments)

15/6759 Permission Granted for Extension of Duration of 09/7936 PL04.237688. (BAM Gable Developments)

00/7607 PL04.125446 Permission Granted for 771 Dwellings comprising 52 detached houses, 152 semi detached houses, 203 terraced houses, 132 duplex

units, 218 apartments and 14 serviced sites and associated site development works. Seven no commercial / retail units, hotel, shopping centre, with supermarket, 4 retail units with café diner, creche, recreational amenities and reservation of site for potential school development. The development comprises Phase One of a development at Terrylands. (Gable Holdings and Blandcrest Ltd)

Conditions of note included condition 2 which required that prior to the commencement of development, a revised phasing programme for development shall be submitted to the planning authority for agreement and that development shall be carried out in two main phases - 1A and 1B. Under clause (f) of this condition, it stated that Phase 1A shall include completion of the spine road, from the junction with Main Street (new roundabout junction), through the site up to the junction with Station Road. Condition no. 17 stated that a temporary football pitch shall be provided to serve the development, in a location to be agreed with the Planning Authority.

07/5921 Permission Granted for Extension of duration of 00/7607. (BAM Gable Developments Ltd., John F. Supple Ltd)

11/4857 Permission Granted for Extension of Duration of 00/7607. (BAM Gable Developments Ltd., John F. Supple Ltd)

00/7674 PL04.131129813 Permission Granted for Residential Units comprising 101 detached houses, 118 semidetached houses, 205 terraced houses, 168 duplex units, 221 apartments and, Reservations of sites for Potential Railway Station and Park and Ride Facility, Post Primary School Campus and associated Active Recreational Uses. (Gable Holdings Ltd & Blandcrest Ltd)

Condition 17 of this permission also required the provision of the temporary football pitch.

12/5005 Permission Granted for Extension of Duration of 00/7674. (BAM / Gable Ltd (Formerly Ascon Gable)

08/7493 Permission Granted for extension of Duration of 00/7674 (Ascon Gable Ltd)

NOTE. There were a number of amendment applications pertaining to the permitted development including 05/862, 05/4357, 05/7728, 06/8004, 07/75745, 11/5087, 11/5088, 14/4308

OTHER RELEVANT KEY PROJECTS / PART VIII PROPOSALS / CONSENTS IN CARRIGTWOHILL

There are a number of key infrastructure projects and developments either recently completed, currently under way or at preliminary design stage in Carrigtwohill which are relevant to this development proposal which are summarised below.

19/5836 Internal road upgrades, IDA Business Park.

Recently completed upgrade of existing internal access roads to provide a dedicated shared use cycleway and footpath, pedestrian and cycle crossing point, bus lane, bus shelter and traffic safety barrier. The development includes the provision of a cycleway and footpath adjacent to the L-3616 public road to connect into the L-3615 at the north eastern corner of the IDA Business Park.

Carrigtwohill URDF – Public Realm Infrastructure Bundle:

Part 8 proposal for Main Street and Station Road Public Realm Works including footpath widening, road re-alignment, resurfacing, signalisation, traffic calming

measures, street lighting, demolition of buildings at the junction of Main Street and Station Road along with other small scale demolition works, and provision of new public spaces, upgrade of Wisers Road junction, additional capacity measures at N25 Junction 3 (Cobh Cross) including widening and realignment of approach roads to the roundabout. It is expected that the proposed development will be advertised before year end 2021.

19/5707 Station Road Schools Campus:

Permission granted for construction of three no. new school buildings and the construction of a main link road with roundabout from Castlelake Housing Estate to Station Road and an additional link from the roundabout to Station Road. This campus comprises of two primary schools and one post-primary school. The link road is currently under construction. There were conditions attached to the permission requiring either the delivery / implementation of the required upgrades and / or junction signalisations or payment of a special contributions towards same.

Bury's Bridge Cycleway:

Part 8 consent for strategic cycleway scheme connecting Bury's Bridge at Dunkettle with Carrigtwohill. The cycleway enters the west side of Carrigtwohill to the north of Cobh Cross (N25 Junction 3) and runs parallel to Carrigtwohill Main Street before turning north and running along the Castlelake Access Road where it then joins the link roads associated with the new schools campus permitted under 19/5707.

Carrigtwohill – Middleton Inter-Urban Cycleway Phase 1:

Part 8 strategic cycleway scheme proposal extending from Wisers Road, north of the Cork to Middleton railway line at the western end of Carrigtwohill to the east of the Carrigane Road bridge at the eastern end of Carrigtwohill. The scheme will pass through the Carrigtwohill UEA, cross Wisers Road, Station Road, Leamlara Road and

Carrigane Road. It will connect to the Carrigtwohill Train Station and the new school campus on Station Road. The scheme will provide connectivity between the existing IDA Business Park to the west of Wisers Road and the industrial zoned lands to the south of the Carrigane Road. It is expected that the proposed development will be advertised before year end 2021

6.0 **Section 247 Consultation(s) with Planning Authority**

It is stated in the planning authority opinion that a Section 247 pre-planning meeting took place with Cork County Council (CCC) on 15th July 2021. This meeting was followed up by a further second consultation on 16th September 2021. The minutes of the meetings are attached to the file.

7.0 **Submissions Received**

Irish Water (report dated 2nd December 2021)

Report confirms that a CoF has been issued subject to:

In respect of Water:

In order to facilitate a water connection for the proposed development, the following is required to be completed;

- A network extension will be required to the Urban Expansion Area (UEA) site and two connection points. Existing watermains in Carrigtwohill must be upsized. A modelling exercise is required to determine the full extent of this upsizing and to determine whether a network extension is required to connect the Tibbotstown water supply scheme to Cork City & Harbour water supply scheme.

In respect of Wastewater:

In order facilitate a wastewater connection for the proposed development, the following is required to be completed;

- A network extension will be required to the Urban Expansion Area (UEA) site and two connection points.
- 326m of 375mm diameter sewer immediately upstream of Old Cobh Road Pump Station must be upsized to 750mm.
- 3 wastewater pump stations must be upsized, however the exact extent and nature of these works has yet to be determined.

8.0 **Forming of Opinion**

Pursuant to section 6(7) of the Act of 2016, regard is had in the forming of the opinion to the documentation submitted by the prospective applicant; the planning authority submissions and the discussions which took place during the tripartite consultation meeting. I shall provide brief detail on each of these elements hereunder.

9.0 **Documentation Submitted**

The prospective applicant has submitted information pursuant to section 5(5)(a) of the Planning & Development (Housing) and Residential Tenancies Act 2016 and Article 285 of the Planning and Development (Strategic Housing Development) Regulations 2017. This information included, inter alia,

- Planning & Design Statement
- Statement of Consistency
- Possible Effects on the Environment, Section 5(5)(iii) Report
- Flood Risk Assessment
- Part V Costs and Methodology
- Architectural Design Statement
- Road Safety Audit Brief

- DMURS Consistency report
- Road Safety Audit
- Landscape Masterplan
- Landscape Design Rationale Report
- Landscape Visual Impact Assessment
- AA Screening Report
- Letters of consent

I have considered all of the documentation submitted by the prospective applicant, relating to this case.

10.0 Planning Authority Submission

In compliance with section 6(4)(b) of the 2016 Act the planning authority for the area in which the proposed development is located, Cork County Council, submitted copies of their section 247 consultation with the prospective applicant and also submitted their opinion in relation to the proposal. These were received by An Bord Pleanála on the 01st December 2021.

The Planning Authority has identified a number of considerations which may have a bearing on the Board's decision as to whether the proposal constitutes a reasonable basis for an application. A synopsis of the report is set out below:

- Proposal is consistent with the Council's overall plans and policies for the area and the Planning Authority welcomes the completion of the existing residential development at Castlelake.
- The distribution of and integration of smaller green spaces to add defensibility and an improved sense of residential amenity.
- Recreational needs of different age groups / users have been taken into account in the design/ layout and provision of open space and recreational facilities.

- Suitable buffer with the railway line.
- Relationship of finished house levels / to avoid opportunity for noise pollution and over-looking from passing trains.
- Less emphasis on long cul-de-sacs with improved connectivity to open space / play areas.
- More emphasis on home zone play areas
- Improved variation in external building designs
- Whether the mix of house types and sizes is appropriate.
- Connectivity – compatibility with other adjoining key infrastructure and existing road network
- Phasing plan and delivery of creche
- Location of childcare facility relative to housing
- Connectivity to train station
- Noise Impact assessment of rail line
- Surface water management
- Green Infrastructure
- AA
- EIA matters
- IW Network extension required in respect of water and waste water

I have reviewed and considered all of the documentation submitted by the planning authority relating to this case.

11.0 Consultation Meeting

A Section 5 Consultation meeting took place via Microsoft Teams on the 3rd February 2022, commencing at 02.30 am. Representatives of the prospective applicant, the planning authority and An Bord Pleanála were in attendance. An agenda was issued by An Bord Pleanála prior to the meeting.

The main topics raised for discussion at the tripartite meeting were as follows:

1. Compliance with CDP Policy, Local Area Plan and Carrigtwohill URDF.
 - Density, core strategy, mix of tenure.
 - Integration with the wider area; to the north, to existing residential to the west, to the train station, to the school site and to the 'TC' zoned site.
2. Urban Design Approach
 - Layout, visual impact
 - Overhead power line
 - Residential amenity
 - External building design
 - Childcare facility
3. Public open space quantum and quality, landscaping and ecology.
4. Traffic, Transport and Connectivity.
 - Compatibility with other adjoining key proposed and existing infrastructure, road network initiatives and projects.
 - Delivery of public realm infrastructure
 - Phasing plan
5. Noise Impact Assessment and railway line.
6. Issues raised in the CE Report incl. Environment Department, Ecology Department, Traffic and Transportation Section, Housing Infrastructure & Implementation Team (HIIT), Estates Section, Architect's Report, Area Engineer.
7. AOB

11.1.1. In respect of compliance with Cork County Development Plan (2014-2020), the Local Area Plan (LAP) and Carrigtwohill URDF, An Bord Pleanála representatives sought further elaboration / discussion / consideration on the following:

- Further justification of the density and mix of tenure proposed, in light of, core strategy and policy set out in the Cork County Development Plan (2014-2020), the Local Area Plan (LAP).
- Further justification that the reason for refusal on the previous ABP-301610-18 (Dec 2018) has been overcome
- Further consideration and justification with respect to integration with the wider area, to the north, to existing residential to the west, to the train station, to the school site and to the 'TC' zoned lands.
- Further consideration and justification that the proposal is compatible with other adjoining key infrastructure and the existing road network in Carrigtwohill.
- Further justification of deliverability of connections, in particular, to Carrigtwohill train station.
- Further consideration of the draft development plan timelines. Should a new draft plan be adopted while any application is under consideration by the Board it would be subject to compliance with the new plan.
- A material contravention statement should refer to the development plan/ LAP at the time the application is made.

11.1.2. In relation to urban design approach, An Bord Pleanála representatives sought further elaboration / discussion / consideration on the following:

- Justification that the proposal provides a high-quality approach to the design and layout of new housing. Strong justification at application stage for the architectural design approach chosen. Justification of the housing and open space layout and connectivity in the context of the existing pattern of development in the area.

- Further consideration of the long cul-de-sacs layout proposed and consideration of improved connectivity to open space / play areas for all future residents.
- Further consideration of inclusion of home zone play areas.
- Further consideration of variation in external building designs.
- Further consideration and justification for non under grounding of the overhead power line.
- Justification for the disposition and quality of public and communal open space.
- Further consideration of the proposal in terms of residential amenity afforded to future residents. Clarification that the proposed apartments are in compliance with the sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2018).
- Clarification required with regard to % of dual and single aspect units proposed within the development and clear identification of any north facing single aspect units.
- Further consideration of the childcare facility in light of the PA comments with respect to same.
- Further consideration of visual impact in terms of views within and across the site.
- Further consideration of additional cross sections showing the proposed development, including impact upon the existing dwellings to the west and surrounding existing development.

11.1.3. In relation to public open space (POS) quantum and quality, landscaping and ecology, An Bord Pleanála representatives sought further elaboration / discussion / consideration on the following:

- Further consideration and demonstration of adequacy of POS in terms of quality and quantity, compliance with Cork County Council Interim recreation and amenity policy and adequate passive supervision.
- Further consideration of the distribution and integration of smaller green spaces to add defensibility and an improved sense of residential amenity.
- Further justification and assessment indicating how the recreational needs of different age groups / users have been taken into account in the design/ layout and provision of open space and recreational facilities.
- Green Infrastructure Plan / Landscaping Plan / Arboriculture drawings, landscape plan and engineering plans to take account of one another.
- Justification that relevant survey work has been carried out and up to date in relation to biodiversity and ecological issues.

11.1.4. In relation to traffic and connectivity, An Bord Pleanála sought further elaboration/discussion/consideration of the following:

- There has been cross over in discussion on some of the items on the agenda and discussion with regard to traffic and connectivity set out heretofore is noted.
- Further clarity that the layout is compatible with other adjoining key proposed and existing infrastructure, road network initiatives and projects.
- Further clarity in respect of delivery of public realm infrastructure.
- Further consideration of a phasing plan.
- Consistency between all drawings and documentation, no room for inaccuracies, drawings need to be accurate and legible.
- Further analysis and assessment in terms of traffic impact assessment, in particular, in light of PA concerns raised.

11.1.5. In relation to noise impact assessment and the railway line, An Bord Pleanála sought further elaboration/discussion/consideration of the following:

- Further consideration and clarity with respect to possible future upgrade to the railway line, possible dualling of the line and how any reservation in place would impact the proposed layout.
- Further consideration that the application will be referred to Iarnród Éireann for comments.
- A noise impact assessment report is required to be submitted with any future application.
- Further consideration and justification in relation to separation distances of housing units to the railway line and boundary treatments.
- Clarity that all documentation is reviewed in terms of inaccuracies and that all submitted reports and supporting documentation has cognisance to each other, and any inconsistencies are resolved. There is limited scope for further information to be submitted in SHD cases and accurate information is required for an informed decision to be made.

11.1.6. In regard to issues raised in the CE Report incl. Environment Department, Ecology Department, Traffic and Transportation Section, Housing Infrastructure & Implementation Team (HIIT), Estates Section, Architect's Report, Area Engineer, An Bord Pleanála sought further elaboration / discussion / consideration of the following:

- Noted that the items raised in PA reports have been previously discussed throughout the meeting.
- Requirement for a Habitats Directive Screening Report which identified possible risks to any Natura sites.
- A report on surface water drainage, surface water management strategy and flood risk which deals specifically with quality of surface water discharge.
- Analysis and assessment of the proposed development in terms of a construction method statement.

- Further clarification and justification that the documentation submitted draws a clear distinction between local ecology and Natura 2000 sites, in relation to any future Natura Impact Statement.
- Further consideration and justification that issues around AA and any possible NIS issues are considered.
- Clarification that all items raised by the PA in their report submitted to the Board are addressed.

11.1.7. In regard to other matters, An Bord Pleanála sought further elaboration / discussion / consideration of the following:

- No further comments.

11.1.8. Both the prospective applicant and the planning authority were given an opportunity to comment and respond to the issues raised by the representatives of ABP. Those comments and responses are recorded in the 'Record of Meeting ABP-311841-21' which is on file. I have fully considered the responses and comments of the prospective applicant and planning authority in preparing the Recommended Opinion hereunder.

12.0 Conclusion and Recommendation

12.1.1. Based on the entirety of the information before me, it would appear that the proposed development falls within the definition of Strategic Housing Development, as set out in section 3 of the Planning and Development (Housing) and Residential Tenancies Act 2016.

12.1.2. I have examined all of the information and submissions before me including the documentation submitted by the prospective applicants, the submissions of the planning authority and the discussions which took place at the tripartite meeting. I have had regard to both national policy, via the section 28 Ministerial Guidelines and local policy via the statutory plans for the area.

- 12.1.3. Having regard to all of the above, I recommend that the Board serve a notice on the prospective applicant, pursuant to Section 6(7)(b) of the Planning and Development (Housing) and Residential Tenancies Act 2016, stating that it is of the opinion that the documentation submitted with the consultation request under section 5(5) of the Act **constitutes a reasonable basis for an application for strategic housing development** under section 4 of the Planning and Development (Housing) and Residential Tenancies Act 2016.
- 12.1.4. I would also recommend that the prospective applicant be notified, pursuant to article 285(5)(b) of the 2017 Regulations, that specified information (as outlined hereunder) be submitted with any application for permission that may follow. I believe the specified information will assist the Board at application stage in its decision making process. I am also recommending that a number of prescribed bodies (as listed hereunder) be notified by the prospective applicant of the making of the application.

13.0 **Recommended Opinion**

- 13.1.1. An Bord Pleanála refers to your request pursuant to section 5 of the Planning and Development (Housing) and Residential Tenancies Act 2016. Section 6(7)(a) of the Act provides that the Board shall form an opinion as to whether the documents submitted with the consultation request (i) constitute a reasonable basis for an application under section 4 of the Act, or (ii) require further consideration and amendment in order to constitute a reasonable basis for an application under section 4.
- 13.1.2. Following consideration of the issues raised during the consultation process and having regard to the opinion of the planning authority, **An Bord Pleanála is of the opinion that the documentation submitted with the request to enter into consultations constitute a reasonable basis for an application for strategic housing development.**
- 13.1.3. Furthermore, pursuant to article 285(5)(b) of the Planning and Development (Strategic Housing Development) Regulations 2017, the prospective applicant is

hereby notified that, in addition to the requirements as specified in articles 297 and 298 of the Planning and Development (Strategic Housing Development) Regulations 2017, the following specific information should be submitted with any application for permission:

1. An updated Architectural Design Statement. The statement should include a justification for the proposed development, having regard to, inter alia, urban design considerations, visual impacts, site context, the locational attributes of the area, linkages through the site, pedestrian connections and national and local planning policy. The statement should specifically address layout, urban design, disposition and quality of public open space and communal open space, finishes of the blocks, the design relationship between the individual blocks within the site, and to existing residential property to the west. The statement should be supported by contextual plans and contiguous elevations and sections.

2. A detailed statement, demonstrating how the proposed development will tie in safely with the wider road network in Carrigtwohill, with other adjoining key infrastructure and to Carrigtwohill train station, in particular, with respect to pedestrian and cycle routes.

3. A detailed statement, which should provide adequate identification of all such elements and justification as applicable, where / if the proposed development materially contravenes the statutory Plan or Local Area Plan for the area other than in relation to the zoning of the land, indicating why permission should, nonetheless, be granted, having regard to a consideration specified in section 37(2)(b) of the Act of 2000.

4. A detailed statement of justification of the density proposed, in terms of suburban location, sequential approach, the road network, topography of the site and

specific local objectives pertaining to the lands contained in the Cobh Municipal District Local Area Plan 2017.

5. A Traffic and Transportation Impact Assessment.
6. Cross-sections at appropriate intervals, photomontages, and any other information deemed relevant, illustrating FFL's levels, ground levels and topography of the site. In particular, showing proposal relative to the train line and to any adjoining existing development in the vicinity, useability and functionality of public open space and private open space / rear gardens.
7. Justification of layout, location and hierarchy and quantum of open space provision, both communal and public open space (POS). Clarity with regard to compliance with Development Plan standards.
8. Detailed landscape drawings that illustrate hard and soft landscaping, useable communal open space, meaningful public open space, quality audit and way finding. The public open space shall be usable space, accessible and overlooked to provide a degree of natural supervision. Details of play equipment, street furniture including public lighting and boundary treatments should be submitted.
9. Details of a Green Infrastructure Plan, Landscaping Plan, Arboriculture Drawings, and Engineering Plans that take account of one another.
10. An up-to-date Ecological Impact Assessment, inclusive of a Bat Survey.
11. A Noise Impact Assessment, with regard being had to proximity to the railway line.
12. A Housing Quality Assessment that provides details in respect of the proposed apartments set out as a schedule of accommodation, with the calculations and

tables required to demonstrate compliance with the various requirements of the 2020 Guidelines on Design Standards for New Apartments. It is important that the proposal meets and preferably exceeds the minimum standards in terms of dual aspect and proportion of apartments which exceed the floor area by 10%. In the interests of clarity clear delineation / colour coding of floor plans indicating which of the apartments are considered by the applicant as dual / single aspect, single aspect north facing and which apartments exceeds the floor area by 10%.

13. A Daylight and Shadow Impact Assessment of the proposed development, specifically with regard to:

- (i) Impact upon adequate daylight and sunlight for individual units, public open space, courtyards, communal areas, private amenity spaces and balconies.
- (ii) Impact to any neighbouring properties.

14. A report that addresses issues of residential amenity (both existing residents of adjoining development and future occupants), specifically with regards to potential overlooking, overshadowing and overbearing. The report shall include full and complete drawings including levels and cross-sections showing the relationship between the proposed development and adjacent residential development.

15. A robust Ecological Impact Statement Report, AA screening report and NIS, as appropriate, which considers potential impacts on the Qualifying Interests of any Natura 2000 site.

16. A report on surface water drainage, surface water management strategy and flood risk which deals specifically with quality of surface water discharge.

17. A response to matters raised within the PA Opinion dated the 1st December 2021.

18. A site layout plan indicating what areas, if any, are to be taken in charge by the planning authority.

19. Site Specific Construction and Demolition Waste Management Plan.

20. Details of public lighting.

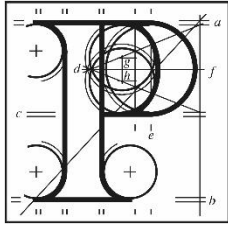
13.1.4. Pursuant to article 285(5)(a) of the Planning and Development (Strategic Housing Development) Regulations 2017, the prospective applicant is informed that the following authorities should be notified in the event of the making of an application arising from this notification in accordance with section 8(1)(b) of the Planning and Development (Housing) and Residential Tenancies Act 2016:

1. Irish Water
2. Iarnród Éireann
3. Cork County Childcare Committee.

PLEASE NOTE:

Under section 6(9) of the Planning and Development (Housing) and Residential Tenancies Act 2016, neither the holding of a consultation under section 6, nor the forming of an opinion under that section, shall prejudice the performance by the Board, or the planning authority or authorities in whose area the proposed strategic housing development would be situated, of any other of their respective functions under the Planning and Development Acts 2000 to 2016 or any other enactment and cannot be relied upon in the formal planning process or in legal proceedings.

Fiona Fair
Senior Planning Inspector
22.02.2022



An
Bord
Pleanála

Planning and Development (Housing) and Residential Tenancies Act 2016

Notice of Pre-Application Consultation Opinion

Case Reference: ABP- 311855-21

Proposed Development: 706 no. residential units (239 no. houses, 467 no. apartments), creche and associated site works.

Castlelake, Terry's-land and Carrigtohill (townlands), Carrigtwohill, Co. Cork.

An Bord Pleanála has considered the issues raised in the pre-application consultation process and, having regard to the consultation meeting and the submission of the planning authority, is of the opinion that the documents submitted with the request to enter into consultations constitute a reasonable basis for an application for strategic housing development.

Furthermore, pursuant to article 285(5)(b) of the Planning and Development (Strategic Housing Development) Regulations 2017, the prospective applicant is hereby notified that, in addition to the requirements as specified in articles 297 and 298 of the Planning and Development (Strategic Housing Development) Regulations 2017, the following specific information should be submitted with any application for permission:

1. An updated Architectural Design Statement. The statement should include a justification for the proposed development, having regard to, inter alia, urban design considerations, visual impacts, site context, the locational attributes of the area, linkages through the site, pedestrian connections and national and local planning policy. The statement should specifically address layout, urban design,

disposition and quality of public open space and communal open space, finishes of the blocks, the design relationship between the individual blocks within the site, and to existing residential property to the west. The statement should be supported by contextual plans and contiguous elevations and sections.

2. A detailed statement, demonstrating how the proposed development will tie in safely with the wider road network in Carrigtwohill, with other adjoining key infrastructure and to Carrigtwohill train station, in particular, with respect to pedestrian and cycle routes.
3. A detailed statement, which should provide adequate identification of all such elements and justification as applicable, where / if the proposed development materially contravenes the statutory Plan or Local Area Plan for the area other than in relation to the zoning of the land, indicating why permission should, nonetheless, be granted, having regard to a consideration specified in section 37(2)(b) of the Act of 2000.
4. A detailed statement of justification of the density proposed, in terms of suburban location, sequential approach, the road network, topography of the site and specific local objectives pertaining to the lands contained in the Cobh Municipal District Local Area Plan 2017.
5. A Traffic and Transportation Impact Assessment.
6. Cross-sections at appropriate intervals, photomontages, and any other information deemed relevant, illustrating FFL's levels, ground levels and topography of the site. In particular, showing proposal relative to the train line and to any adjoining existing development in the vicinity, useability and functionality of public open space and private open space / rear gardens.
7. Justification of layout, location and hierarchy and quantum of open space provision, both communal and public open space (POS). Clarity with regard to compliance with Development Plan standards.
8. Detailed landscape drawings that illustrate hard and soft landscaping, useable communal open space, meaningful public open space, quality audit and way finding. The public open space shall be usable space, accessible and overlooked to provide a degree of natural supervision. Details of play equipment, street furniture including public lighting and boundary treatments should be submitted.
9. Details of a Green Infrastructure Plan, Landscaping Plan, Arboriculture Drawings, and Engineering Plans that take account of one another.
10. An up-to-date Ecological Impact Assessment, inclusive of a Bat Survey.

- 11.** A Noise Impact Assessment, with regard being had to proximity to the railway line.
- 12.** A Housing Quality Assessment that provides details in respect of the proposed apartments set out as a schedule of accommodation, with the calculations and tables required to demonstrate compliance with the various requirements of the 2020 Guidelines on Design Standards for New Apartments. It is important that the proposal meets and preferably exceeds the minimum standards in terms of dual aspect and proportion of apartments which exceed the floor area by 10%. In the interests of clarity clear delineation / colour coding of floor plans indicating which of the apartments are considered by the applicant as dual / single aspect, single aspect north facing and which apartments exceeds the floor area by 10%.
- 13.** A Daylight and Shadow Impact Assessment of the proposed development, specifically with regard to:
 - (i) Impact upon adequate daylight and sunlight for individual units, public open space, courtyards, communal areas, private amenity spaces and balconies.
 - (ii) Impact to any neighbouring properties.
- 14.** A report that addresses issues of residential amenity (both existing residents of adjoining development and future occupants), specifically with regards to potential overlooking, overshadowing and overbearing. The report shall include full and complete drawings including levels and cross-sections showing the relationship between the proposed development and adjacent residential development.
- 15.** A robust Ecological Impact Statement Report, AA screening report and NIS, as appropriate, which considers potential impacts on the Qualifying Interests of any Natura 2000 site.
- 16.** A report on surface water drainage, surface water management strategy and flood risk which deals specifically with quality of surface water discharge
- 17.** A response to matters raised within the PA Opinion dated the 1st December 2021.
- 18.** A site layout plan indicating what areas, if any, are to be taken in charge by the planning authority.
- 19.** Site Specific Construction and Demolition Waste Management Plan.
- 20.** Details of public lighting.

Also, pursuant to article 285(5)(a) of the Planning and Development (Strategic Housing Development) Regulations 2017, the prospective applicant is informed that the following authorities should be notified in the event of the making of an application arising from this notification in accordance with section 8(1)(b) of the Planning and Development (Housing) and Residential Tenancies Act 2016, as amended:

- 1. Irish Water**
- 2. Iarnród Éireann**
- 3. Cork County Childcare Committee.**

PLEASE NOTE:

Under section 6(9) of the Planning and Development (Housing) and Residential Tenancies Act 2016, as amended, neither the holding of a consultation under section 6, nor the forming of an opinion under that section, shall prejudice the performance by the Board, or the planning authority or authorities in whose area the proposed strategic housing development would be situated, of any other of their respective functions under the Planning and Development Acts 2000 to 2020 or any other enactment and cannot be relied upon in the formal planning process or in legal proceedings.

Stephen O'Sullivan
Assistant Director of Planning
February , 2022

Appendix 1.3

Statutory Consultation

Ref: AR/Project No. 22461/Lt1002
26th January, 2021

An Taisce

The National Trust for Ireland
Tailors' Hall
Back Lane
Dublin, D08 X2A3,

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremen BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

Associate Directors Mohammed Rafiq BSc CEng MStructE (London) | Brian Sayers BE MSc CEng MIEI |
David Aherne BE CEng MIEI MCIBSE | Tim Hurley BEng MEngSc CEng MIEI | Micheál Fenton BE CEng MIEI |
Ian Brosnan BE CEng MIEI MICE MStructE | Ken Fitzgerald BSc Surv Dip CEcon PG Dip Planning EIA CZM

Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



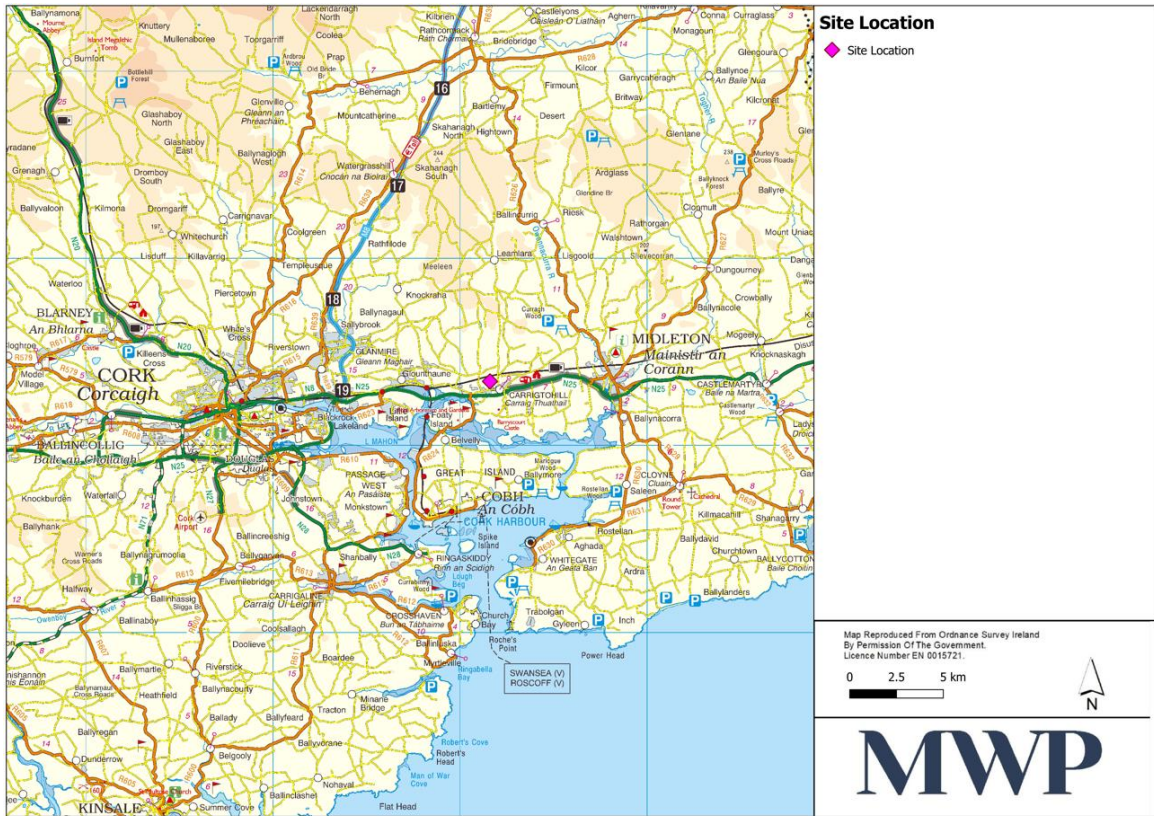


Figure 1 Site Location

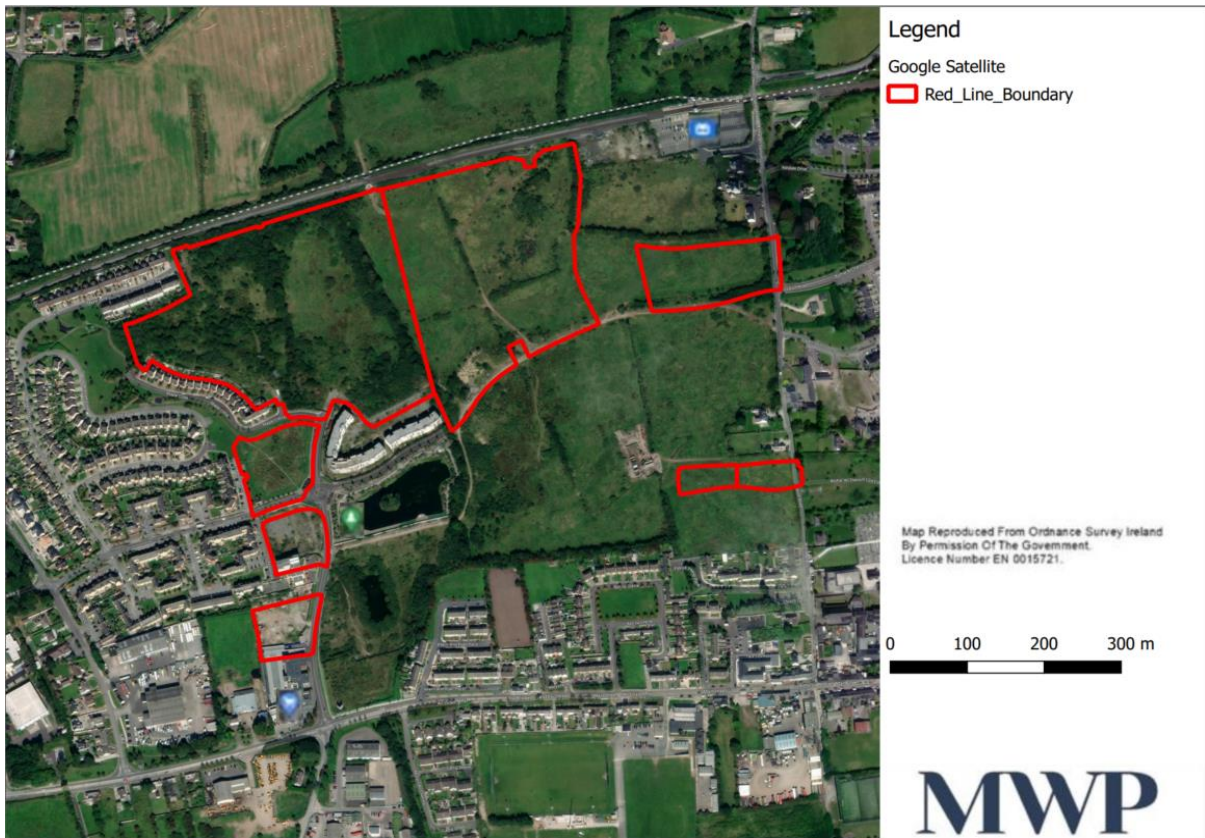


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

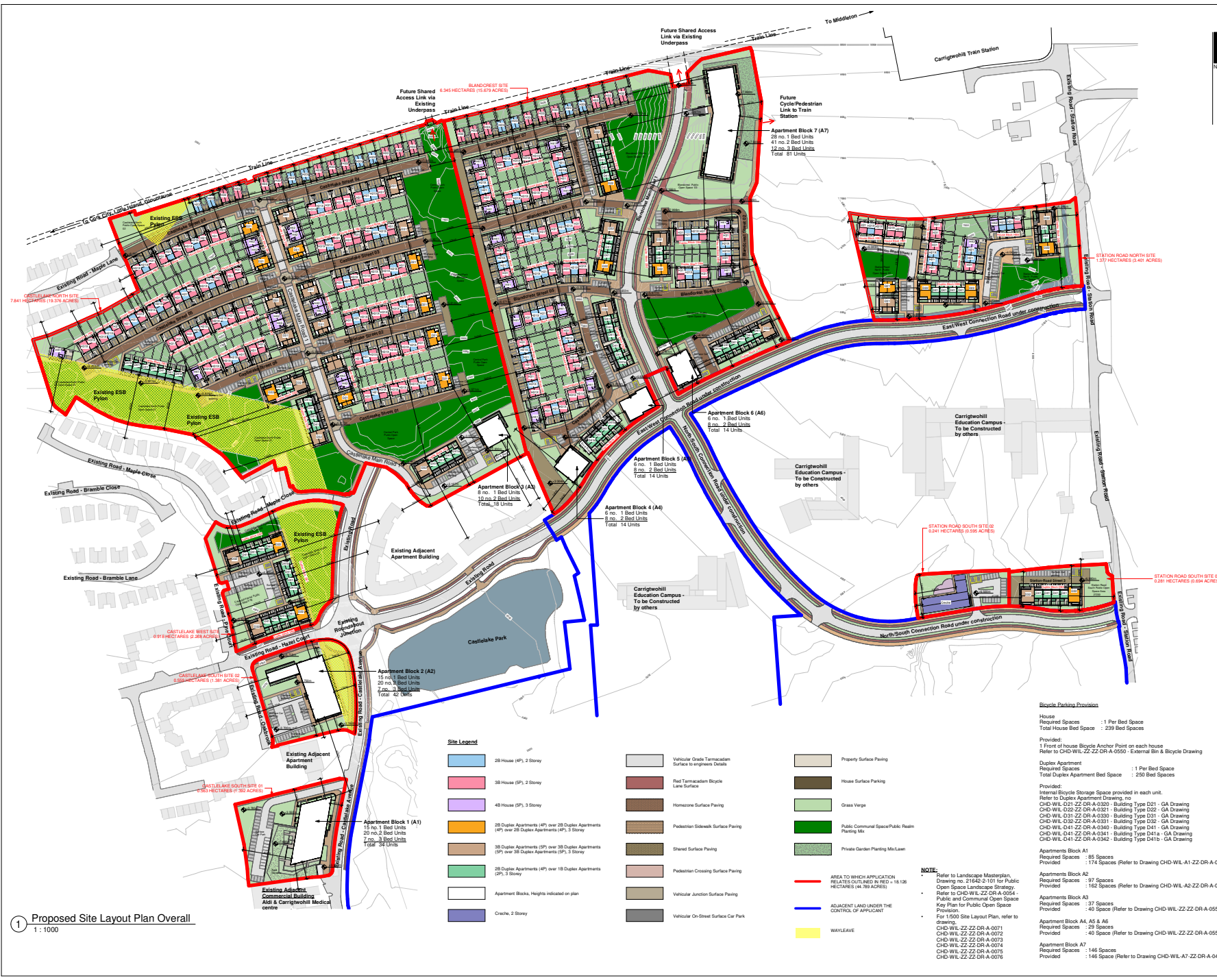
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: The following information was obtained from the Carrigrohilly Urban Regeneration Scheme - Final Development Plan.

Block	Area (ha)	Units
A1	10.5	176
A2	10.5	209
A3	10.5	163
A4	10.5	141
A5 & A6	10.5	29
A7	10.5	146
Total	61.5	754

Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
House (40%)			
2 Bed (2S)	20	20	2.7%
2 Bed (2P)	20	20	2.7%
3 Bed (3P)	20	20	2.7%
Duplex (40%)			
2 Bed (2S)	20	20	2.7%
2 Bed (2P)	20	20	2.7%
3 Bed (3P)	20	20	2.7%
Apartment (20%)			
1 Bed (1S)	176	176	23.2%
1 Bed (1P)	176	176	23.2%
2 Bed (2S)	141	141	18.5%
2 Bed (2P)	141	141	18.5%
3 Bed (3S)	141	141	18.5%
3 Bed (3P)	141	141	18.5%
Total Units		754	100%

AREA OF UNDEVELOPABLE LAND

Land ID	Area (ha)	Hectares	Acres
Land 01	0.123	0.303	0.75
Land 02	0.308	0.781	1.93
Land 03	0.383	0.964	2.39
Land 04	0.833	2.088	5.17
Land 05	0.464	1.155	2.87
Total	2.638	6.691	16.51

AREA OF DEVELOPABLE LAND

Site Name	Area	Hectares	Acres
Blanchard Site	6,942.408 m ²	6.942	17.29
Castlake North Site	7,612.285 m ²	7.612	18.85
Castlake South Site A1	5,553.979 m ²	5.554	13.79
Castlake South Site B1	5,553.979 m ²	5.554	13.79
Castlake West Site	2,152.144 m ²	2.152	5.34
Station Road North Site	4,978.264 m ²	4.978	12.39
Station Road South Site A1	2,686.614 m ²	2.687	6.68
Station Road South Site B1	2,686.614 m ²	2.687	6.68
Total	34,192.605 m²	34.193	84.73

DEENSITY

706 UNITS / 15,433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Site	Use	Internal area (m ²)	Gross street area (m ²)	Gross area (m ²)
A1	20	49,110	7,711.02	1,431.56
A2	15	49,110	7,711.02	1,431.56
A3	10	49,110	7,711.02	1,431.56
A4	10	49,110	7,711.02	1,431.56
A5 & A6	10	49,110	7,711.02	1,431.56
A7	10	49,110	7,711.02	1,431.56
Total	209	491,100	77,110.20	15,433.28

Site Coverage Area

Site	Use	Internal area (m ²)	Gross street area (m ²)	Gross area (m ²)
A1	1	1,200.00	4,800.00	1,200.00
A2	1	1,200.00	4,800.00	1,200.00
A3	1	1,200.00	4,800.00	1,200.00
A4	1	1,200.00	4,800.00	1,200.00
A5 & A6	1	1,200.00	4,800.00	1,200.00
A7	1	1,200.00	4,800.00	1,200.00
Total	7	8,400.00	33,600.00	8,400.00

Gross Building Footprint Area m² : 35,138.54
 Gross Site Coverage Area m² : 43,943.82

Internal Bicycle Storage Provision

Building Type	Count
Apartment Parking Spaces	239
Street Parking Spaces	306
House Parking Spaces	658
Total	1,203

Universal Accessible Surface Car Parking Provision

Building Type	Count
UA Apartment Parking Spaces	18
UA Street Parking Spaces	17
UA House Parking Spaces	37
Total	72

Bicycle Parking Provision

House Required Spaces : 1 Per Bed Space
 Total House Bed Space : 239 Bed Spaces

Provided : 1 Front of house Bicycle Anchor Point on each house Refer to CHD-WL-ZZ-ZR-A-050 - External Bin & Bicycle Drawing

Duplex Apartment Required Spaces : 1 Per Bed Space
 Total Duplex Apartment Bed Space : 250 Bed Spaces

Provided : Internal Bicycle Storage Space provided in each unit. Refer to Duplex Apartment Drawing, no. CHD-WL-D21-ZZ-ZR-A-030 - Building Type D21 - GA Drawing
 CHD-WL-D22-ZZ-ZR-A-031 - Building Type D22 - GA Drawing
 CHD-WL-D31-ZZ-ZR-A-030 - Building Type D31 - GA Drawing
 CHD-WL-D32-ZZ-ZR-A-031 - Building Type D32 - GA Drawing
 CHD-WL-D41-ZZ-ZR-A-040 - Building Type D41 - GA Drawing
 CHD-WL-D42-ZZ-ZR-A-041 - Building Type D42 - GA Drawing
 CHD-WL-D43-ZZ-ZR-A-042 - Building Type D43 - GA Drawing

Apartment Block A1 Required Spaces : 85 Spaces
 Provided : 174 Spaces (Refer to Drawing CHD-WL-A1-ZZ-ZR-A-010)

Apartment Block A2 Required Spaces : 87 Spaces
 Provided : 162 Spaces (Refer to Drawing CHD-WL-A2-ZZ-ZR-A-020)

Apartment Block A3 Required Spaces : 37 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-ZR-A-050)

Apartment Block A4, A5 & A6 Required Spaces : 29 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-ZR-A-050)

Apartment Block A7 Required Spaces : 146 Spaces
 Provided : 146 Spaces (Refer to Drawing CHD-WL-A7-ZZ-ZR-A-040)

NOTE:

Refer to Landscape Masterplan, Drawing no. 01602-010 for Public Open Space Landscape Strategy. Refer to CHD-WL-ZZ-ZR-A-004 - Public and Communal Open Space Plan for Public Open Space Provision.

For 1500 Site Layout Plan, refer to drawing:
 CHD-WL-ZZ-ZR-A-001
 CHD-WL-ZZ-ZR-A-002
 CHD-WL-ZZ-ZR-A-003
 CHD-WL-ZZ-ZR-A-004
 CHD-WL-ZZ-ZR-A-005
 CHD-WL-ZZ-ZR-A-006

1 Proposed Site Layout Plan Overall
 1 : 1000



Ref: AR/Project No. 22461/LtIFI
21 January 2021

Mr. Mike Fitzsimons,
Inland Fisheries Ireland,
Ashbourne Business Park,
Dock Road,
Limerick.

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

Dear Mr Fitzsimons

MWP has been retained by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission as part of a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The site comprises 18.35 hectares. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on **Proposed Site Layout Plan**.

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Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



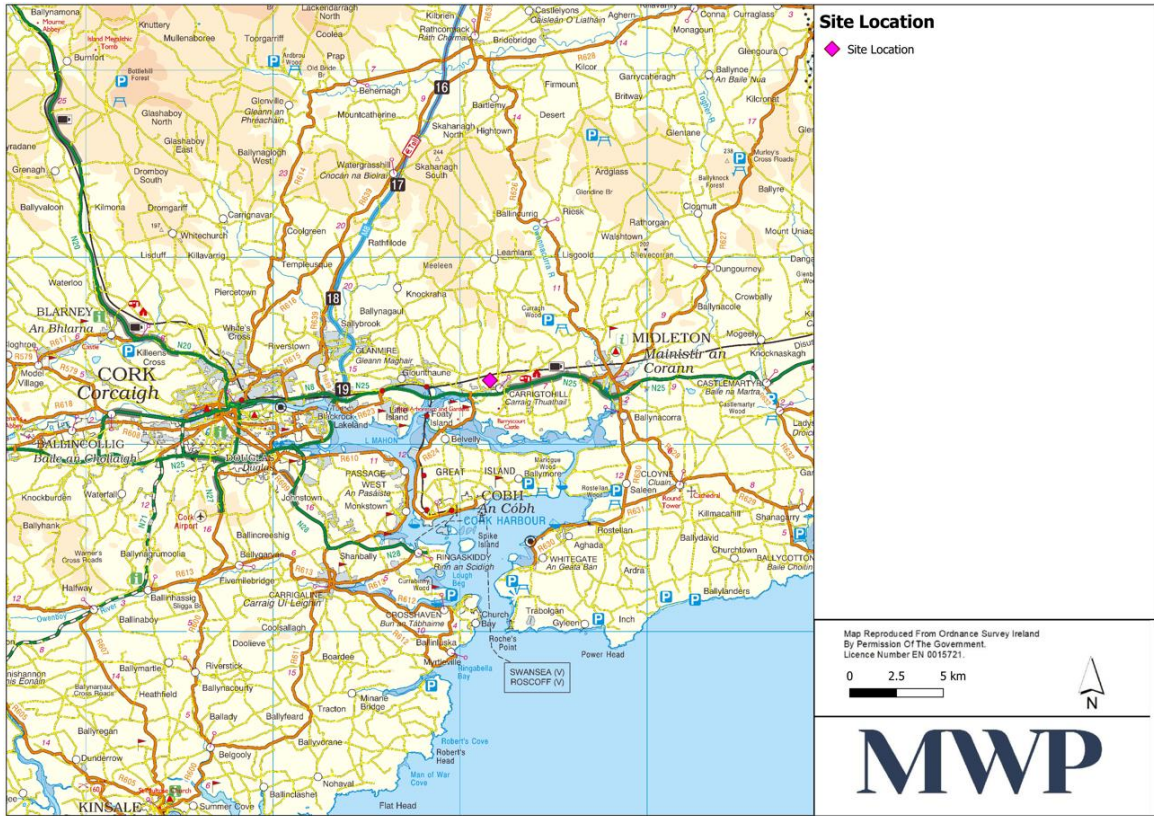


Figure 1 Site Location

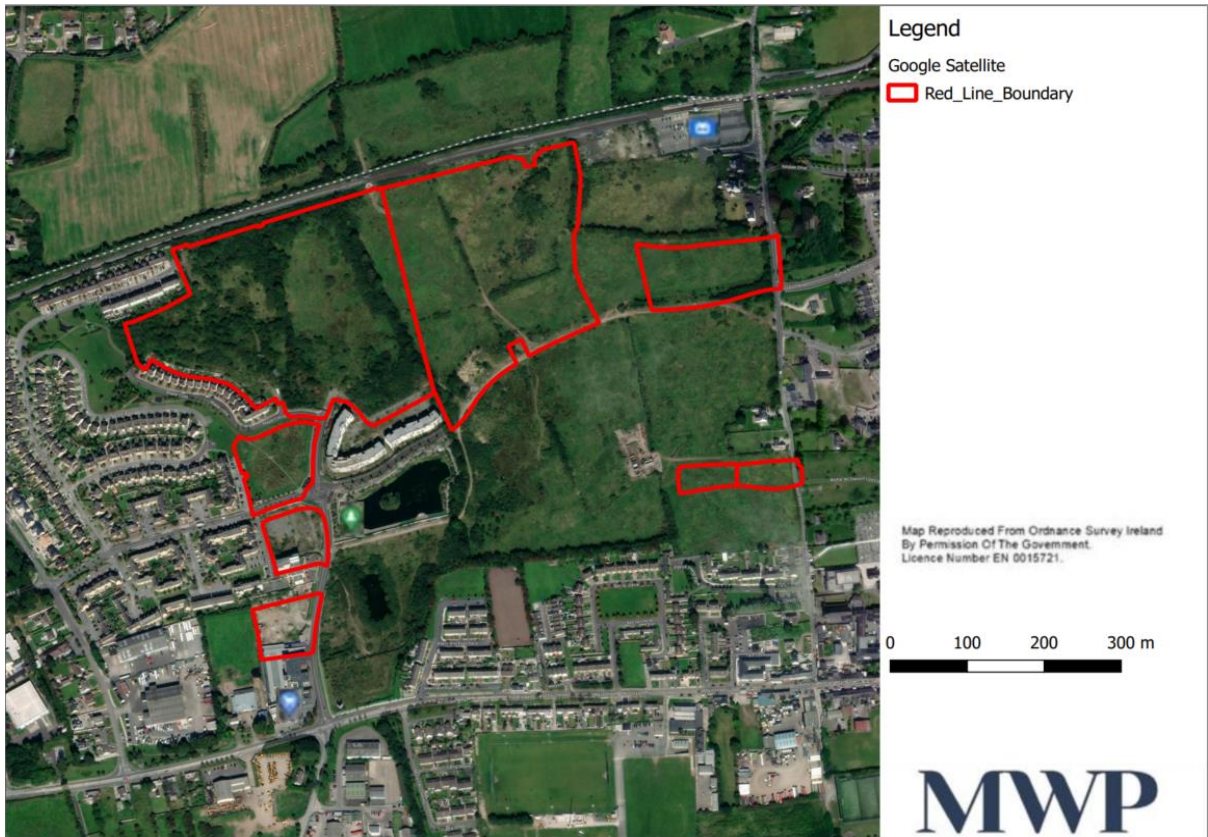


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

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The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication “Recommendations for Site Development Works for Housing Areas” published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass

through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

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A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity. Mitigation measures will also be outlined.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

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It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;
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Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie and/or info@mwp.ie

Yours faithfully,

Áine Ryan
for MWP

Encl. 1. (Figure 3 Proposed Site Layout).

Ref: AR/Project No. 22461/Lt1003

26th January, 2021

Department of Environment, Energy & Communications

29-31 Adelaide Rd,

Dublin 2,

D02 X285

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

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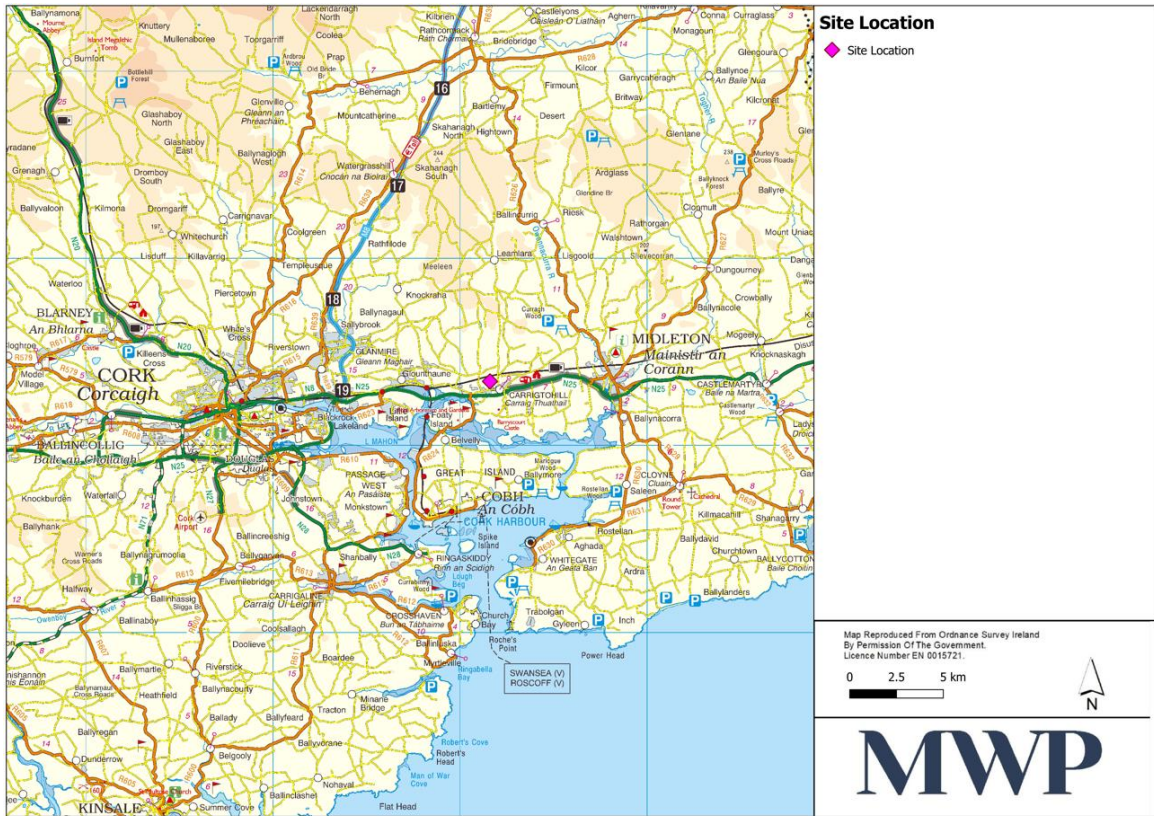


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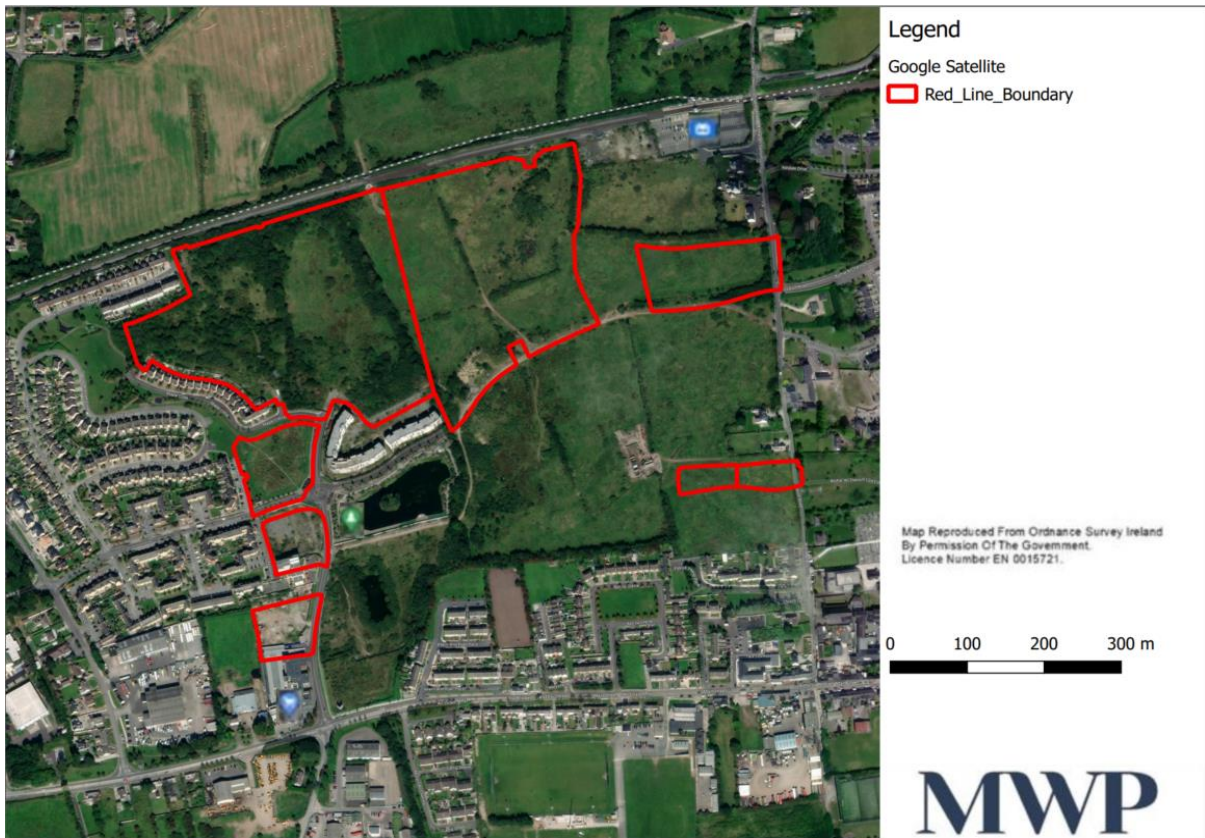


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- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

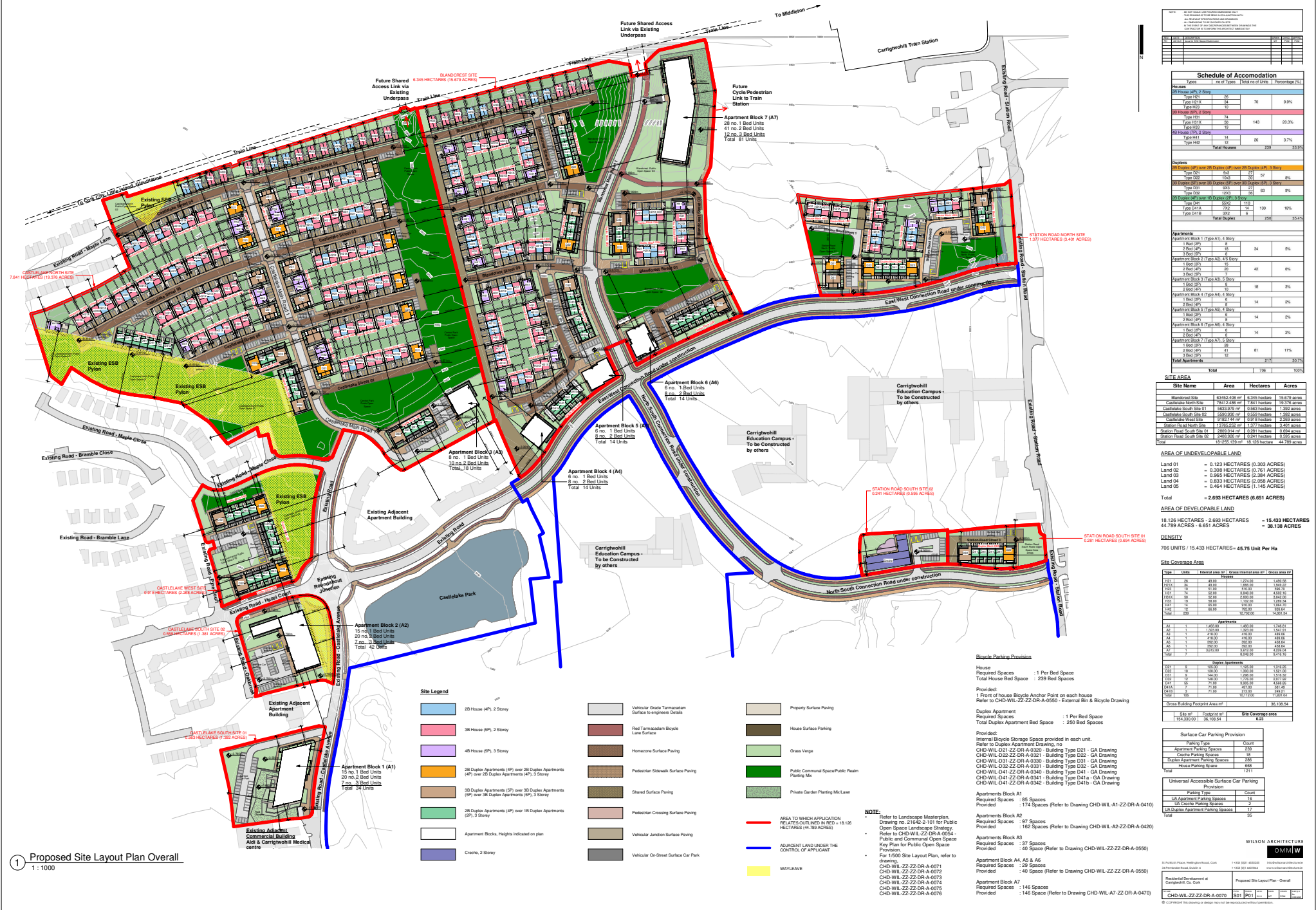
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

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for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: 1. All floor areas are net internal areas unless otherwise stated. 2. All floor areas are net internal areas unless otherwise stated. 3. All floor areas are net internal areas unless otherwise stated. 4. All floor areas are net internal areas unless otherwise stated. 5. All floor areas are net internal areas unless otherwise stated.

Block	Type	Units	Area (sqm)	Area (ha)
Block 1 (A1)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 2 (A2)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 3 (A3)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 4 (A4)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 5 (A5)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 6 (A6)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40
Block 7 (A7)	35 Duplex Apartments (4P) over 26 Duplex Apartments (4P), 3 Storey	20 no. 2 Bed Units	14,000	1.40

Schedule of Accommodation

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Site Area

Site Name	Area	Hectares	Acres
Blondorest Site	6,345,408 sqm	6,345	15,679
Castletlake North Site	7,612,256 sqm	7,612	18,938
Castletlake South Site (A)	5,853,379 sqm	5,853	14,502
Castletlake South Site (B)	5,959,225 sqm	5,959	14,741
Castletlake West Site	2,157,144 sqm	2,157	5,362
Station Road North Site	1,177,000 sqm	1,177	2,914
Station Road South Site (A)	2,806,514 sqm	2,806	7,004
Station Road South Site (B)	2,408,526 sqm	2,408	6,004
Total	31,177,153 sqm	31,177	77,208

AREA OF UNDEVELOPABLE LAND

Land No.	Area	Hectares	Acres
Land 01	0.123	0.303	0.752
Land 02	0.308	0.781	1.951
Land 03	0.863	2.164	5.400
Land 04	0.833	2.088	5.200
Land 05	0.464	1.185	2.952
Total	2.693	6.861	17.258

AREA OF DEVELOPABLE LAND

Area	Hectares	Acres
18,126 Hectares	18,126	44,788
- 2,693 Hectares	-2,693	-6,861
Total	15,433	38,187

DENSITY
706 UNITS / 15,433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Use	Internal area (sqm)	Gross internal area (sqm)	Gross area (sqm)
Residential	26,000,000	26,000,000	26,000,000
Commercial	1,000,000	1,000,000	1,000,000
Public Open Space	1,000,000	1,000,000	1,000,000
Other	1,000,000	1,000,000	1,000,000
Total	29,000,000	29,000,000	29,000,000

Internal Bicycle Storage Space provided in each unit.

Block	Internal Bicycle Storage	External Bicycle Storage
Block A1	85 Spaces	174 Spaces
Block A2	85 Spaces	174 Spaces
Block A3	37 Spaces	74 Spaces
Block A4, A5 & A6	29 Spaces	58 Spaces
Block A7	146 Spaces	292 Spaces

Site Coverage Area

Block	Internal area (sqm)	Gross internal area (sqm)	Gross area (sqm)
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Block A4, A5 & A6	1,400,000	1,400,000	1,400,000
Block A7	1,400,000	1,400,000	1,400,000
Total	5,800,000	5,800,000	5,800,000

1 Proposed Site Layout Plan Overall
1 : 1000



Ref: AR/Project No. 22461/Lt1004

26th January, 2021

**Department of Culture, Heritage and the Gaeltacht,
Sport & Media,**
23 Kildare Street,
Dublin 2,
D02 TD30

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

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ENGINEERING AND ENVIRONMENTAL CONSULTANTS

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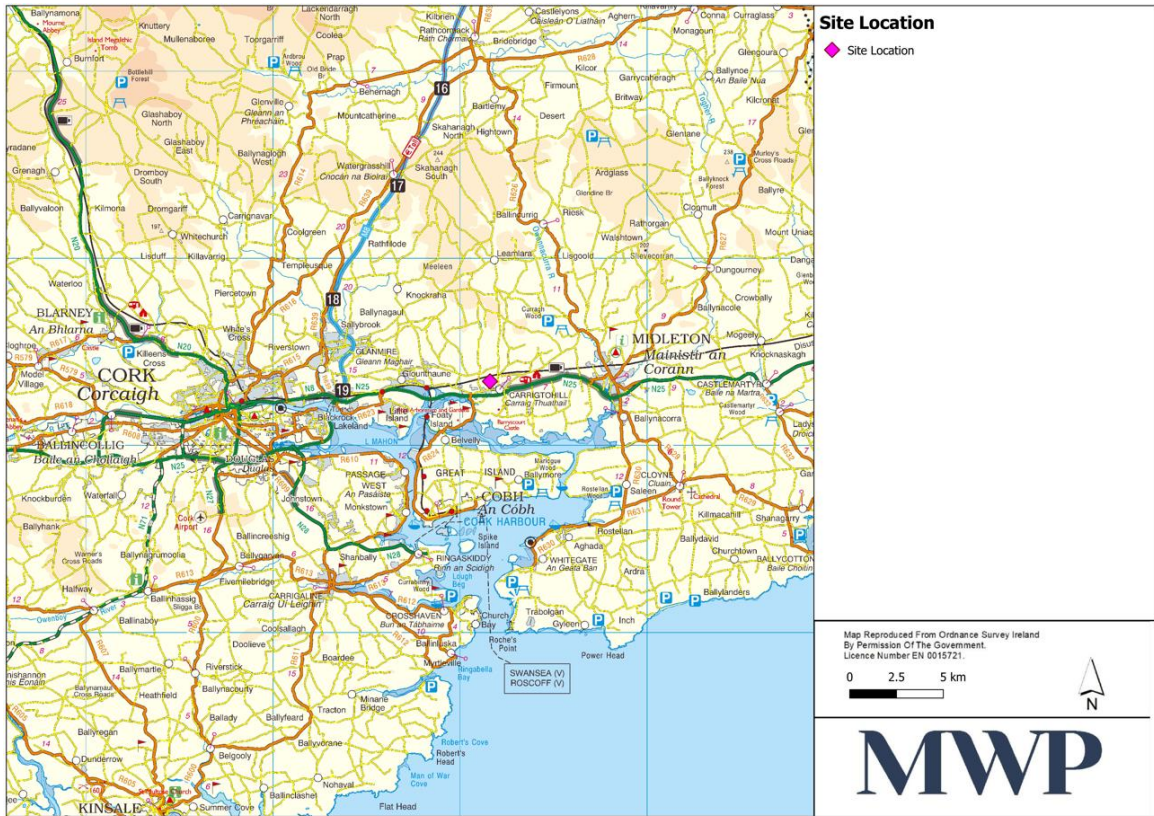


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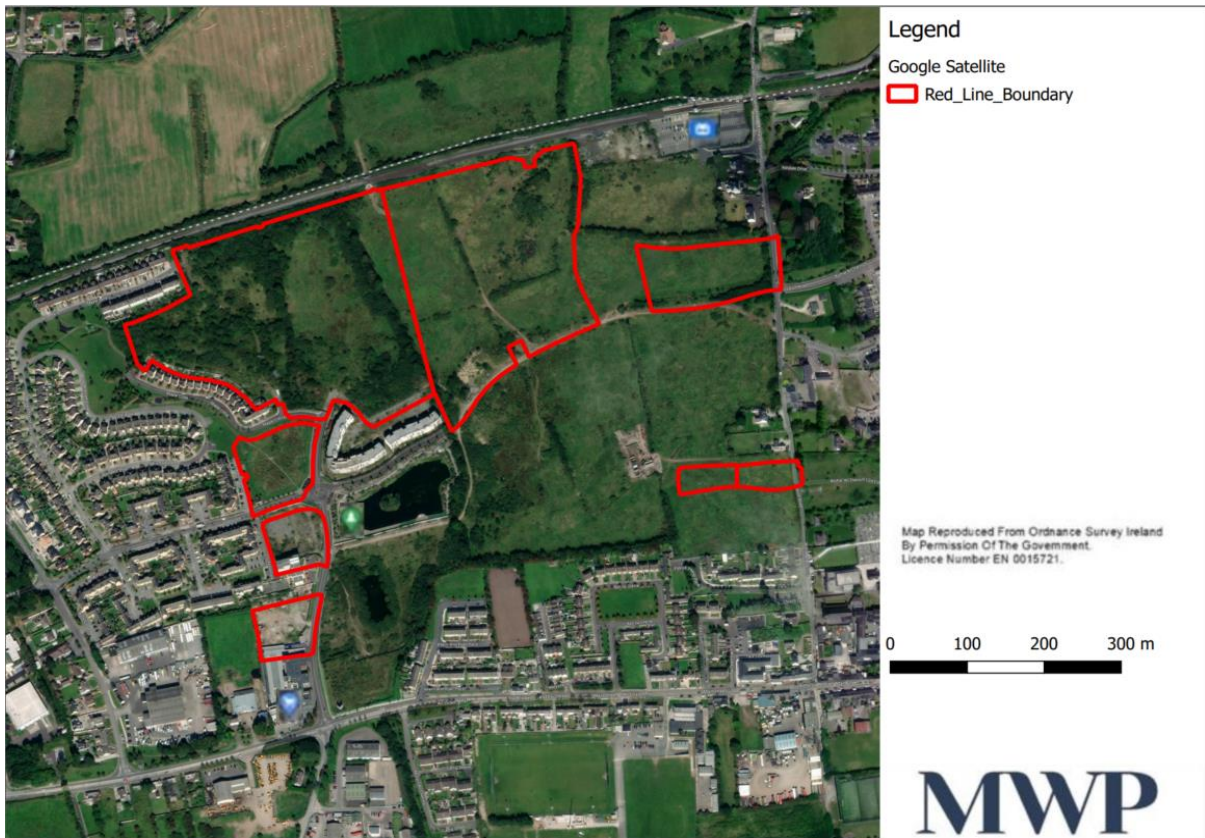


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- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

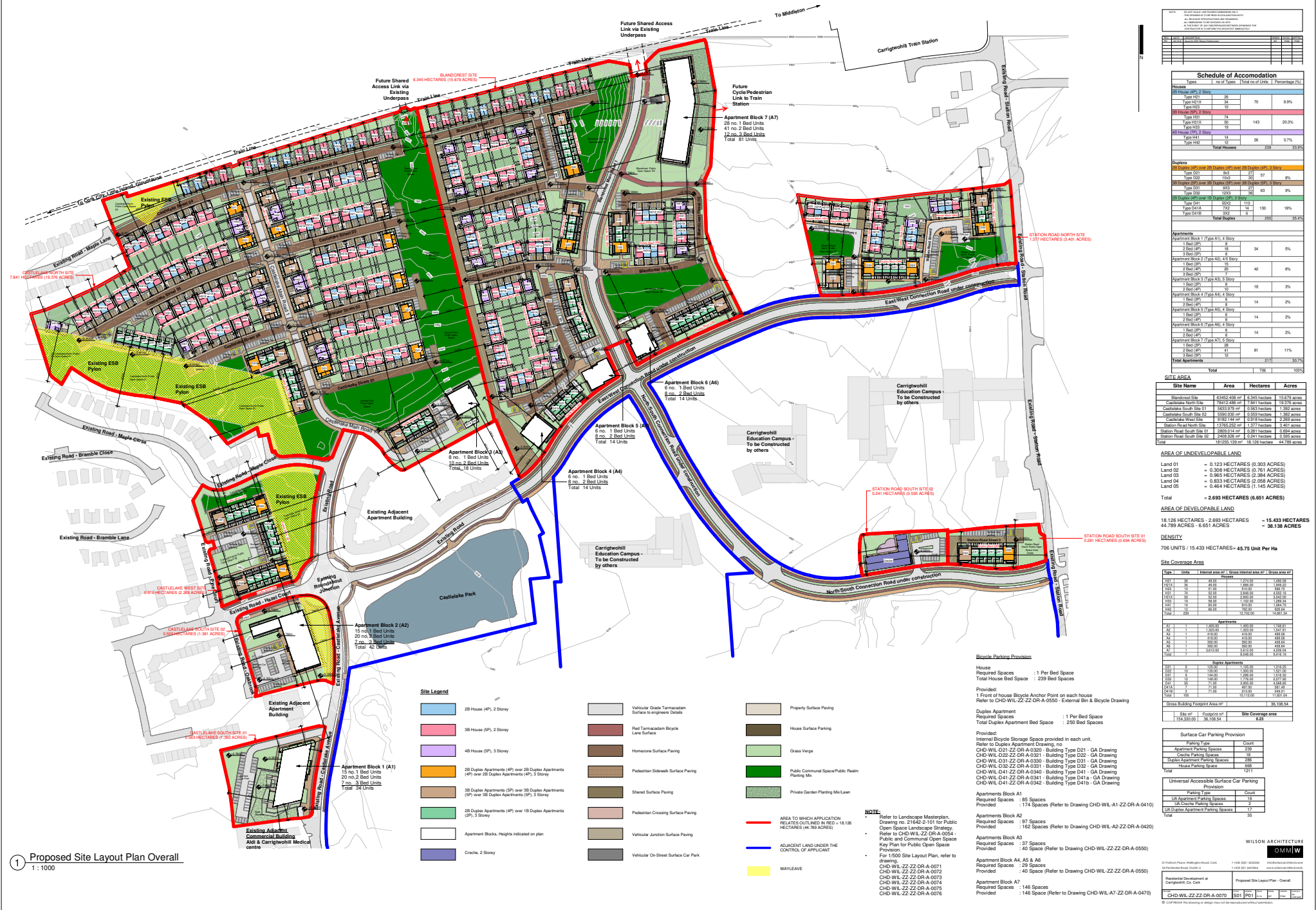
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



1 Proposed Site Layout Plan Overall
1 : 1000

Site Legend

	25 House (4P), 2 Storey		Vehicle Grade Tarmac/Asphalt Surface to engineers Details		Property Surface Parking
	35 House (5P), 2 Storey		Red Tarmac/Asphalt Bicycle Lane Surface		House Surface Parking
	45 House (6P), 3 Storey		Homogeneous Surface Paving		Grass Verge
	25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey		Pedestrian Sidewalk Surface Paving		Public Communal Space/Public Realm Planting Mix
	35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey		Shaded Surface Paving		Private Garden Planting Mix/Lawn
	25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey		Pedestrian Crossing Surface Paving		Vehicle Junction Surface Paving
	Apartment Blocks, Heights indicated on plan		Vehicle On-Street Surface Car Park		Wayleave
	Existing Adjacent Apartment Building				

	Vehicle Grade Tarmac/Asphalt Surface to engineers Details		Property Surface Parking
	Red Tarmac/Asphalt Bicycle Lane Surface		House Surface Parking
	Homogeneous Surface Paving		Grass Verge
	Pedestrian Sidewalk Surface Paving		Public Communal Space/Public Realm Planting Mix
	Shaded Surface Paving		Private Garden Planting Mix/Lawn
	Pedestrian Crossing Surface Paving		Vehicle Junction Surface Paving
	Vehicle On-Street Surface Car Park		Wayleave

Site Legend

	AREA TO WHICH APPLICATION RELATES OUTLINED IN RED - 18.128 HECTARES (44.789 ACRES)
	ADJACENT LAND UNDER THE CONTROL OF APPLICANT
	WAYLEAVE

NOTE:
 Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy.
 Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision.
 For 1500 Site Layout Plan, refer to drawing:
 CHD-WL-ZZ-DR-A-0071
 CHD-WL-ZZ-DR-A-0072
 CHD-WL-ZZ-DR-A-0073
 CHD-WL-ZZ-DR-A-0074
 CHD-WL-ZZ-DR-A-0075
 CHD-WL-ZZ-DR-A-0076

Bicycle Parking Provision

House
 Required Spaces : 1 Per Bed Space
 Total House Bed Space : 239 Bed Spaces

Duplex Apartment
 Required Spaces : 1 Per Bed Space
 Total Duplex Apartment Bed Space : 250 Bed Spaces

Provided:
 1 Floor of house Bicycle Anchor Point on each house
 Refer to CHD-WL-ZZ-DR-A-0050 - External Bin & Bicycle Drawing

Internal Bicycle Storage Space provided in each unit.
 Refer to Duplex Apartment Drawing, no. CHD-WL-D21-ZZ-DR-A-0301 - Building Type D21 - GA Drawing
 CHD-WL-D22-ZZ-DR-A-0301 - Building Type D22 - GA Drawing
 CHD-WL-D31-ZZ-DR-A-0301 - Building Type D31 - GA Drawing
 CHD-WL-D32-ZZ-DR-A-0301 - Building Type D32 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0340 - Building Type D41 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0341 - Building Type D41 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0342 - Building Type D41 - GA Drawing

Apartment Block A1
 Required Spaces : 85 Spaces
 Provided : 174 Spaces (Refer to Drawing CHD-WL-A1-ZZ-DR-A-0410)

Apartment Block A2
 Required Spaces : 37 Spaces
 Provided : 162 Spaces (Refer to Drawing CHD-WL-A2-ZZ-DR-A-0420)

Apartment Block A3
 Required Spaces : 37 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-DR-A-0550)

Apartment Block A4, A5 & A6
 Required Spaces : 29 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-DR-A-0550)

Apartment Block A7
 Required Spaces : 146 Spaces
 Provided : 146 Spaces (Refer to Drawing CHD-WL-A7-ZZ-DR-A-0470)

NOTE:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
25 House (4P), 2 Storey	25	25	0.0%
35 House (5P), 2 Storey	34	70	0.9%
45 House (6P), 3 Storey	14	14	0.2%
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	50	143	20.2%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	14	0.2%
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	14	30	0.7%
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	14	30	0.7%
Total Houses		239	33.2%

Duplexes

Types	no. of Types	Total no. Units	Percentage (%)
25 Duplex (4P) over 25 Duplex (4P) over 25 Duplex (4P), 3 Storey	50	143	20.2%
35 Duplex (5P) over 35 Duplex (5P) over 35 Duplex (5P), 3 Storey	14	14	0.2%
25 Duplex (4P) over 18 Duplex (2P) over 18 Duplex (2P), 3 Storey	14	30	0.7%
25 Duplex (4P) over 18 Duplex (2P) over 18 Duplex (2P), 3 Storey	14	30	0.7%
Total Duplexes		250	35.4%

Apartment Blocks

Types	no. of Types	Total no. Units	Percentage (%)
Apartment Block 1 (Type A1), 4 Storey	1	85	1.2%
Apartment Block 2 (Type A2), 3 Storey	1	37	0.5%
Apartment Block 3 (Type A3), 4.5 Storey	1	42	0.6%
Apartment Block 4 (Type A4), 3 Storey	1	18	0.3%
Apartment Block 5 (Type A5), 4 Storey	1	14	0.2%
Apartment Block 6 (Type A6), 4 Storey	1	14	0.2%
Apartment Block 7 (Type A7), 4 Storey	1	146	2.1%
Apartment Block 8 (Type A8), 5 Storey	1	14	0.2%
Apartment Block 9 (Type A9), 5 Storey	1	81	1.1%
Apartment Block 10 (Type A10), 5 Storey	1	12	0.2%
Total Apartments		211	30.1%
Total		706	100.0%

SITE AREA

Site Name	Area	Hectares	Acres
Blindcrest Site	6342.408 m ²	6.342	15.679
Castlake North Site	7472.256 m ²	7.472	18.526
Castlake South Site (1)	5833.979 m ²	5.834	14.392
Castlake South Site (2)	5592.222 m ²	5.592	13.824
Castlake West Site	2157.144 m ²	2.157	5.352
Castlake East Site	1922.222 m ²	1.922	4.756
Station Road North Site (1)	2826.614 m ²	2.827	7.004
Station Road South Site (1)	2408.326 m ²	2.408	5.956
Station Road South Site (2)	1127.159 m ²	1.127	2.792
Total		26.83	66.61

AREA OF UNDEVELOPABLE LAND

Land 01 = 0.123 HECTARES (0.303 ACRES)
 Land 02 = 0.308 HECTARES (0.761 ACRES)
 Land 03 = 0.063 HECTARES (0.156 ACRES)
 Land 04 = 0.833 HECTARES (2.058 ACRES)
 Land 05 = 0.464 HECTARES (1.145 ACRES)

Total = 2.693 HECTARES (6.651 ACRES)

AREA OF DEVELOPABLE LAND

18.126 HECTARES = 2.693 HECTARES = 15.433 HECTARES
 44.788 ACRES = 6.651 ACRES = 38.138 ACRES

DENSITY

706 UNITS / 15.433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Type	Use	Internal area m ²	Gross internal area m ²	Gross area m ²
1	25 House (4P), 2 Storey	442.00	1,711.00	1,431.00
2	35 House (5P), 2 Storey	418.00	1,682.00	1,374.00
3	45 House (6P), 3 Storey	312.00	1,248.00	1,131.00
4	25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	1,014.00	4,056.00	3,312.00
5	35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	198.00	792.00	694.00
6	25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	198.00	792.00	694.00
7	25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	198.00	792.00	694.00
8	Apartment Block 1 (Type A1), 4 Storey	85.00	340.00	290.00
9	Apartment Block 2 (Type A2), 3 Storey	37.00	148.00	127.00
10	Apartment Block 3 (Type A3), 4.5 Storey	42.00	168.00	144.00
11	Apartment Block 4 (Type A4), 3 Storey	18.00	72.00	61.00
12	Apartment Block 5 (Type A5), 4 Storey	14.00	56.00	47.00
13	Apartment Block 6 (Type A6), 4 Storey	14.00	56.00	47.00
14	Apartment Block 7 (Type A7), 4 Storey	146.00	584.00	500.00
15	Apartment Block 8 (Type A8), 5 Storey	14.00	56.00	47.00
16	Apartment Block 9 (Type A9), 5 Storey	81.00	324.00	276.00
17	Apartment Block 10 (Type A10), 5 Storey	12.00	48.00	40.00
Total		3,122.00	12,488.00	10,481.00

Apartment Blocks

Block	Area m ²	Area ha	Area ac
A1	1,200.00	1.200	2.966
A2	1,170.00	1.170	2.883
A3	1,120.00	1.120	2.764
A4	1,360.00	1.360	3.364
A5	1,360.00	1.360	3.364
A6	1,360.00	1.360	3.364
A7	1,460.00	1.460	3.604
A8	1,360.00	1.360	3.364
A9	1,360.00	1.360	3.364
A10	1,360.00	1.360	3.364
Total	12,488.00	12.488	30.924

Site Coverage Area

Block	Area m ²	Area ha	Area ac
A1	1,200.00	1.200	2.966
A2	1,170.00	1.170	2.883
A3	1,120.00	1.120	2.764
A4	1,360.00	1.360	3.364
A5	1,360.00	1.360	3.364
A6	1,360.00	1.360	3.364
A7	1,460.00	1.460	3.604
A8	1,360.00	1.360	3.364
A9	1,360.00	1.360	3.364
A10	1,360.00	1.360	3.364
Total	12,488.00	12.488	30.924

Universal Accessible Surface Car Parking Provision

Category	Provision
Public	16
UA	16
UA Cycle	16
UA Cycle	16
Total	32

WILSON ARCHITECTURE

CHD-WL-ZZ-DR-A-0070

Ref: AR/Project No. 22461/Lt1011

26th January, 2021

Department of Housing, Local Government & Heritage

Newtown Road,
Carrick lawn,
Wexford, Y35 AP90

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremon BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

Associate Directors Mohammed Rafiq BSc CEng MStructE (London) | Brian Sayers BE MSc CEng MIEI |
David Aherne BE CEng MIEI MCIBSE | Tim Hurley BEng MEngSc CEng MIEI | Micheál Fenton BE CEng MIEI |
Ian Brosnan BE CEng MIEI MICE MStructE | Ken Fitzgerald BSc Surv Dip CEcon PG Dip Planning EIA CZM

Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



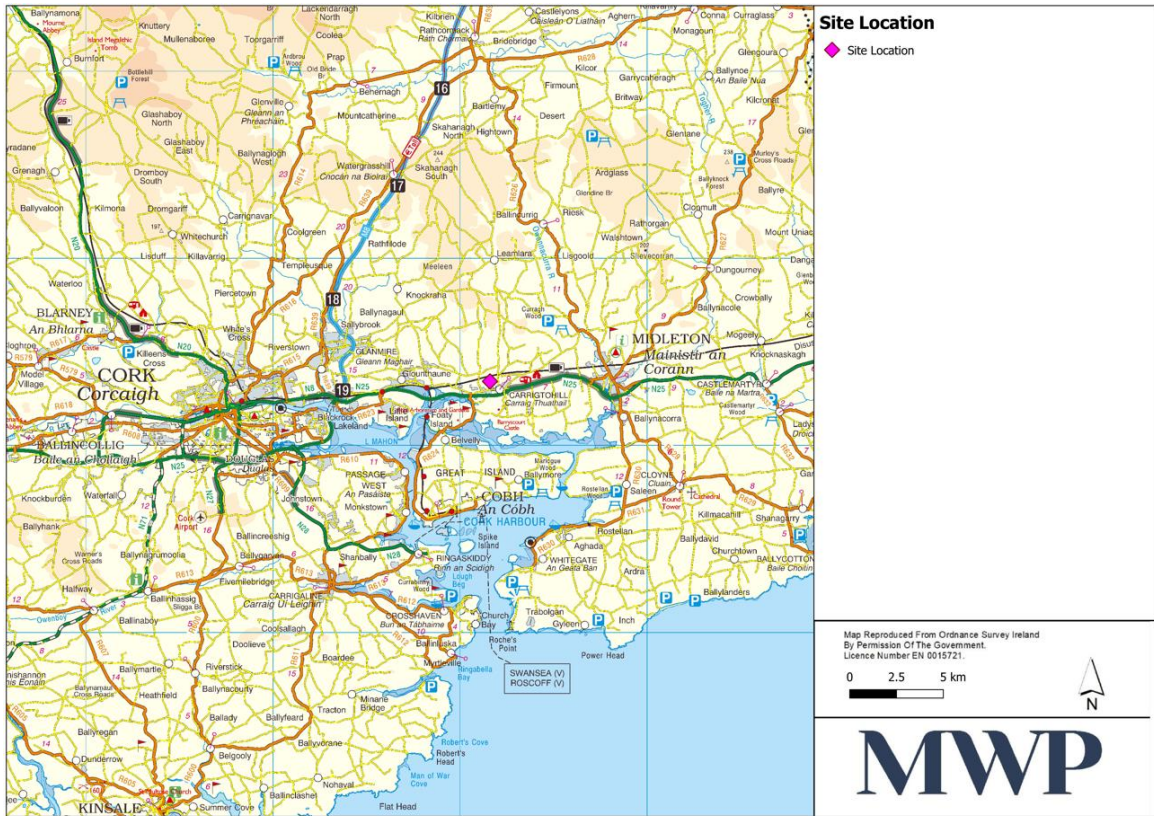


Figure 1 Site Location

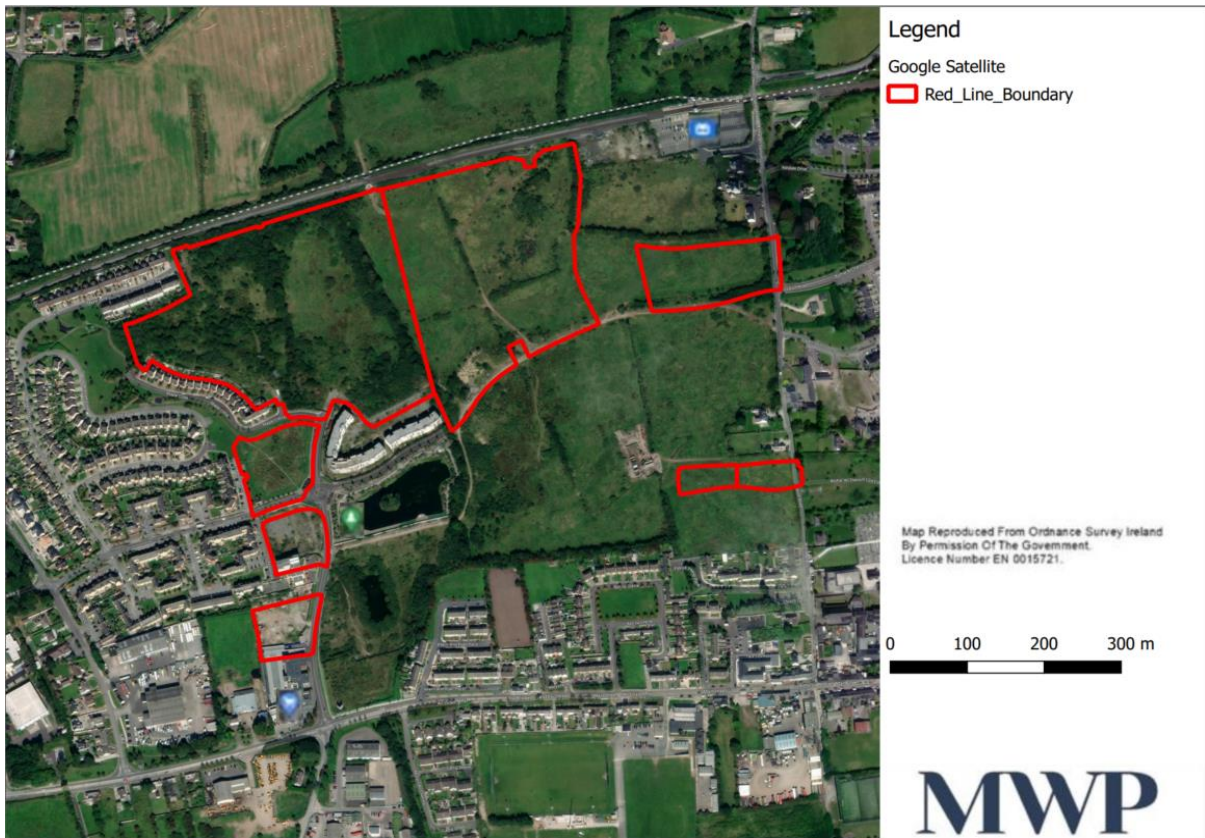


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: All areas are in hectares unless otherwise stated. The number of units is based on the following assumptions: 1. Apartment blocks are 2.5m high. 2. Maximum floor area is 1000sqm. 3. Maximum floor area is 1000sqm. 4. Maximum floor area is 1000sqm.

Block	Type	Units	Area (ha)
A1	1 Bed	13	0.18
A2	1 Bed	16	0.22
A3	1 Bed	8	0.11
A4	1 Bed	9	0.12
A5	1 Bed	6	0.08
A6	1 Bed	6	0.08
A7	1 Bed	28	0.38
Total		86	1.15

Schedule of Accommodation

Block	Type	Units	Area (ha)	Percentage (%)
A1	1 Bed	13	0.18	15.1
A2	1 Bed	16	0.22	18.5
A3	1 Bed	8	0.11	9.3
A4	1 Bed	9	0.12	10.3
A5	1 Bed	6	0.08	6.9
A6	1 Bed	6	0.08	6.9
A7	1 Bed	28	0.38	32.2
Total		86	1.15	100.0

Apartment Blocks

Block	Type	Units	Area (ha)	Percentage (%)
A1	1 Bed	13	0.18	15.1
A2	1 Bed	16	0.22	18.5
A3	1 Bed	8	0.11	9.3
A4	1 Bed	9	0.12	10.3
A5	1 Bed	6	0.08	6.9
A6	1 Bed	6	0.08	6.9
A7	1 Bed	28	0.38	32.2
Total		86	1.15	100.0

Site Area

Site Name	Area	Hectares	Acres
Blindcrest Site	6342.408	6.342	15.679
Castletlake North Site	7471.258	7.471	18.536
Castletlake South Site 01	5853.979	5.854	14.502
Castletlake South Site 02	5592.522	5.593	13.842
Castletlake West Site	2157.144	2.157	5.353
Station Road North Site 01	1592.824	1.593	3.942
Station Road South Site 01	2826.614	2.827	7.004
Station Road South Site 02	2408.526	2.409	5.969
Total	31255.159	31.255	77.328

AREA OF UNDEVELOPABLE LAND

Land	Area	Hectares	Acres
Land 01	0.123	0.303	0.751
Land 02	0.308	0.761	1.884
Land 03	0.363	0.904	2.242
Land 04	0.833	2.068	5.124
Land 05	0.464	1.145	2.851
Total	2.688	6.681	16.652

AREA OF DEVELOPABLE LAND

Area	Hectares	Acres
18,126 Hectares	44,788	110,676
2,688 Hectares	6,681	16,652
Total	20,814	51,928

DENSITY

706 UNITS / 15,433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area	Units	Area (ha)	Units per Ha
A1	13	0.18	72.2
A2	16	0.22	72.7
A3	8	0.11	72.7
A4	9	0.12	72.7
A5	6	0.08	72.7
A6	6	0.08	72.7
A7	28	0.38	73.7
Total	86	1.15	74.8

Site Coverage Area

Block	Area (ha)	Units	Units per Ha
A1	0.18	13	72.2
A2	0.22	16	72.7
A3	0.11	8	72.7
A4	0.12	9	72.7
A5	0.08	6	72.7
A6	0.08	6	72.7
A7	0.38	28	73.7
Total	1.15	86	74.8

Apartment Blocks

Block	Area (ha)	Units	Units per Ha
A1	0.18	13	72.2
A2	0.22	16	72.7
A3	0.11	8	72.7
A4	0.12	9	72.7
A5	0.08	6	72.7
A6	0.08	6	72.7
A7	0.38	28	73.7
Total	1.15	86	74.8

Internal Bicycle Storage

Block	Required Spaces	Provided
A1	13	13
A2	16	16
A3	8	8
A4	9	9
A5	6	6
A6	6	6
A7	28	28
Total	86	86

Universal Accessible Surface Car Parking

Block	Required Spaces	Provided
A1	1	1
A2	1	1
A3	1	1
A4	1	1
A5	1	1
A6	1	1
A7	1	1
Total	7	7

Site Coverage Area

Block	Area (ha)	Units	Units per Ha
A1	0.18	13	72.2
A2	0.22	16	72.7
A3	0.11	8	72.7
A4	0.12	9	72.7
A5	0.08	6	72.7
A6	0.08	6	72.7
A7	0.38	28	73.7
Total	1.15	86	74.8

CHD-WL-ZZ-DR-A-0070

Block	Area (ha)	Units	Units per Ha
A1	0.18	13	72.2
A2	0.22	16	72.7
A3	0.11	8	72.7
A4	0.12	9	72.7
A5	0.08	6	72.7
A6	0.08	6	72.7
A7	0.38	28	73.7
Total	1.15	86	74.8

1 Proposed Site Layout Plan Overall
1 : 1000

NOTE: Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy. Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision. For 1500 Site Layout Plan, refer to drawing: CHD-WL-ZZ-DR-A-0071 CHD-WL-ZZ-DR-A-0072 CHD-WL-ZZ-DR-A-0073 CHD-WL-ZZ-DR-A-0074 CHD-WL-ZZ-DR-A-0075 CHD-WL-ZZ-DR-A-0076



Ref: AR/Project No. 22461/Lt1009

26th January, 2021

Geological Survey of Ireland
Beggars Bush,
Haddington Road,
Dublin,
D04 K7X4

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

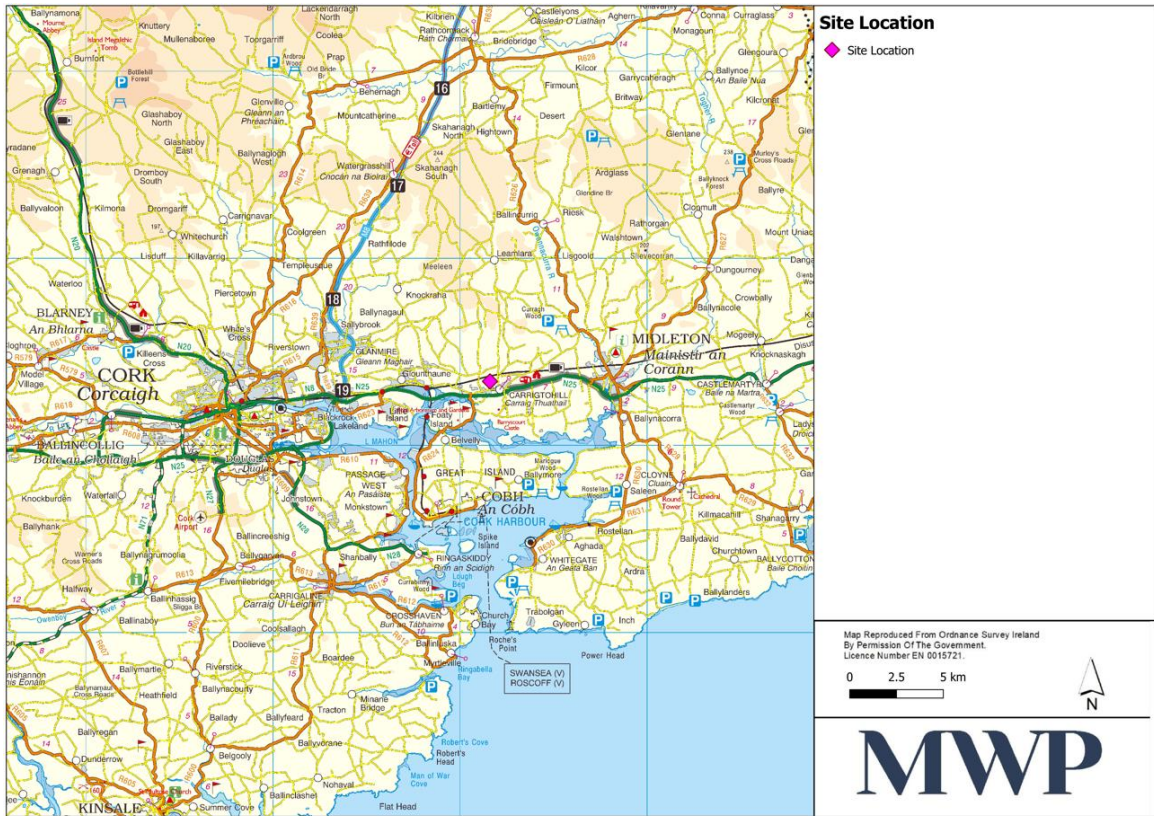


Figure 1 Site Location

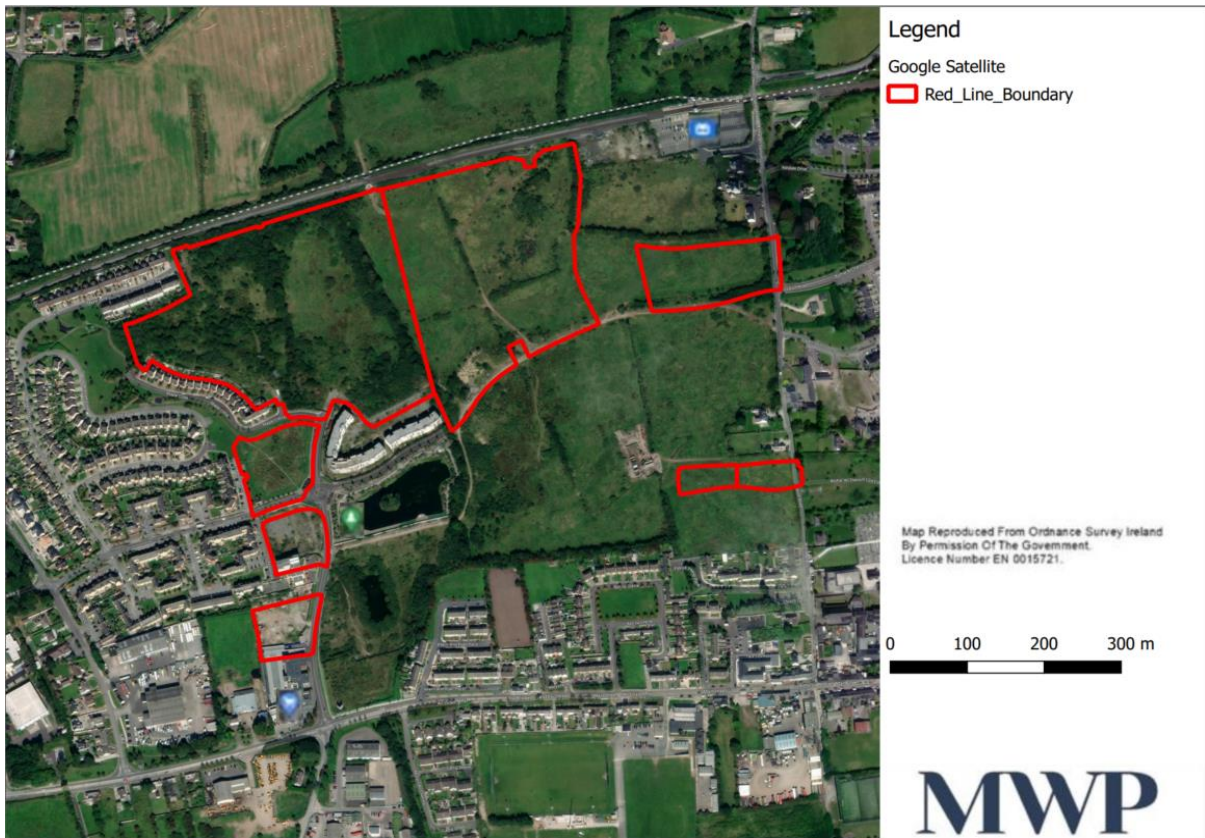


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan
for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
25 House (4P), 2 Storey	35	35	0.9%
35 House (5P), 2 Storey	50	70	0.9%
45 House (5P), 3 Storey	14	14	0.3%
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	50	143	20.3%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	14	0.3%
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	14	35	3.7%
Total Houses		206	33.2%

Apartment Blocks

Apartment Block	no. of Units	Percentage (%)
Apartment Block 1 (Type A1), 4 Storey	14	0.8%
Apartment Block 2 (Type A2), 4 Storey	14	0.8%
Apartment Block 3 (Type A3), 4 Storey	14	0.8%
Apartment Block 4 (Type A4), 4 Storey	14	0.8%
Apartment Block 5 (Type A5), 4 Storey	14	0.8%
Apartment Block 6 (Type A6), 4 Storey	14	0.8%
Apartment Block 7 (Type A7), 4 Storey	14	0.8%
Total Apartments	84	13.1%

AREA OF UNDEVELOPABLE LAND

Site Name	Area	Hectares	Acres
Blindcrest Site	6342.408 m ²	6.342	15.679
Castlake North Site	7471.258 m ²	7.471	18.536
Castlake South Site 01	5853.979 m ²	5.854	14.502
Castlake South Site 02	5559.222 m ²	5.559	13.802
Castlake West Site	2157.144 m ²	2.157	5.352
Station Road North Site 01	2892.614 m ²	2.893	7.184
Station Road South Site 01	2892.614 m ²	2.893	7.184
Station Road South Site 02	2408.326 m ²	2.408	5.958
Total	31275.553 m²	31.276	77.228

AREA OF DEVELOPABLE LAND
18.128 HECTARES = 2.693 HECTARES = 15.433 HECTARES = 38.118 ACRES
44.789 ACRES = 6.651 ACRES

DENSITY
706 UNITS / 15.433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Type	Use	Internal area m ²	Gross internal area m ²	Gross area m ²
Houses	H101	26	492	1,711.02
	H102	35	630	1,937.07
	H103	10	312	833.00
	H104	19	58	132.00
	H105	14	102	129.00
	H106	14	102	129.00
	H107	14	102	129.00
	H108	14	102	129.00
	H109	14	102	129.00
	H110	14	102	129.00
Apartments	A1	1	1,000	1,748.01
	A2	1	1,000	1,748.01
	A3	1	1,000	1,748.01
	A4	1	1,000	1,748.01
	A5	1	1,000	1,748.01
	A6	1	1,000	1,748.01
	A7	1	1,000	1,748.01
Total			12,122.00	14,461.34
				35,128.54

Internal Bicycle Storage Space provided in each unit.

Building	Required Spaces	Provided
Apartment Block A1	85 Spaces	174 Spaces (Refer to Drawing CHD-WIL-A1-ZZ-DR-A-0410)
Apartment Block A2	85 Spaces	174 Spaces (Refer to Drawing CHD-WIL-A2-ZZ-DR-A-0420)
Apartment Block A3	85 Spaces	174 Spaces (Refer to Drawing CHD-WIL-A3-ZZ-DR-A-0550)
Apartment Block A4, A5 & A6	29 Spaces	40 Spaces (Refer to Drawing CHD-WIL-ZZ-ZZ-DR-A-0550)
Apartment Block A7	146 Spaces	146 Spaces (Refer to Drawing CHD-WIL-A7-ZZ-DR-A-0470)

Universal Accessible Surface Car Parking Provision

Building	Required Spaces	Provided
UA Car Parking Spaces	16	16
UA Car Parking Spaces	17	17
Total	33	33

Ref: AR/Project No. 22461/Lt1005

26th January, 2021

The Health & Safety Executive,

Oak House,
Millennium Park,
Naas,
Co. Kildare

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremen BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

Associate Directors Mohammed Rafiq BSc CEng MStructE (London) | Brian Sayers BE MSc CEng MIEI |
David Aherne BE CEng MIEI MCIBSE | Tim Hurley BEng MEngSc CEng MIEI | Micheál Fenton BE CEng MIEI |
Ian Brosnan BE CEng MIEI MICE MStructE | Ken Fitzgerald BSc Surv Dip CEcon PG Dip Planning EIA CZM

Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



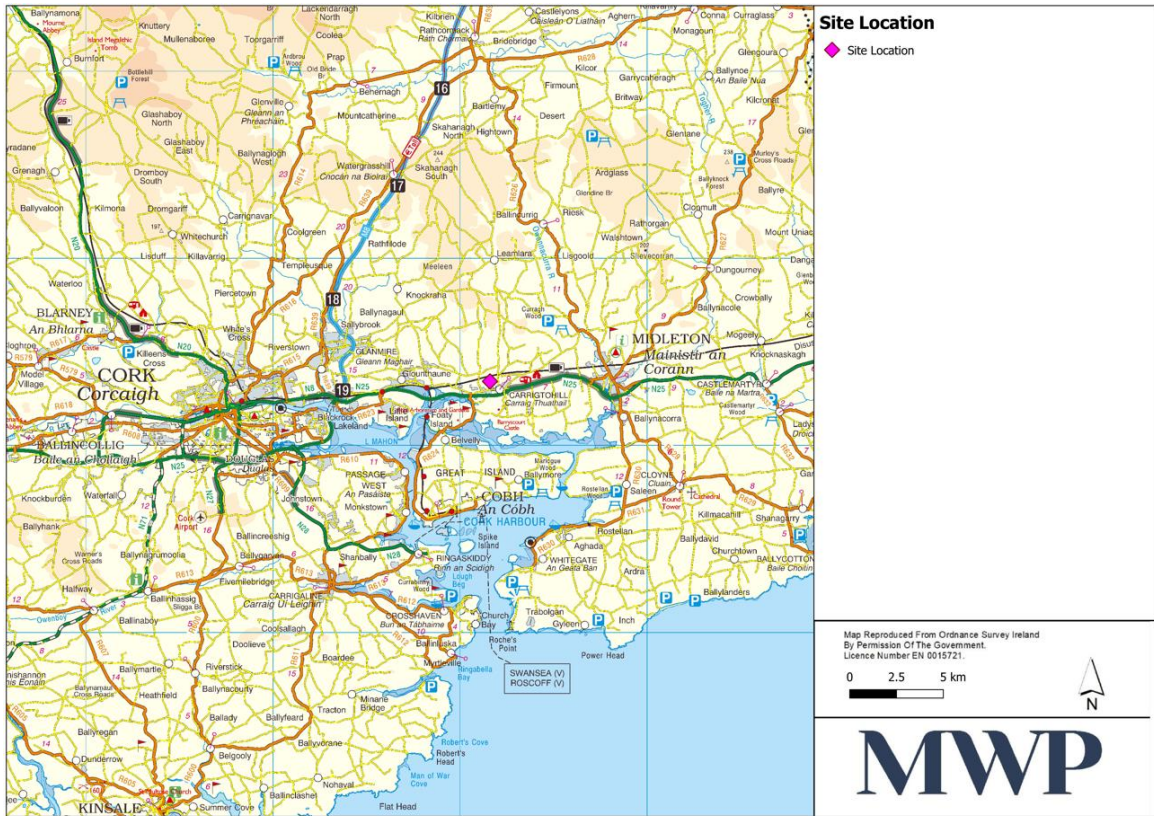


Figure 1 Site Location

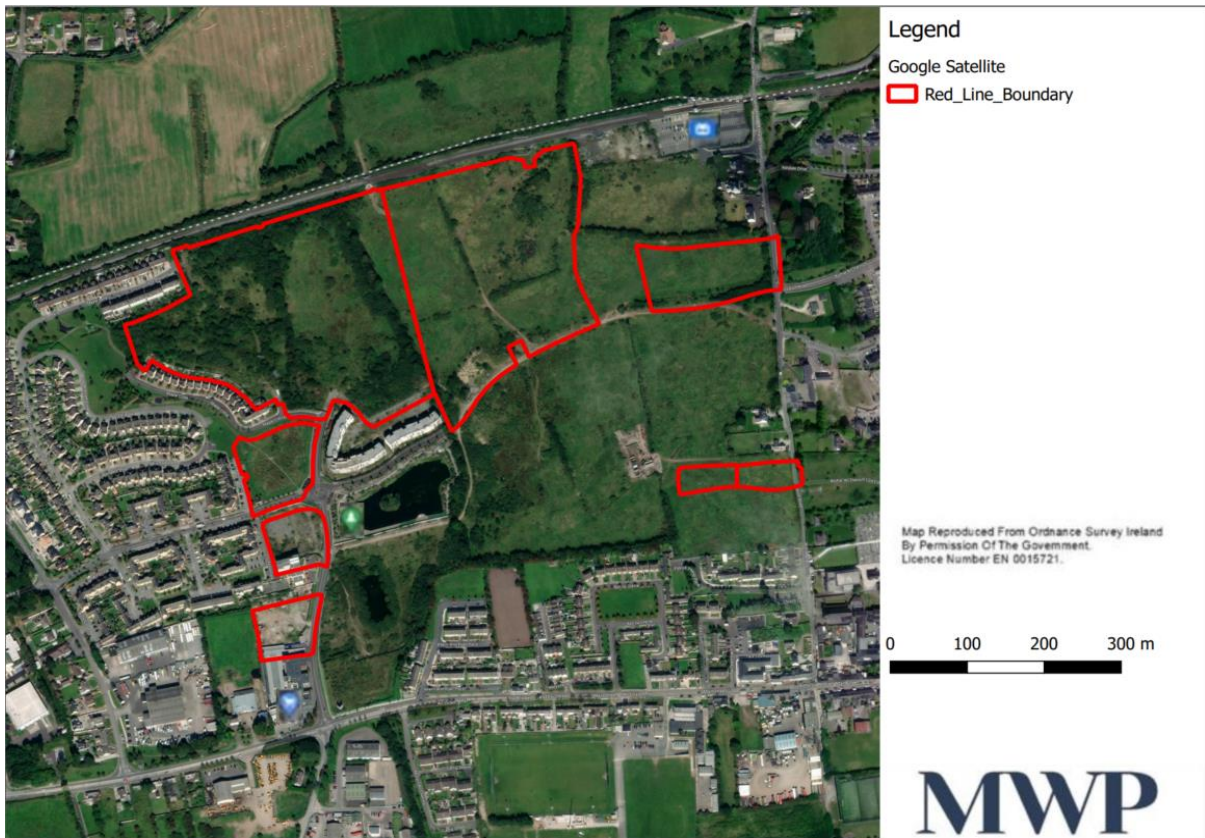


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

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Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

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A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

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- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

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Please address any comments you may have to:

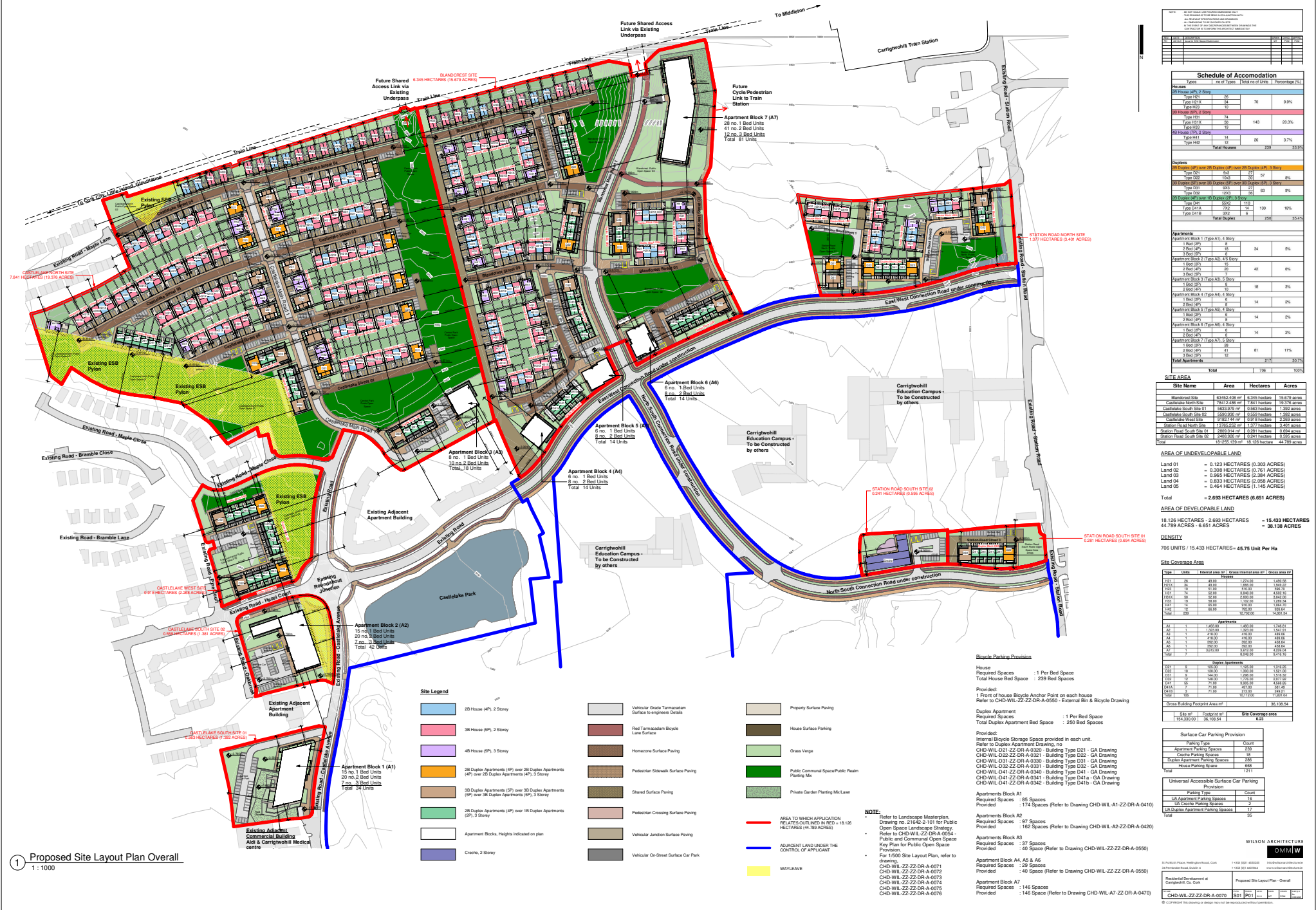
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



1 Proposed Site Layout Plan Overall
1 : 1000

Site Legend

	25 House (4P), 2 Storey		Vehicle Grade Tarmac/Asphalt Surface to engineers Details		Property Surface Parking
	35 House (5P), 2 Storey		Red Tarmac/Asphalt Bicycle Lane Surface		House Surface Parking
	45 House (6P), 3 Storey		Homogeneous Surface Parking		Grass Verge
	25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey		Pedestrian Sidewalk Surface Parking		Public Communal Space/Public Realm Planting Mix
	35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey		Shared Surface Parking		Private Garden Planting Mix/Lawn
	25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey		Pedestrian Crossing Surface Parking		Vehicle Junction Surface Parking
	Apartment Blocks, Heights indicated on plan		Vehicle On-Street Surface Car Park		Wayleave
	25 House (4P), 2 Storey				

	Vehicle On-Street Surface Car Park
	Wayleave

Site Legend

	AREA TO WHICH APPLICATION RELATES OUTLINED IN RED - 18.128 HECTARES (44.789 ACRES)
	ADJACENT LAND UNDER THE CONTROL OF APPLICANT
	WAYLEAVE

NOTE:
 Refer to Landscape Masterplan, Drawing no. 01660-2/10 for Public Open Space Landscape Strategy.
 Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision.
 For 1500 Site Layout Plan, refer to drawing:
 CHD-WL-ZZ-DR-A-0071
 CHD-WL-ZZ-DR-A-0072
 CHD-WL-ZZ-DR-A-0073
 CHD-WL-ZZ-DR-A-0074
 CHD-WL-ZZ-DR-A-0075
 CHD-WL-ZZ-DR-A-0076

Bicycle Parking Provision

House	Required Spaces	: 1 Per Bed Space
Total House Bed Space	: 238 Bed Spaces	
Duplex Apartment	Required Spaces	: 1 Per Bed Space
Total Duplex Apartment Bed Space	: 250 Bed Spaces	
Provided:		
1 Floor of house Bicycle Anchor Point on each House	Refer to CHD-WL-ZZ-DR-A-0050 - External Bin & Bicycle Drawing	
Internal Bicycle Storage Space provided in each unit.	Refer to Duplex Apartment Drawing, no. CHD-WL-D21-ZZ-DR-A-0301 - Building Type D21 - GA Drawing	
CHD-WL-D22-ZZ-DR-A-0301 - Building Type D22 - GA Drawing		
CHD-WL-D31-ZZ-DR-A-0301 - Building Type D31 - GA Drawing		
CHD-WL-D32-ZZ-DR-A-0301 - Building Type D32 - GA Drawing		
CHD-WL-D41-ZZ-DR-A-0340 - Building Type D41 - GA Drawing		
CHD-WL-D41-ZZ-DR-A-0341 - Building Type D41 - GA Drawing		
CHD-WL-D41-ZZ-DR-A-0342 - Building Type D41 - GA Drawing		

Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
25 House (4P), 2 Storey	25	25	0.8%
25 House (4P), 2 Storey	50	70	0.8%
35 House (5P), 2 Storey	14	14	0.3%
45 House (6P), 3 Storey	50	143	20.2%
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	14	14	0.3%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	38	3.7%
TOTAL HOUSES		238	33.2%
Duplexes			
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	14	14	0.3%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	38	3.7%
45 Duplex Apartments (6P) over 45 Duplex Apartments (6P), 3 Storey	14	42	0.8%
TOTAL DUPLEXES		94	13.5%
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	14	14	0.3%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	38	3.7%
45 Duplex Apartments (6P) over 45 Duplex Apartments (6P), 3 Storey	14	42	0.8%
TOTAL DUPLEXES		94	13.5%
Apartment Blocks			
Apartment Block 1 (Type A1), 4 Storey	1	14	0.3%
Apartment Block 2 (Type A2), 3 Storey	1	14	0.3%
Apartment Block 3 (Type A3), 4 Storey	1	14	0.3%
Apartment Block 4 (Type A4), 4 Storey	1	14	0.3%
Apartment Block 5 (Type A5), 4 Storey	1	14	0.3%
Apartment Block 6 (Type A6), 4 Storey	1	14	0.3%
Apartment Block 7 (Type A7), 4 Storey	1	14	0.3%
TOTAL APARTMENT BLOCKS		84	11.9%
Total Apartments		252	35.7%
Total		706	100.0%

SITE AREA

Site Name	Area	Hectares	Acres
Blanchard Site	6342.408 m ²	6.342 Hectares	15.679 acres
Castlake North Site	7472.258 m ²	7.472 Hectares	18.326 acres
Castlake South Site (1)	5833.979 m ²	5.834 Hectares	14.362 acres
Castlake South Site (2)	5592.222 m ²	5.592 Hectares	13.824 acres
Castlake West Site	2157.144 m ²	2.157 Hectares	5.325 acres
Station Road North Site	1777.000 m ²	1.777 Hectares	4.392 acres
Station Road South Site (1)	2826.614 m ²	2.827 Hectares	6.984 acres
Station Road South Site (2)	2408.926 m ²	2.409 Hectares	5.956 acres
Total	31275.159 m ²	31.275 Hectares	77.228 acres

AREA OF UNDEVELOPABLE LAND

Land	Area	Hectares	Acres
Land 01	= 0.123 HECTARES (0.303 ACRES)		
Land 02	= 0.308 HECTARES (0.761 ACRES)		
Land 03	= 0.863 HECTARES (2.136 ACRES)		
Land 04	= 0.833 HECTARES (2.058 ACRES)		
Land 05	= 0.464 HECTARES (1.145 ACRES)		
Total	= 2.693 HECTARES (6.651 ACRES)		

AREA OF DEVELOPABLE LAND

Area	Hectares	Acres
18.128 HECTARES	= 2.693 HECTARES	= 15.433 HECTARES
44.789 ACRES	= 6.651 ACRES	= 38.118 ACRES

DENSITY

706 UNITS / 15.433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Type	Use	Internal area m ²	Gross internal area m ²	Gross area m ²
House	25	492	1,711.02	1,431.24
	35	492	1,711.02	1,431.24
	45	492	1,711.02	1,431.24
	25	372	1,343.04	1,111.76
	35	372	1,343.04	1,111.76
	45	372	1,343.04	1,111.76
	18	88	312.96	252.48
	19	88	312.96	252.48
	20	88	312.96	252.48
	21	88	312.96	252.48
Duplex	25	88	312.96	252.48
	35	88	312.96	252.48
	45	88	312.96	252.48
	25	88	312.96	252.48
	35	88	312.96	252.48
Apartment	A1	1,400	4,931.00	1,748.01
	A2	1,400	4,931.00	1,748.01
	A3	1,400	4,931.00	1,748.01
	A4	1,400	4,931.00	1,748.01
	A5	1,400	4,931.00	1,748.01
	A6	1,400	4,931.00	1,748.01
	A7	1,400	4,931.00	1,748.01
Total		31,275.16	112,122.00	44,720.84

Site Coverage Area

Use	Internal area m ²	Gross internal area m ²	Gross area m ²
House	2,928	10,424.00	8,648.00
Duplex	352	1,247.92	1,014.72
Apartment	14,000	49,310.00	17,480.01
Total	17,280	61,081.92	27,142.73

Universal Accessible Surface Car Parking Provision

Category	Provision
House	1.6
Duplex	1.6
Apartment	1.6
Total	4.8

WILSON ARCHITECTURE

1500 Site Layout Plan - Overall

CHD-WL-ZZ-DR-A-0070

Ref: AR/Project No. 22461/Lt1006

26th January, 2021

Ms. Audrey Rafferty,
The Irish Aviation Authority,
12-12 D'Olier Street,
Dublin 2,

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

Dear Audrey,

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremon BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

Associate Directors Mohammed Rafiq BSc CEng MStructE (London) | Brian Sayers BE MSc CEng MIEI |
David Aherne BE CEng MIEI MCIBSE | Tim Hurley BEng MEngSc CEng MIEI | Micheál Fenton BE CEng MIEI |
Ian Brosnan BE CEng MIEI MICE MStructE | Ken Fitzgerald BSc Surv Dip CEcon PG Dip Planning EIA CZM

Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



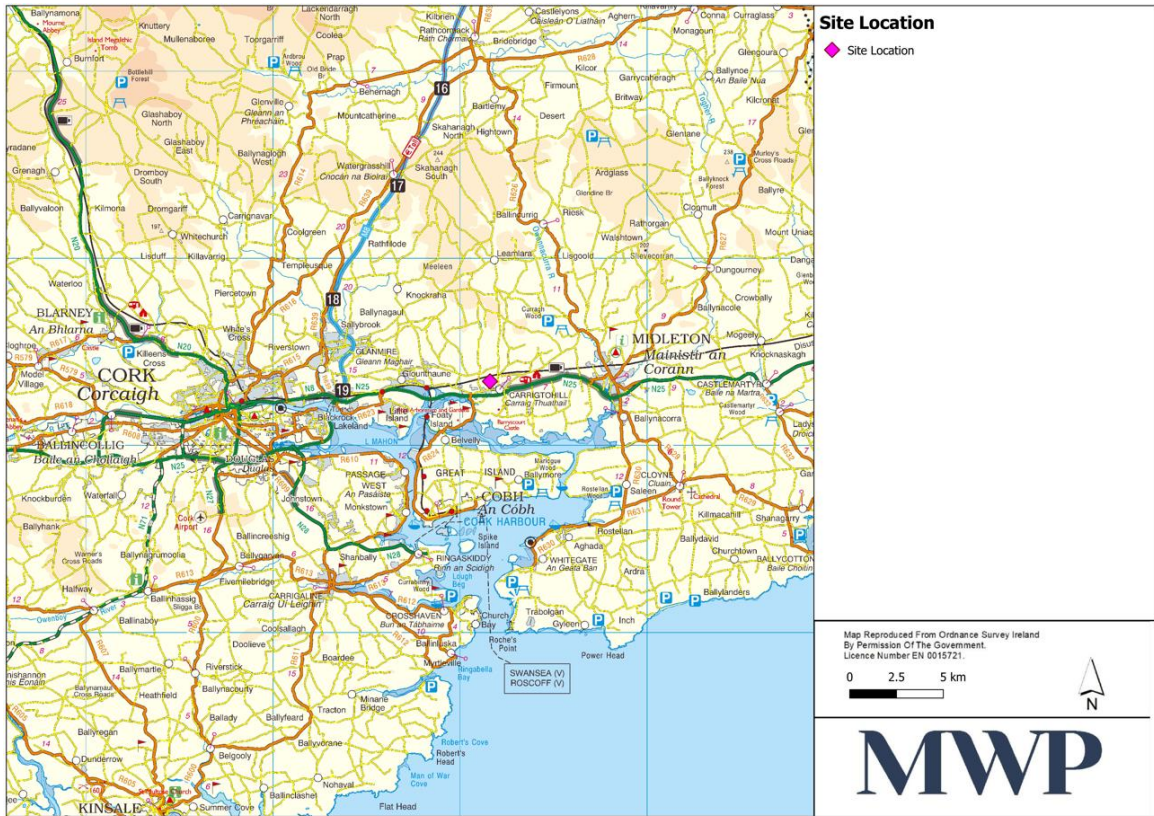


Figure 1 Site Location

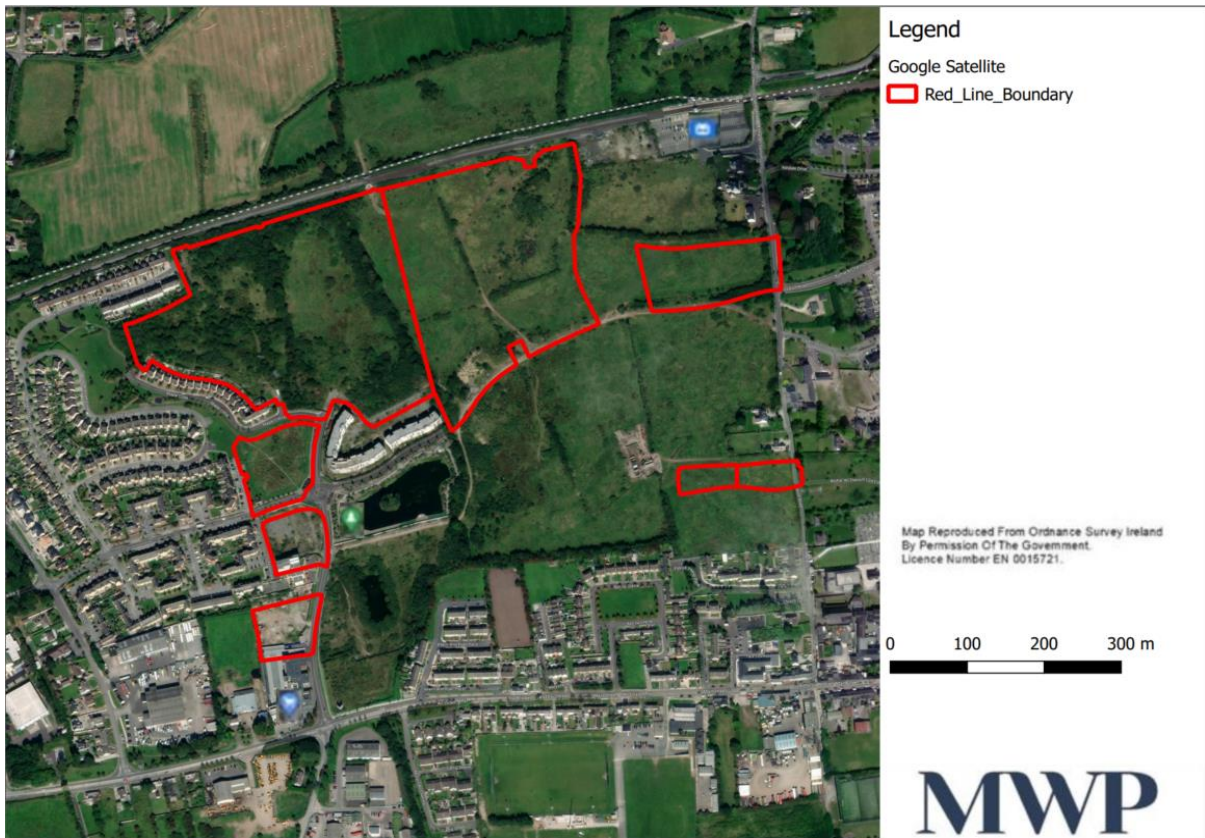


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

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We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).

Ref: AR/Project No. 22461/Lt1012
4th February, 2022

Mr Joseph Johnson
Irish Rail

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

Dear Mr Johnson

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

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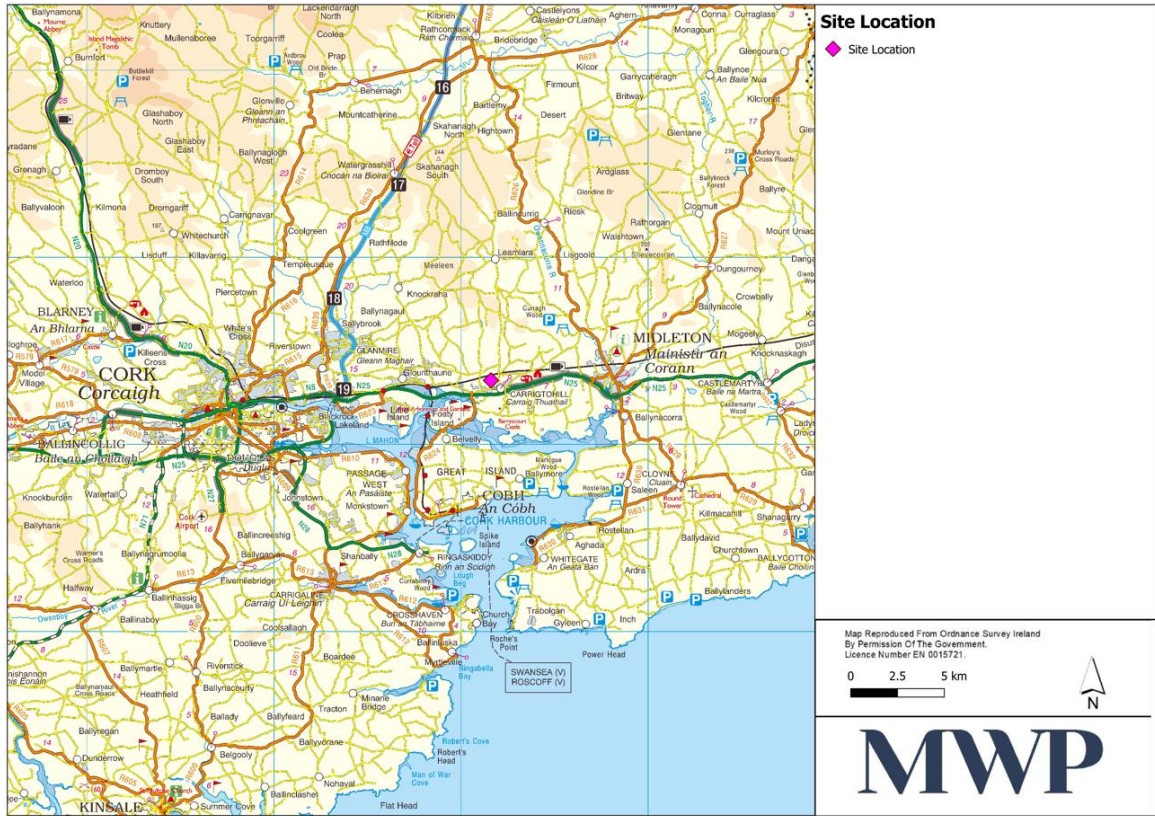


Figure 1 Site Location

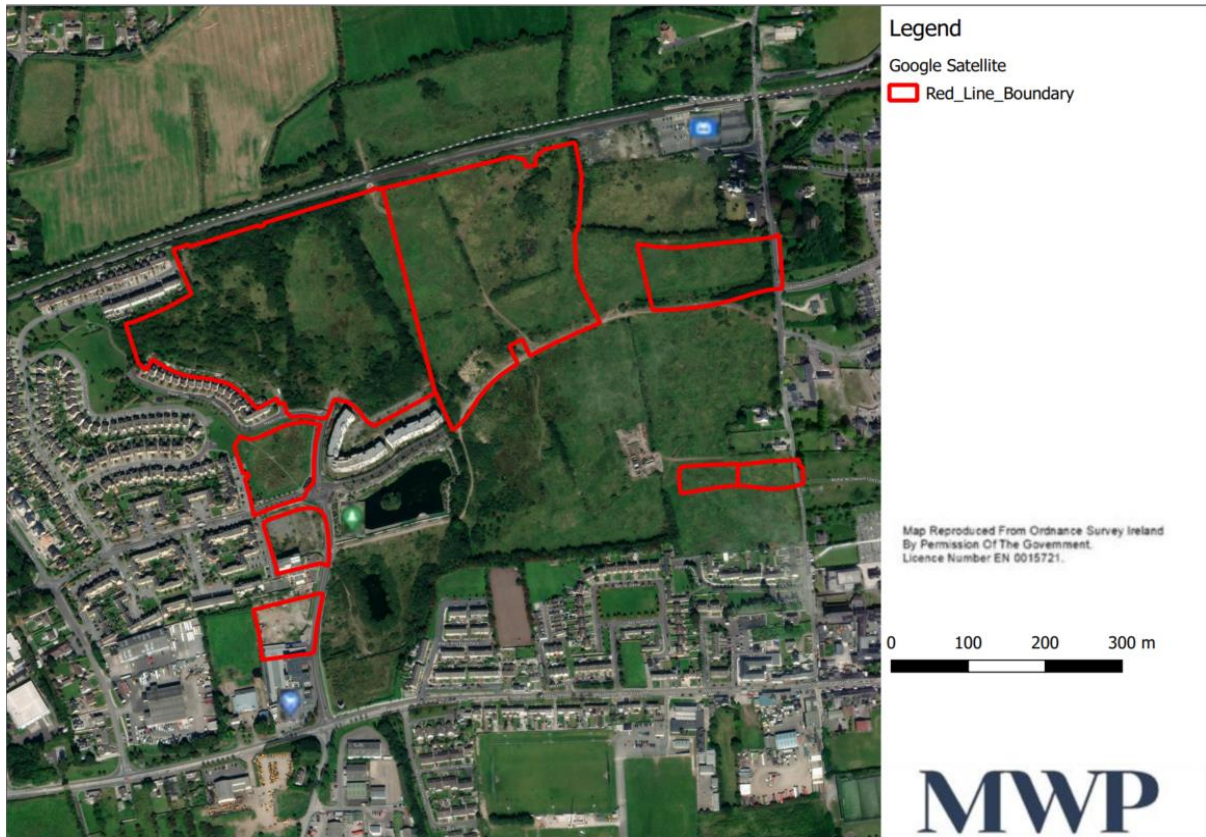


Figure Error! No text of specified style in document. Site Boundary

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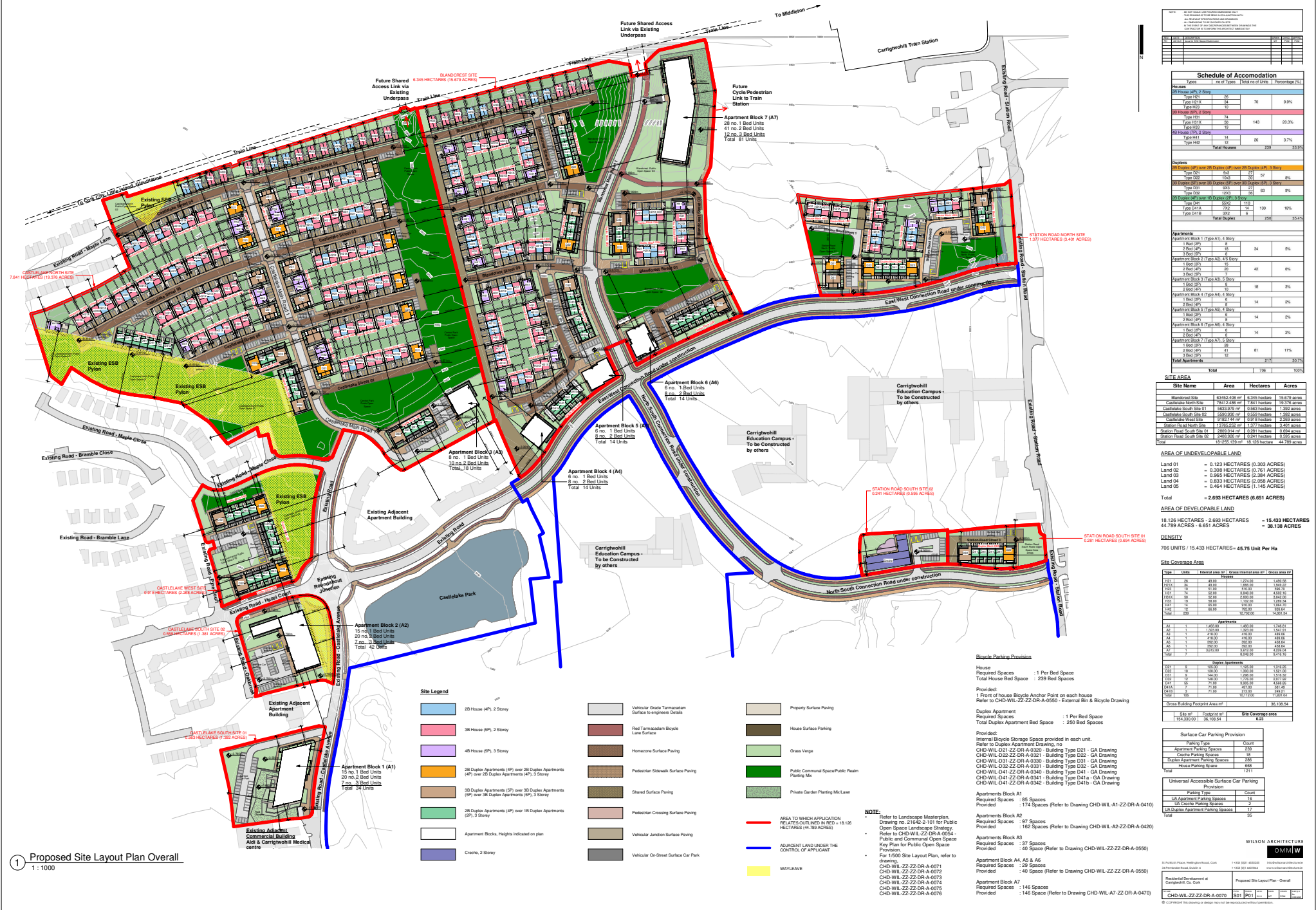
Please address any comments you may have to:

Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan
for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



1 Proposed Site Layout Plan Overall
1 : 1000

Site Legend

	25 House (4P), 2 Storey		Vehicle Grade Tarmac/Asphalt Surface to engineers Details		Property Surface Parking
	35 House (5P), 2 Storey		Red Tarmac/Asphalt Bicycle Lane Surface		House Surface Parking
	45 House (6P), 3 Storey		Homogeneous Surface Paving		Grass Verge
	25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey		Pedestrian Sidewalk Surface Paving		Public Communal Space/Public Realm Planting Mix
	35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey		Street Surface Paving		Private Garden Planting Mix/Lawn
	25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey		Pedestrian Crossing Surface Paving		Vehicle Junction Surface Paving
	Apartment Blocks, Heights indicated on plan		Vehicle On-Street Surface Car Park		Wayleave
	25 House (4P), 2 Storey				

	Vehicle Grade Tarmac/Asphalt Surface to engineers Details		Property Surface Parking
	Red Tarmac/Asphalt Bicycle Lane Surface		House Surface Parking
	Homogeneous Surface Paving		Grass Verge
	Pedestrian Sidewalk Surface Paving		Public Communal Space/Public Realm Planting Mix
	Street Surface Paving		Private Garden Planting Mix/Lawn
	Pedestrian Crossing Surface Paving		Vehicle Junction Surface Paving
	Vehicle On-Street Surface Car Park		Wayleave

Site Legend

	AREA TO WHICH APPLICATION RELATES OUTLINED IN RED - 18.128 HECTARES (44.789 ACRES)
	ADJACENT LAND UNDER THE CONTROL OF APPLICANT
	WAYLEAVE

NOTE:
 Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy.
 Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision.
 For 1500 Site Layout Plan, refer to drawing:
 CHD-WL-ZZ-DR-A-0071
 CHD-WL-ZZ-DR-A-0072
 CHD-WL-ZZ-DR-A-0073
 CHD-WL-ZZ-DR-A-0074
 CHD-WL-ZZ-DR-A-0075
 CHD-WL-ZZ-DR-A-0076

Bicycle Parking Provision

House
 Required Spaces : 1 Per Bed Space
 Total House Bed Space : 238 Bed Spaces

Duplex Apartment
 Required Spaces : 1 Per Bed Space
 Total Duplex Apartment Bed Space : 250 Bed Spaces

Provided:
 1 Floor of house Bicycle Anchor Point on each house
 Refer to CHD-WL-ZZ-DR-A-0050 - External Bin & Bicycle Drawing

Internal Bicycle Storage Space provided in each unit.
 Refer to Duplex Apartment Drawing, no. CHD-WL-D21-ZZ-DR-A-0301 - Building Type D21 - GA Drawing
 CHD-WL-D22-ZZ-DR-A-0301 - Building Type D22 - GA Drawing
 CHD-WL-D31-ZZ-DR-A-0301 - Building Type D31 - GA Drawing
 CHD-WL-D32-ZZ-DR-A-0301 - Building Type D32 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0340 - Building Type D41 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0341 - Building Type D41 - GA Drawing
 CHD-WL-D41-ZZ-DR-A-0342 - Building Type D41 - GA Drawing

Apartment Block A1
 Required Spaces : 85 Spaces
 Provided : 174 Spaces (Refer to Drawing CHD-WL-A1-ZZ-DR-A-0410)

Apartment Block A2
 Required Spaces : 37 Spaces
 Provided : 162 Spaces (Refer to Drawing CHD-WL-A2-ZZ-DR-A-0420)

Apartment Block A3
 Required Spaces : 37 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-DR-A-0550)

Apartment Block A4, A5 & A6
 Required Spaces : 29 Spaces
 Provided : 40 Spaces (Refer to Drawing CHD-WL-ZZ-DR-A-0550)

Apartment Block A7
 Required Spaces : 146 Spaces
 Provided : 146 Spaces (Refer to Drawing CHD-WL-A7-ZZ-DR-A-0470)

Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
25 House (4P), 2 Storey	25	25	0.8%
35 House (5P), 2 Storey	50	70	0.9%
45 House (6P), 3 Storey	14	14	0.2%
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	50	143	20.2%
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	14	14	0.2%
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	14	20	3.7%
Total Houses		206	30.2%

Apartment Blocks

Apartment Block	no. of Units	Percentage (%)
Apartment Block 1 (Type A1), 4 Storey	174	25.2%
Apartment Block 2 (Type A2), 3 Storey	162	23.8%
Apartment Block 3 (Type A3), 3 Storey	40	5.9%
Apartment Block 4 (Type A4), 3 Storey	18	2.6%
Apartment Block 5 (Type A5), 3 Storey	14	2.0%
Apartment Block 6 (Type A6), 3 Storey	14	2.0%
Apartment Block 7 (Type A7), 3 Storey	146	21.4%
Total Apartments	708	100.0%

AREA OF UNDEVELOPABLE LAND

Site Name	Area	Hectares	Acres
Blindcrest Site	6342.408 m ²	6.342 Hectares	15.679 acres
Castlake North Site	7472.256 m ²	7.472 Hectares	18.326 acres
Castlake South Site (1)	5833.979 m ²	5.834 Hectares	14.362 acres
Castlake South Site (2)	5592.256 m ²	5.592 Hectares	13.824 acres
Castlake West Site	2157.144 m ²	2.157 Hectares	5.352 acres
Station Road North Site (1)	2920.614 m ²	2.921 Hectares	7.242 acres
Station Road South Site (1)	2408.326 m ²	2.408 Hectares	5.956 acres
Station Road South Site (2)	1127.159 m ²	1.127 Hectares	2.772 acres
Total		2.693 Hectares (6.691 Acres)	

AREA OF DEVELOPABLE LAND

Land	Area	Hectares	Acres
Land 01	0.123 Hectares	0.303 Acres	
Land 02	0.308 Hectares	0.761 Acres	
Land 03	0.083 Hectares	0.206 Acres	
Land 04	0.833 Hectares	2.058 Acres	
Land 05	0.464 Hectares	1.145 Acres	
Total		2.693 Hectares (6.691 Acres)	

DENSITY
 706 UNITS / 15.433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Use	Internal area m ²	Gross internal area m ²	Gross area m ²
25 House (4P), 2 Storey	492	1,711.02	1,431.24
35 House (5P), 2 Storey	984	3,422.04	2,862.48
45 House (6P), 3 Storey	1968	6,844.08	5,724.96
25 Duplex Apartments (4P) over 25 Duplex Apartments (4P), 3 Storey	3936	13,688.16	11,449.92
35 Duplex Apartments (5P) over 35 Duplex Apartments (5P), 3 Storey	1968	6,844.08	5,724.96
25 Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	1968	6,844.08	5,724.96
Total	11,904	41,359.44	34,818.52

Universal Accessible Surface Car Parking Provision

Category	Count
Apartment Parking Spaces	239
House Parking Spaces	206
House Parking Spaces	658
Total	1103

WILSON ARCHITECTURE

1500 Site Layout Plan - Overall

CHD-WL-ZZ-DR-A-0070

Ref: AR/Project No. 22461/Lt1007

26th January, 2021

The Manager,
National Parks & Wildlife Service,
Development Applications Unit,
Department of Housing, Local
Government & Heritage,
Newtown Road,
Wexford, Y35 AP90

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern,

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremon BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

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Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland

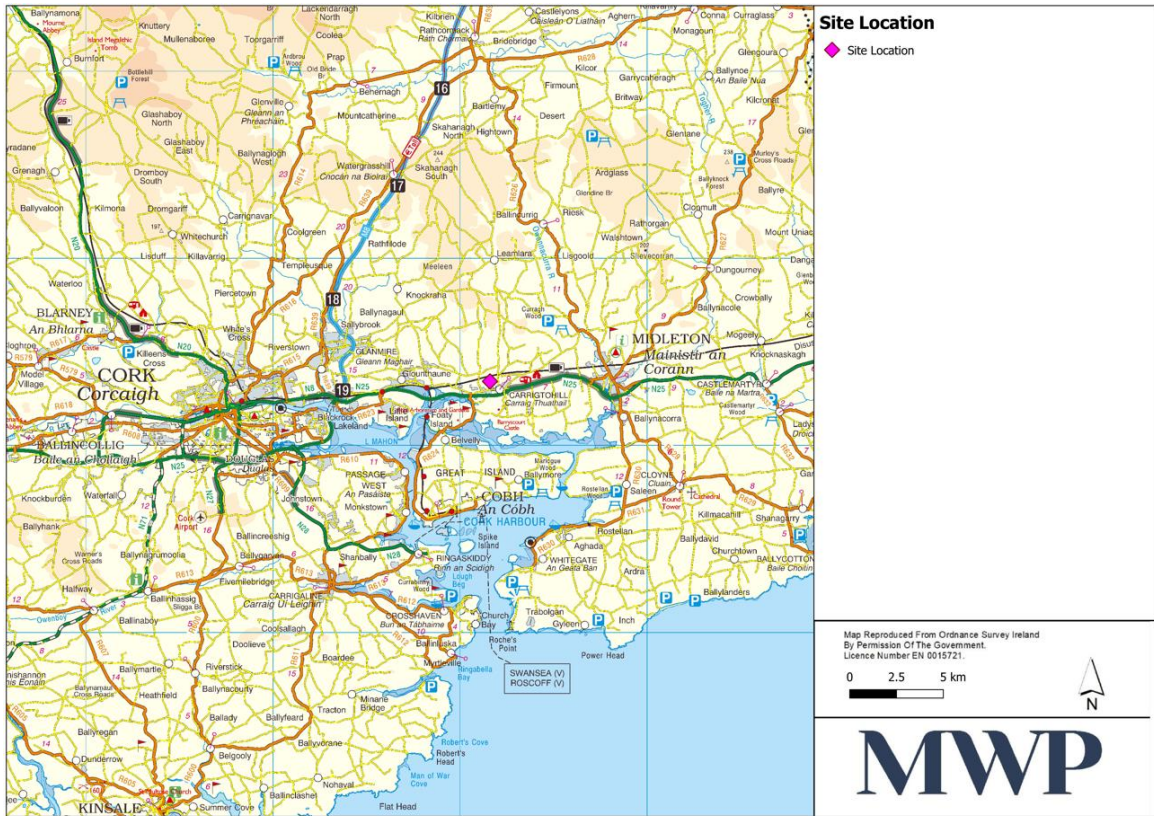


Figure 1 Site Location

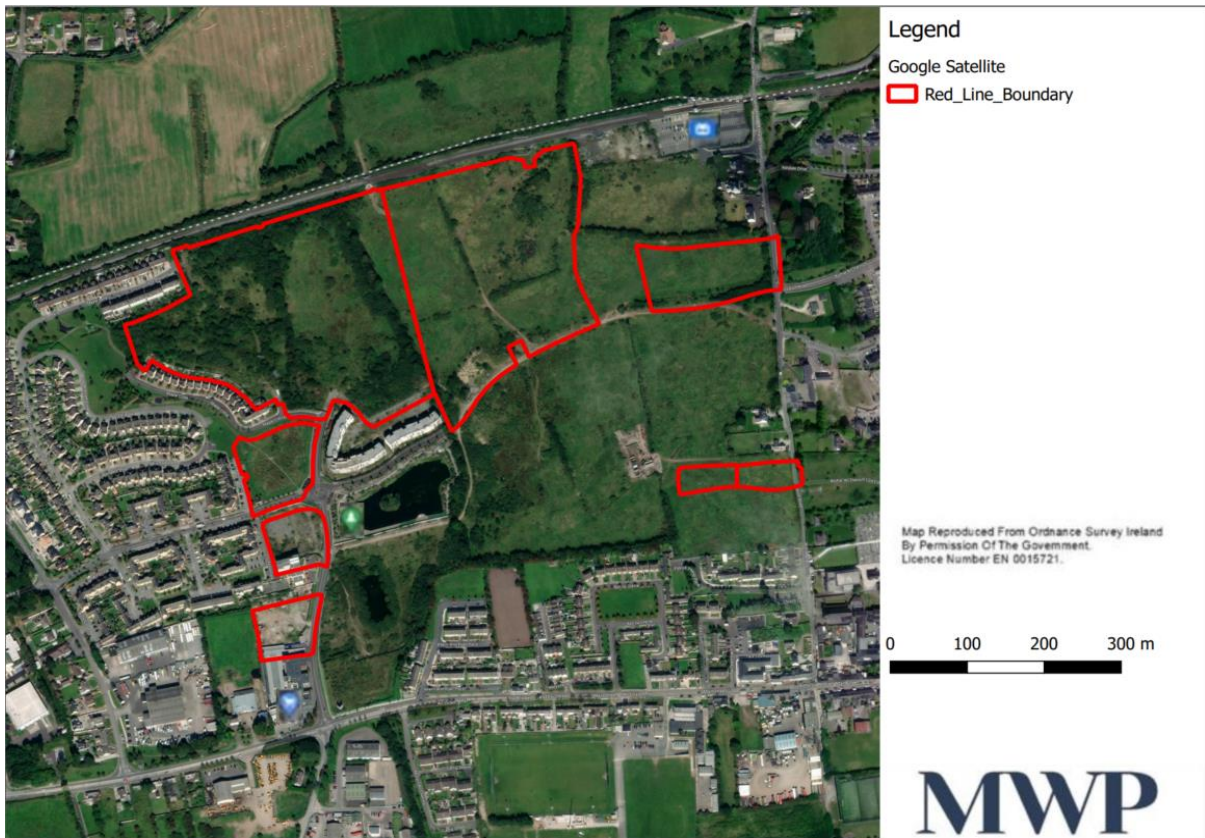


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

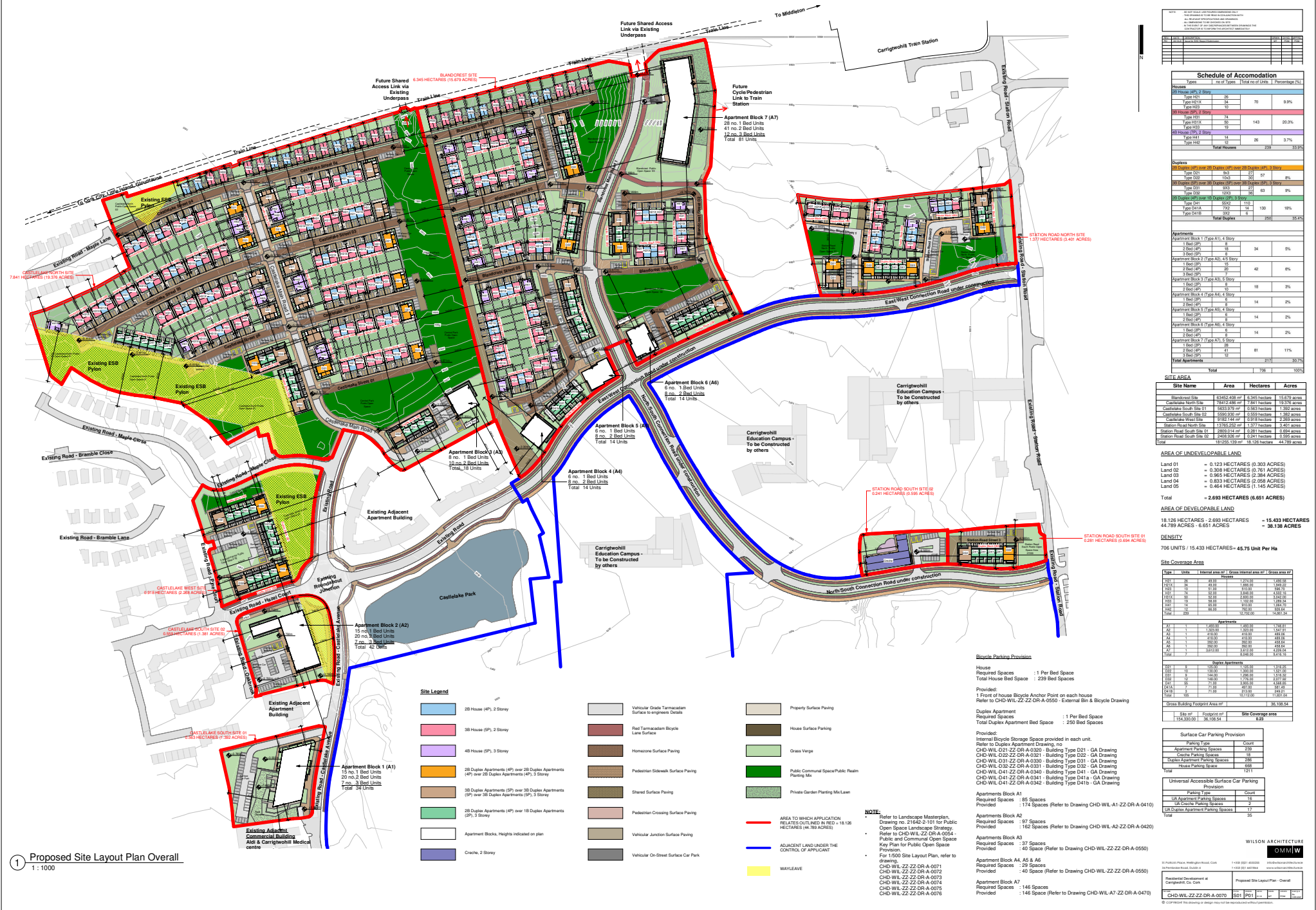
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: 1. All areas are shown in hectares (ha) and acres (ac). 2. The number of units is based on the maximum number of units that can be accommodated on the site. 3. The number of units is based on the maximum number of units that can be accommodated on the site.

Block	Type	Units	Area (ha)	Area (ac)
A1	1 Bed Units	13	0.18	0.45
A2	1 Bed Units	16	0.22	0.54
A3	1 Bed Units	8	0.11	0.27
A4	1 Bed Units	9	0.12	0.30
A5	1 Bed Units	6	0.08	0.20
A6	1 Bed Units	6	0.08	0.20
A7	1 Bed Units	28	0.38	0.94
Total		76	1.03	2.56

Schedule of Accommodation

Block	Type	Units	Area (ha)	Area (ac)
A1	1 Bed Units	13	0.18	0.45
A2	1 Bed Units	16	0.22	0.54
A3	1 Bed Units	8	0.11	0.27
A4	1 Bed Units	9	0.12	0.30
A5	1 Bed Units	6	0.08	0.20
A6	1 Bed Units	6	0.08	0.20
A7	1 Bed Units	28	0.38	0.94
Total		76	1.03	2.56

Site Area

Site Name	Area	Hectares	Acres
Blindcrest Site	6,942.408	6.942	15.679
Castlake North Site	7,612.256	7.612	18.739
Castlake South Site 01	5,853.979	5.854	13.922
Castlake South Site 02	2,592.222	2.592	6.420
Castlake West Site	2,157.144	2.157	5.292
Station Road North Site 01	2,926.614	2.927	7.244
Station Road South Site 01	2,926.614	2.927	7.244
Station Road South Site 02	2,408.326	2.408	5.956
Total	31,225.559	31.226	77.228

AREA OF UNDEVELOPABLE LAND

Land	Area	Hectares	Acres
Land 01	0.123	0.303	0.750
Land 02	0.308	0.761	1.883
Land 03	0.063	0.156	0.388
Land 04	0.833	2.058	5.084
Land 05	0.464	1.145	2.841
Total	2.693	6.651	16.446

AREA OF DEVELOPABLE LAND

Area	Hectares	Acres
18,126 Hectares	44,788 Acres	15,433 Hectares
15,433 Hectares	38,118 Acres	38,118 Hectares

DENSITY
706 UNITS / 15,433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Use	Internal area m ²	Gross internal area m ²	Gross area m ²
Residential	4,432,000	4,432,000	4,432,000
Commercial	1,111,000	1,111,000	1,111,000
Public Open Space	1,111,000	1,111,000	1,111,000
Other	1,111,000	1,111,000	1,111,000
Total	8,765,000	8,765,000	8,765,000

Apartment Spaces

Block	Required Spaces	Provided
A1	13	13
A2	16	16
A3	8	8
A4	9	9
A5	6	6
A6	6	6
A7	28	28
Total	76	76

Surface Car Parking Provision

Particulars	Count
Apartment Parking Spaces	76
Visitor Parking Spaces	20
Other Parking Spaces	20
Total	116

Universal Accessible Surface Car Parking Provision

Particulars	Count
UA Apartment Parking Spaces	1
UA Visitor Parking Spaces	1
UA Other Parking Spaces	1
Total	3

1 Proposed Site Layout Plan Overall
1 : 1000

NOTE:
Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy. Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision.
For 1500 Site Layout Plan, refer to drawing:
CHD-WL-ZZ-DR-A-0071
CHD-WL-ZZ-DR-A-0072
CHD-WL-ZZ-DR-A-0073
CHD-WL-ZZ-DR-A-0074
CHD-WL-ZZ-DR-A-0075
CHD-WL-ZZ-DR-A-0076



Ref: AR/Project No. 22461/Lt1008
26th January, 2021

The Office of Public Works,
Head Office,
Jonathan Swift Street,
Trim,
Co. Meath, C15 NX36

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern,

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

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Registered in Ireland as Malachy Walsh & Company Limited

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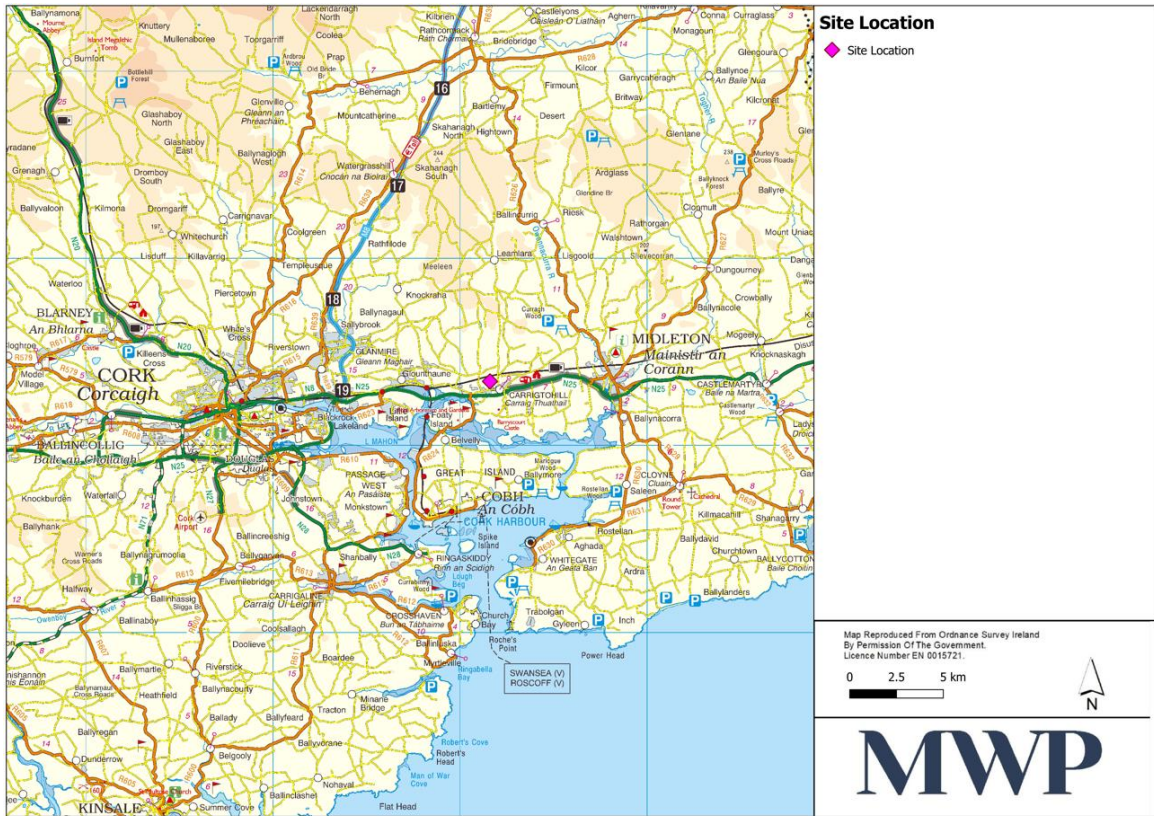


Figure 1 Site Location

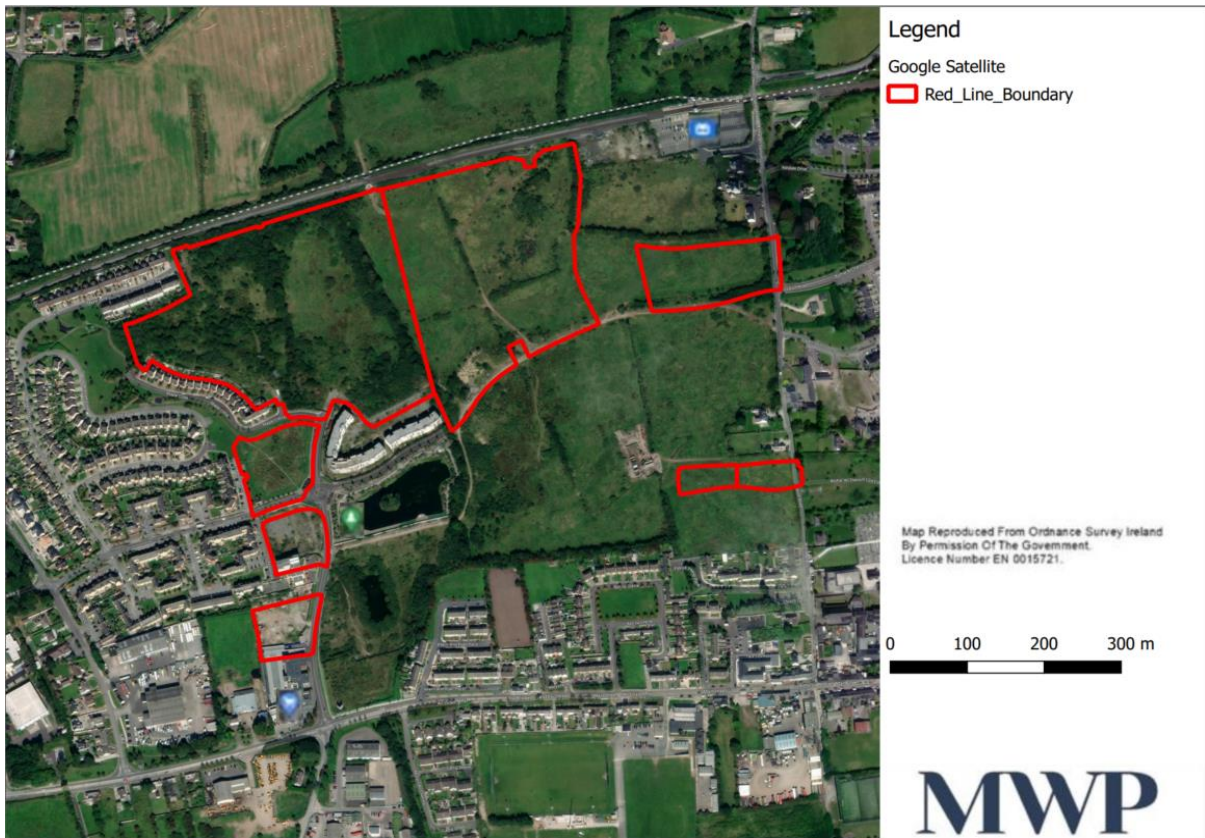


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

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Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

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Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

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Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

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Please address any comments you may have to:

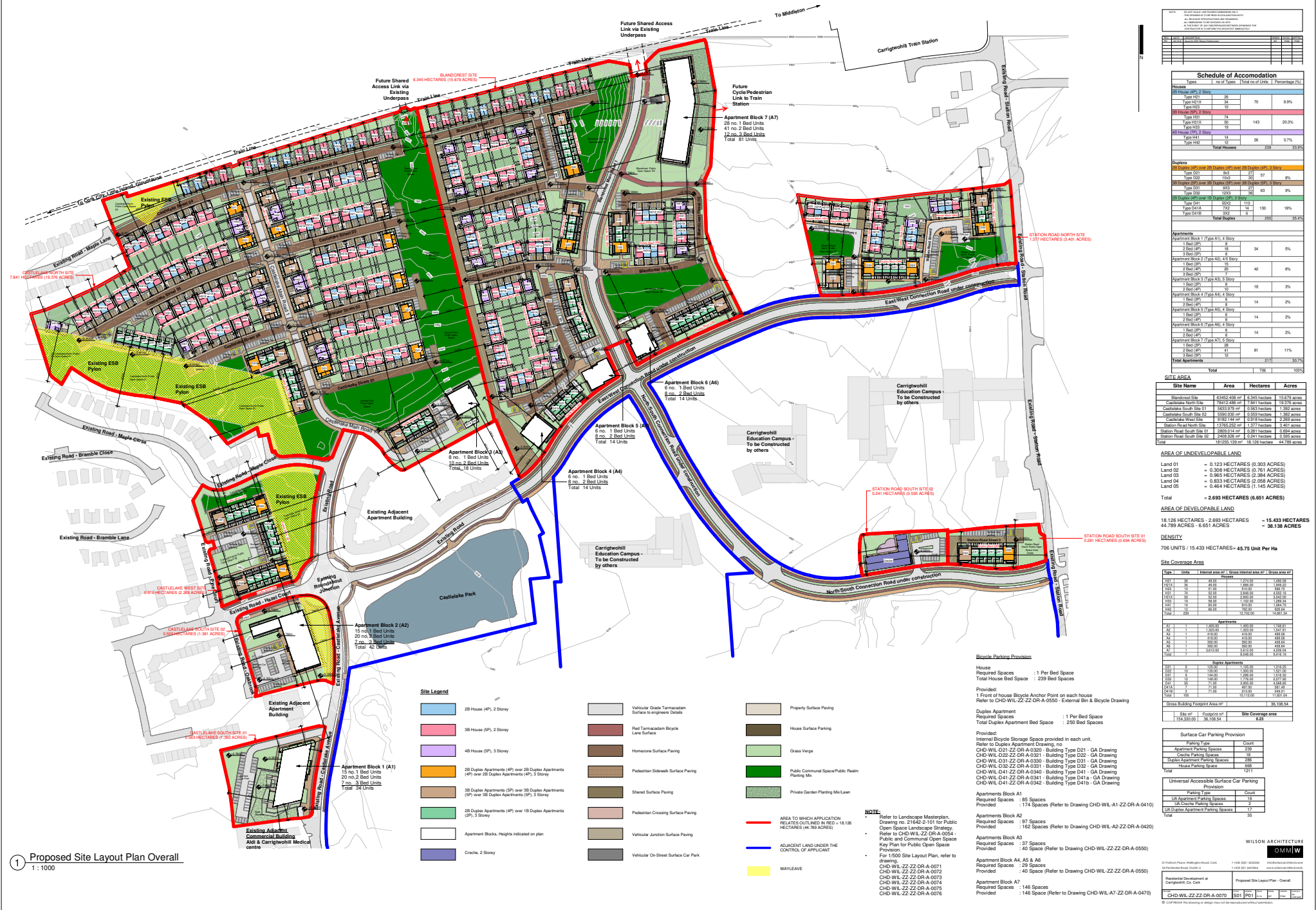
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: 1. All areas are shown in hectares (ha) and acres (ac). 2. The number of units is based on the maximum number of units that can be accommodated on the site. 3. The number of units is based on the maximum number of units that can be accommodated on the site. 4. The number of units is based on the maximum number of units that can be accommodated on the site. 5. The number of units is based on the maximum number of units that can be accommodated on the site.

Types	no. of Types	Total no. Units	Percentage (%)
2B House (4P), 2 Storey	26	70	8.9%
2B House (4P), 2 Storey	34	70	8.9%
2B House (4P), 2 Storey	14	143	20.2%
2B House (4P), 2 Storey	50	143	20.2%
2B House (4P), 2 Storey	14	30	3.7%
2B House (4P), 2 Storey	30	30	3.7%
TOTAL HOUSES		258	33.2%

Schedule of Accommodation

Types	no. of Types	Total no. Units	Percentage (%)
2B House (4P), 2 Storey	26	70	8.9%
2B House (4P), 2 Storey	34	70	8.9%
2B House (4P), 2 Storey	14	143	20.2%
2B House (4P), 2 Storey	50	143	20.2%
2B House (4P), 2 Storey	14	30	3.7%
2B House (4P), 2 Storey	30	30	3.7%
TOTAL HOUSES		258	33.2%

Duplexes

Types	no. of Types	Total no. Units	Percentage (%)
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Storey	83	27	0.7%
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Storey	22	63	9%
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Storey	120	37	0.9%
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Storey	11	100	18%
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Storey	8	250	35.4%
TOTAL DUPLEXES		258	33.2%

Apartments

Types	no. of Types	Total no. Units	Percentage (%)
Apartment Block 1 (Type A1), 4 Storey	1	34	5%
Apartment Block 2 (Type A2), 3 Storey	1	42	6%
Apartment Block 3 (Type A3), 5 Storey	1	18	3%
Apartment Block 4 (Type A4), 4 Storey	1	14	2%
Apartment Block 5 (Type A5), 4 Storey	1	14	2%
Apartment Block 6 (Type A6), 4 Storey	1	14	2%
Apartment Block 7 (Type A7), 5 Storey	1	81	11%
Apartment Block 8 (Type A8), 5 Storey	1	12	1%
TOTAL APARTMENTS		211	27.3%
TOTAL UNITS		706	100%

SITE AREA

Site Name	Area	Hectares	Acres
Blanchard Site	6,942.408	6.942	15.679
Castlake North Site	7,612.258	7.612	17.326
Castlake South Site (1)	5,833.979	5.834	13.262
Castlake South Site (2)	2,592.222	2.592	5.862
Castlake West Site	2,157.144	2.157	4.852
Station Road North Site	2,170.222	2.170	4.862
Station Road South Site (1)	2,026.214	2.026	4.562
Station Road South Site (2)	2,408.222	2.408	5.452
TOTAL	31,139.729	31.140	70.626

AREA OF UNDEVELOPABLE LAND

Land 01 = 0.123 HECTARES (0.303 ACRES)
 Land 02 = 0.308 HECTARES (0.761 ACRES)
 Land 03 = 0.063 HECTARES (0.156 ACRES)
 Land 04 = 0.833 HECTARES (2.058 ACRES)
 Land 05 = 0.464 HECTARES (1.145 ACRES)

Total = 2.693 HECTARES (6.651 ACRES)

AREA OF DEVELOPABLE LAND

18,126 HECTARES = 2,693 HECTARES = 15,433 HECTARES
 44,788 ACRES = 6,651 ACRES = 38,138 ACRES

DENSITY

706 UNITS / 15,433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Type	Use	Internal area m ²	Gross internal area m ²	Gross area m ²
1	26	49,110	1,711,010	1,760,120
2	34	49,110	1,711,010	1,760,120
3	14	37,110	1,343,010	1,380,120
4	50	37,110	1,343,010	1,380,120
5	14	37,110	1,343,010	1,380,120
6	30	37,110	1,343,010	1,380,120
7	81	37,110	1,343,010	1,380,120
8	12	37,110	1,343,010	1,380,120
TOTAL	259	383,810	12,722,010	14,461,240

Apartment

Block	Area	Internal area m ²	Gross area m ²
A1	1	1,200	1,430
A2	1	1,200	1,430
A3	1	1,200	1,430
A4	1	1,200	1,430
A5	1	1,200	1,430
A6	1	1,200	1,430
A7	1	1,200	1,430
A8	1	1,200	1,430
TOTAL	8	9,600	11,540

Internal Bicycle Storage Space provided in each unit.

Block	Required Spaces	Provided
Apartment Block A1	85 Spaces	174 Spaces (Refer to Drawing CHD-WIL-A1-ZZ-DR-A-010)
Apartment Block A2	85 Spaces	174 Spaces (Refer to Drawing CHD-WIL-A2-ZZ-DR-A-020)
Apartment Block A3	37 Spaces	74 Spaces (Refer to Drawing CHD-WIL-ZZ-DR-A-050)
Apartment Block A4, A5 & A6	29 Spaces	40 Spaces (Refer to Drawing CHD-WIL-ZZ-DR-A-050)
Apartment Block A7	146 Spaces	146 Spaces (Refer to Drawing CHD-WIL-A7-ZZ-DR-A-070)

Universal Accessible Surface Car Parking Provision

Block	Required Spaces	Provided
UA Apartment Parking Spaces	16	16
UA Cycle Parking Spaces	17	17
UA Cycle Parking Spaces	17	17
TOTAL	50	50

1 Proposed Site Layout Plan Overall
1 : 1000

NOTE:

- Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy.
- Refer to CHD-WIL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision.
- For 1500 Site Layout Plan, refer to drawing:
 - CHD-WIL-ZZ-DR-A-0071
 - CHD-WIL-ZZ-DR-A-0072
 - CHD-WIL-ZZ-DR-A-0073
 - CHD-WIL-ZZ-DR-A-0074
 - CHD-WIL-ZZ-DR-A-0075
 - CHD-WIL-ZZ-DR-A-0076

Site Legend

2B House (4P), 2 Storey	Vehicle Grade Tarmac/Asphalt Surface to engineers Details	Property Surface Parking
3B House (5P), 2 Storey	Red Tarmac/Asphalt Bicycle Lane Surface	House Surface Parking
4B House (6P), 3 Storey	Homogeneous Surface Parking	Grass Verge
2B Duplex Apartments (4P) over 2B Duplex Apartments (4P), 3 Storey	Pedestrian Sidewalk Surface Parking	Public Communal Space/Public Realm Planting Mix
3B Duplex Apartments (5P) over 2B Duplex Apartments (5P), 3 Storey	Shared Surface Parking	Private Garden Planting Mix/Lawn
2B Duplex Apartments (4P) over 18 Duplex Apartments (2P), 3 Storey	Pedestrian Crossing Surface Parking	Vehicle Junction Surface Parking
Apartment Blocks, Heights indicated on plan	Vehicle On-Street Surface Car Park	WAYLEAVE

Bicycle Parking Provision

House Required Spaces : 1 Per Bed Space
 Total House Bed Space : 258 Bed Spaces

Provided:
 1 Floor of house Bicycle Anchor Point on each house
 Refer to CHD-WIL-ZZ-DR-A-0050 - External Bin & Bicycle Drawing

Duplex Apartment Required Spaces : 1 Per Bed Space
 Total Duplex Apartment Bed Space : 250 Bed Spaces



Ref: AR/Project No. 22461/Lt1008
26th January, 2021

Traffic Infrastructure Ireland,
Parkgate Business Centre,
Parkgate Street,
Dublin 8,
D08 DK10

Re: **Consultation on EIAR for Strategic Housing Development (SHD)
at Castlelake, Carrigtwohill, Co. Cork**

To whom it may concern,

MWP has been commissioned by BAM Property, to prepare an Environmental Impact Assessment Report (EIAR) for a Strategic Housing Development at Castlelake, Carrigtwohill, County Cork for submission with a planning application to An Bord Pleanála.

Permission is being sought for the construction of 707 No. residential units with a childcare facility, landscaped open spaces and associated works and services. The proposed development will assist in addressing the current housing need in the country and more specifically, in County Cork

Location

The proposed development site is located circa 500m west of Carrigtwohill village, 16km east of Cork city and 9km east of the Jack Lynch tunnel, on the northern side of the N25 Cork to Waterford Road, as indicated on **Figure 1**. The site is bounded by agricultural lands to the north, the existing Castlelake housing estate to the west and the Cork Road L3680 to the south.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and also providing an amenity for existing and future residents and visitors. An east-west link road is currently under construction along the southern boundary of the main land block associated with this development. A north-south link road is proposed to join with an existing rail underpass. Carrigtwohill train station is located to the north east of the site.

The development site boundary is shown in **Figure 2** and the proposed site layout is indicated on the **Proposed Site Plan Layout**.

ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Directors Peter Fay BSc CEng MIEI MStructE | Peter O'Donnell BE CEng MICE FIEI | Jack O'Leary ME CEng FIEI |
Paul Collins BE CEng MIEI MStructE | Declan Cremen BE CEng MIEI MStructE | John Lee BE HDipSHWW CEng FIEI

Associate Directors Mohammed Rafiq BSc CEng MStructE (London) | Brian Sayers BE MSc CEng MIEI |
David Aherne BE CEng MIEI MCIBSE | Tim Hurley BEng MEngSc CEng MIEI | Micheál Fenton BE CEng MIEI |
Ian Brosnan BE CEng MIEI MICE MStructE | Ken Fitzgerald BSc Surv Dip CEcon PG Dip Planning EIA CZM

Registered in Ireland as Malachy Walsh & Company Limited

Company Registration Number 133445 VAT Number 4726135H

Registered Office Park House, Bessboro Road, Blackrock, Cork, Ireland



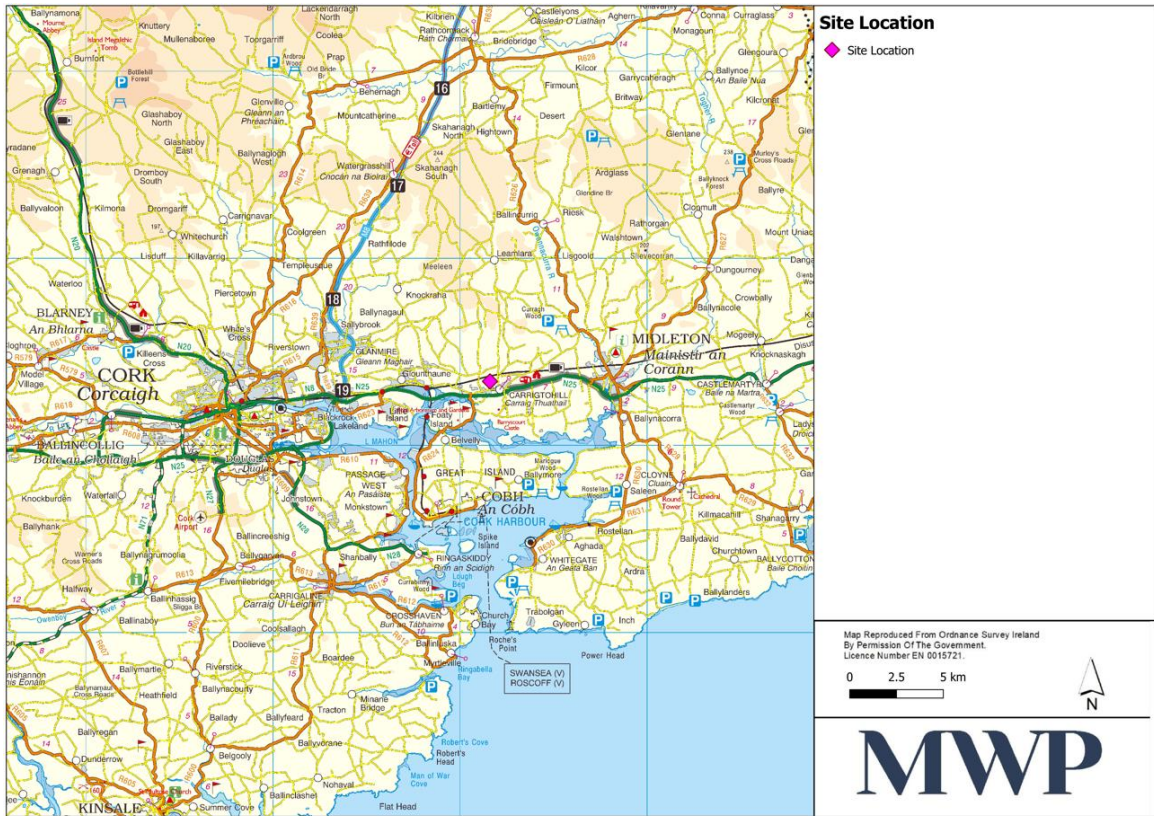


Figure 1 Site Location

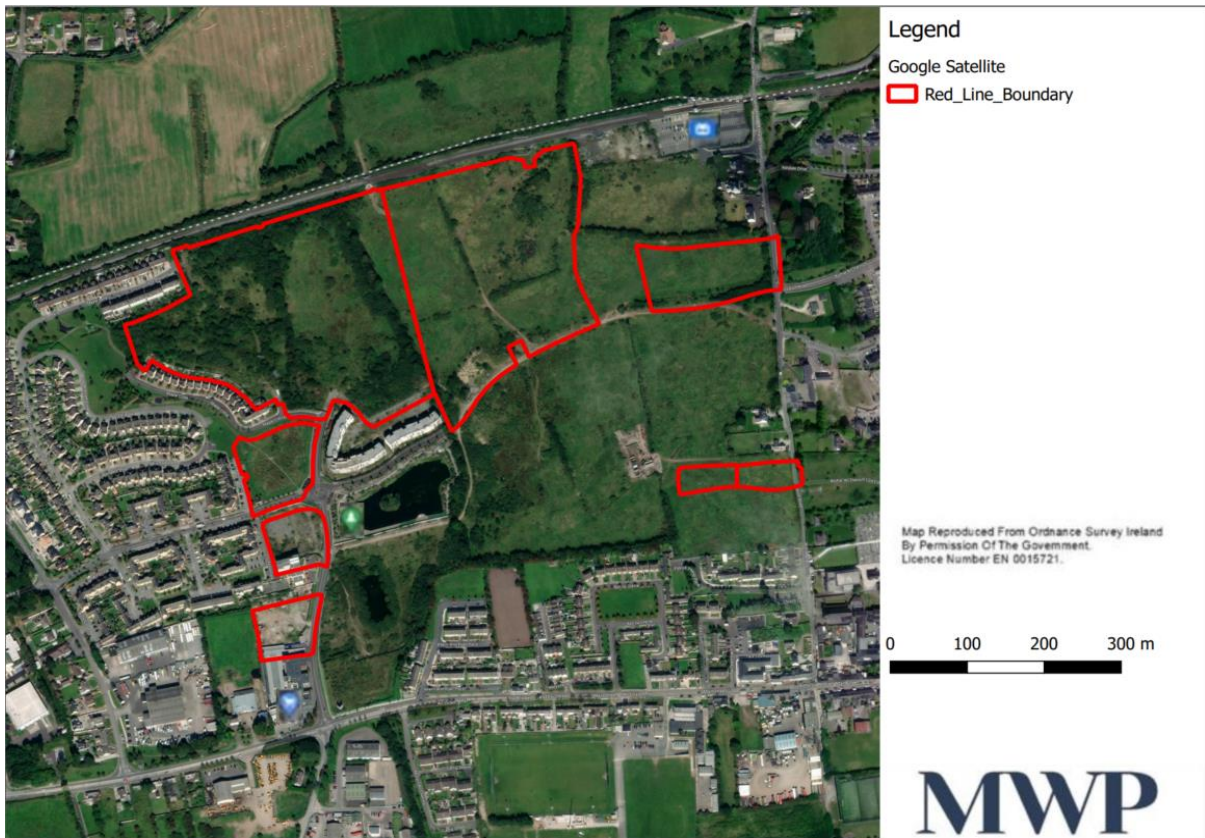


Figure 2 Site Boundary

The topography on the site is relatively flat with an elevation of ca.9m AOD to the north near the railway to circa 4m AOD further south.

Surface Water

Drainage reflects the site topography with a number of water courses and ditches flowing in a generally southern direction across the site. A stream known as the Woodstock stream enters the eastern-most land block nearest Station Road and flows in a westerly direction before turning south out of the site from where it flows into Slatty Water approximately 900m south west of the closest point of the proposed development. There is also a lined man-made lake (attenuation pond) to the south of the main land block associated with the existing Castl lake housing development, which is currently used as an amenity by local residents. The pond has an overflow into the Woodstock Stream. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream. The Woodstock stream is hydrologically connected to both the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Great Island Channel SAC (001058) is located approximately 772m south of the closest point of the proposed development boundary while Cork Harbour SAC (004030) is located approximately 708m to the south.

Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock stream in the southwest of the site. There is also a man-made lake (attenuation lagoon/pond) to the south of the main land block which is currently used as an amenity by local residents. This pond has an overflow into the Woodstock stream.

Proposed Surface Water Strategy

The surface water drainage network for the proposed development has been designed in accordance with the principles as set out in Section 3 of the publication "Recommendations for Site Development Works for Housing Areas" published by the Department of the Environment and Local Government, and in accordance with IS EN 752 Drain and sewer systems outside buildings.

The stormwater runoff collected from the existing Castl lake residential development currently discharges to the drainage network as laid for the existing development. The existing Castl lake Housing estate is divided into two catchment areas, namely the lands to the north and eastern extents of the site, and the lands to the western section of the site. The stormwater from the area of the development to the west of the site is collected via an underground gravity sewer network and discharges towards an existing underground attenuation structure, which is located adjacent to the main access road into Castl lake and discharges attenuated flows to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. The stormwater drainage for the northern and eastern section of the development is collected via separate underground gravity sewer networks and discharges to the feature amenity lined attenuation lagoon, which is located centrally to the lands. This amenity lagoon provides both detention and retention storage and discharges attenuation surface water runoff to the Woodstock Stream at a rate equivalent pre-development greenfield runoff. Both of these attenuation structures were designed to provide sufficient storage volume to cater for incoming flows from the entire catchment of the Castl lake lands.

As part of the proposed application development, the stormwater from the northern extents of the site, which is at a suitable elevation, is to be collected via a new underground surface water drainage network and discharge to the feature amenity attenuation lagoon. All incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants. The remainder of the site, which typically consists of the southern section and which is too low lying to connect to the amenity pond, is to connect to the existing surface water network that discharges to the underground attenuation tank. Again, all incoming flows will first pass through a Class 1 bypass petrol interceptor to remove hydrocarbon contaminants.

Both of these attenuation structures have been designed to allow for the collection of runoff from the entire site and provide sufficient storage capacity to restrict the runoff discharged to the Woodstock Stream to an equivalent pre-development greenfield runoff rate.

A detailed assessment on the impacts on water including surface water, groundwater and flooding will be undertaken as part of the EIAR taking into consideration relevant water quality standards and guidelines. Hydrological connectivity with adjacent water bodies will be considered as will the cumulative effects of the proposed development in combination with other permitted and proposed developments in the vicinity.

Flood Risk Assessment

A Flood Risk Assessment (FRA) for the proposed residential development in Carrigtwohill, Co Cork has been conducted by JBA Consulting. In summary, the majority of the proposed development on-site is located within Flood Zone C. In the post-development scenario all the residential dwellings are located outside of the 0.1% AEP flood extent and will not be impacted by climate change or the identified residual risk events.

Wastewater

It is proposed that a new underground gravity wastewater network will be provided to serve the proposed development. This wastewater network has been designed to fall by gravity towards the existing wastewater network as laid for the existing Castlake development, which discharges to the public wastewater sewer network at the existing access junction into the development. A pre-connection enquiry form was submitted to Irish Water in respect to the foul connection from the proposed development. Subsequently, Irish Water have confirmed that based on the size of the proposed development and on the capacity currently available, that subject to a valid connection agreement being put in place, the proposed connection to the Irish Water network can be facilitated, with the proviso that some local network upgrades are carried out to the existing public network.

Appropriate Assessment

The subject site is hydrologically connected to the Great Channel SAC and Cork Harbour SPA via the Woodstock Stream which flows downstream to both these Natura 2000 sites. An AA Screening has been prepared which has concluded that there is potential for significant effects on two Natura 2000 sites due to the following reasons:

- There is potential for impacts to water quality of these sites;

- There is a potential for invasive species to be spread downstream and alter the habitats for which Cork Harbour SPA and Great Island Channel SAC are designated.

Consequently, a Natura Impact Statement shall be prepared for submission with the planning application.

Traffic and Access

The traffic and transportation effects of the proposed development for both the construction phase and operational phase will be assessed and defined in accordance with the EPA EIAR Guidelines. Any required mitigation will be identified. The assessment will be in accordance with the Transport Infrastructure Ireland (TII) Traffic and Transport Assessment (TTA) Guidelines, Cork County Development Plan, Cobh Municipal District Local Area Plan and Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS).

The existing and future baseline traffic and transportation network and traffic volumes will be established using recent pre Covid-19 traffic data, traffic planning documentation for permitted adjacent local development and associated future trip generation. The proposed development trip generation and distribution for both the construction and operational phases will be established on the basis of the proposed development travel modes and trip volumes, access arrangements, proposed Construction Traffic Management Plan, Mobility Management Plan and parking strategy. The traffic impacts of the proposed development on the existing and future baseline network will be analysed for all user mode types, including vehicles, pedestrians, cyclists and public transport users. Peak traffic period junction capacity analysis will be carried out using the TRL software ARCADY, OSCADY and PICADY, as appropriate, to establish predicted road junction ratios of flow to capacity, vehicle queues and delays, both with and without the proposed development. In accordance with the TII TTA Guidelines, the proposed development construction, opening year and plan years, five and 15 years after opening year, will be assessed. The residual effects of the proposed development, with any required mitigation, will also be assessed.

We are consulting with you on this proposal as it may be of interest to you or your organisation. If there is any key issue which you consider should be addressed in the EIAR we would welcome your input at this stage.

Please address any comments you may have to:

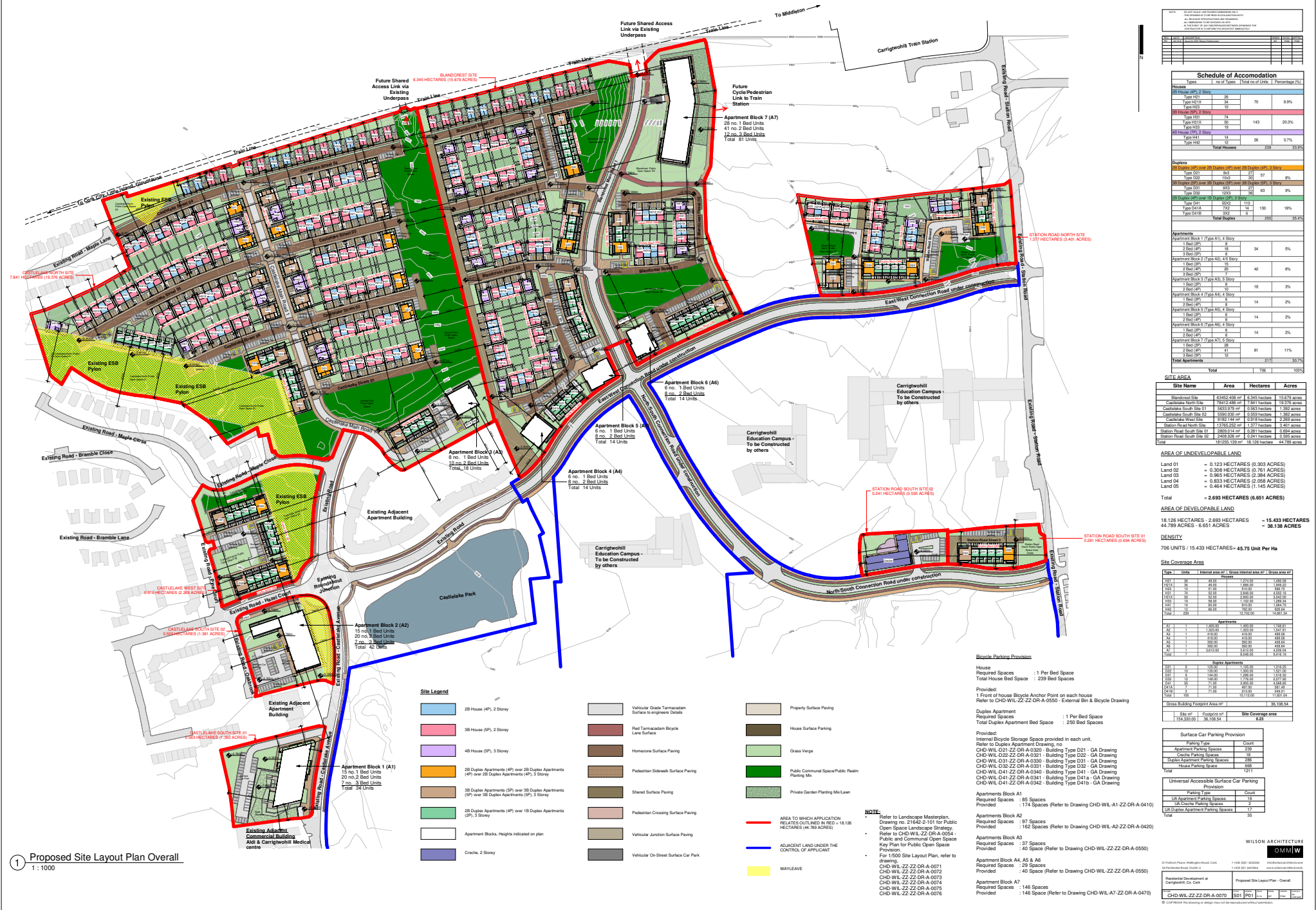
Áine Ryan, at the address above or by email to: aine.ryan@mwp.ie

Yours faithfully,

Áine Ryan

for MWP

Encl. 1. (Figure 3 Proposed Site Layout).



NOTE: 1. All areas are shown in hectares (ha) and acres (ac). 2. The number of units is based on the maximum number of units that can be accommodated on the site. 3. The number of units is based on the maximum number of units that can be accommodated on the site. 4. The number of units is based on the maximum number of units that can be accommodated on the site. 5. The number of units is based on the maximum number of units that can be accommodated on the site.

Block	Type	Units	Area (ha)	Area (ac)
A1	1 Bed Units	13	0.18	0.45
A2	1 Bed Units	16	0.22	0.54
A3	1 Bed Units	8	0.11	0.27
A4	1 Bed Units	9	0.12	0.30
A5	1 Bed Units	6	0.08	0.20
A6	1 Bed Units	6	0.08	0.20
A7	1 Bed Units	28	0.38	0.94
Total		86	1.15	2.86

Schedule of Accommodation

Block	Type	Units	Area (ha)	Area (ac)
A1	1 Bed Units	13	0.18	0.45
A2	1 Bed Units	16	0.22	0.54
A3	1 Bed Units	8	0.11	0.27
A4	1 Bed Units	9	0.12	0.30
A5	1 Bed Units	6	0.08	0.20
A6	1 Bed Units	6	0.08	0.20
A7	1 Bed Units	28	0.38	0.94
Total		86	1.15	2.86

AREA OF UNDEVELOPABLE LAND

Land No.	Area (hectares)	Area (acres)
Land 01	0.123	0.303
Land 02	0.308	0.761
Land 03	0.063	0.156
Land 04	0.833	2.058
Land 05	0.464	1.145
Total	2.693	6.651

AREA OF DEVELOPABLE LAND

Block	Area (hectares)	Area (acres)
Block A1	0.18	0.45
Block A2	0.22	0.54
Block A3	0.11	0.27
Block A4	0.12	0.30
Block A5	0.08	0.20
Block A6	0.08	0.20
Block A7	0.38	0.94
Total	1.15	2.86

APARTMENT BLOCKS

Block	Type	Units	Area (ha)	Area (ac)
A1	1 Bed Units	13	0.18	0.45
A2	1 Bed Units	16	0.22	0.54
A3	1 Bed Units	8	0.11	0.27
A4	1 Bed Units	9	0.12	0.30
A5	1 Bed Units	6	0.08	0.20
A6	1 Bed Units	6	0.08	0.20
A7	1 Bed Units	28	0.38	0.94
Total		86	1.15	2.86

DENSITY

706 UNITS / 15.433 HECTARES = 45.75 Unit Per Ha

Site Coverage Area

Block	Area (ha)	Area (ac)
A1	0.18	0.45
A2	0.22	0.54
A3	0.11	0.27
A4	0.12	0.30
A5	0.08	0.20
A6	0.08	0.20
A7	0.38	0.94
Total	1.15	2.86

Internal Bicycle Storage Space

Block	Required Spaces	Provided Spaces
A1	13	13
A2	16	16
A3	8	8
A4	9	9
A5	6	6
A6	6	6
A7	28	28
Total	86	86

Universal Accessible Surface Car Parking Provision

Block	Required Spaces	Provided Spaces
A1	1	1
A2	1	1
A3	1	1
A4	1	1
A5	1	1
A6	1	1
A7	1	1
Total	7	7

CHD-WL-ZZ-DR-A-0070

Block	Required Spaces	Provided Spaces
A1	13	13
A2	16	16
A3	8	8
A4	9	9
A5	6	6
A6	6	6
A7	28	28
Total	86	86

1 Proposed Site Layout Plan Overall
1 : 1000

NOTE: Refer to Landscape Masterplan, Drawing no. 01662-0110 for Public Open Space Landscape Strategy. Refer to CHD-WL-ZZ-DR-A-0054 Public and Communal Open Space Plan for Public Open Space Provision. For 1500 Site Layout Plan, refer to drawing: CHD-WL-ZZ-DR-A-0071 CHD-WL-ZZ-DR-A-0072 CHD-WL-ZZ-DR-A-0073 CHD-WL-ZZ-DR-A-0074 CHD-WL-ZZ-DR-A-0075 CHD-WL-ZZ-DR-A-0076



From: INFO <Information@tii.ie>
Sent: Monday 7 February 2022 11:52
To: Aine Ryan
Subject: TII Ref: TII22-117114. RE: Strategic Housing Development, Carrigtwohill, Co. Cork [Filed 07 Feb 2022 12:26]

CAUTION: This email originated from outside MWP. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Ms. Ryan,

I wish to acknowledge receipt of your correspondence of 28 January 2022, regarding the above.

The matter is receiving attention and a further reply will issue as soon as possible.

Yours sincerely,

Andrew Moore
Regulatory and Administration Executive



From: Aine Ryan <Aine.Ryan@mwp.ie>
Sent: Friday 28 January 2022 08:22
To: INFO <Information@tii.ie>
Subject: FW: Strategic Housing Development, Carrigtwohill, Co. Cork

You don't often get email from aine.ryan@mwp.ie. [Learn why this is important](#)

CAUTION: This email originated from outside of TII. Do not click links or open attachments unless you recognise the sender and are sure that the content is safe.

From: Housing Manager DAU <Manager.DAU@housing.gov.ie>
Sent: Thursday 3 February 2022 10:44
To: Aine Ryan
Subject: RE: Strategic Housing Development, Carrigtwohill, Co. Cork [Filed 03 Feb 2022 10:46]

CAUTION: This email originated from outside MWP. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Our Ref: G Pre00018/2022 (Please quote in all related correspondence)

A Chara

I acknowledge receipt of your recent consultation.

In the event of observations, you will receive a co-ordinated heritage-related response by email from Development Applications Unit (DAU).

The normal target turnaround for pre-planning and other general consultations is six weeks from date of receipt. In relation to general consultations from public bodies under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 to 2011, the Department endeavours to meet deadline dates, where requested.

If you have not heard from DAU and wish to receive an update, please email manager.dau@housing.gov.ie.

Regards
Diarmuid

Diarmuid Buttimer
Executive Officer

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta
Department of Housing, Local Government and Heritage
Aonad na nIarratas ar Fhorbairt
Development Applications Unit

Oifigi an Rialtais
Government Offices

Bóthar an Bhaile Nua, Loch Garman, Contae Loch Garman, Y35 AP90
Newtown Road, Wexford, County Wexford, Y35 AP90

—
Diarmuid.Buttimer@housing.gov.ie
Manager.DAU@housing.gov.ie

From: GSI Planning <GSIPlanning@GSI.ie>
Sent: Tuesday 15 February 2022 14:29
To: Aine Ryan
Cc: GSI Planning; Clare Glanville
Subject: RE: EIS 22/19 - Strategic Housing Development, Carrigtwohill, Co Cork [Filed 15 Feb 2022 14:30]
Attachments: 22_19 Strategic Housing Development Carrigtwohill Co Cork.pdf; GSI datasets relevant to EIA & SEA_20210421.pdf

CAUTION: This email originated from outside MWP. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Áine,

With reference to your letter received on the 28 January 2022, concerning the consultation on EIAR for Strategic Housing Development (SHD) at Castl lake, Carrigtwohill, Co. Cork, please find attached response and dataset sheet from Geological Survey Ireland.

If you have any further queries or if we can be of further assistance, please do not hesitate to contact me Trish Smullen, or my colleague Clare Glanville at GSIPlanning@gsi.ie.

Yours sincerely,

Trish Smullen
Geological Survey Ireland

From: GSI Planning
Sent: 28 January 2022 08:58
To: Clare Glanville; Sophie O'Connor; Brian McConnell; Monica Lee; Taly Hunter Williams; Sean Cullen; Charise McKeon; Jim Hodgson; Eoin McGrath; Trish Smullen
Cc: GSI Planning
Subject: EIS 22/19 - Strategic Housing Development, Carrigtwohill, Co Cork

[EIS 22/19](#)

[Strategic Housing Development, Carrigtwohill, Co Cork. Request for observations by MWP. Letter with site plan is enclosed.](#)

Regards,

John

From: Aine Ryan [mailto:Aine.Ryan@mwp.ie]
Sent: 28 January 2022 08:11
To: Siobhan Power; GSI Planning
Subject: Strategic Housing Development, Carrigtwohill, Co. Cork

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

From: O'LEARY Geraldine <Geraldine.O'LEARY@IAA.ie>
Sent: Tuesday 8 February 2022 15:21
To: Aine Ryan
Subject: Strategic Housing Development, Carrigtwohill, Co. Cork. [Filed 08 Feb 2022 15:25]

CAUTION: This email originated from outside MWP. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Re: Construction of 707 no. residential units with childcare facility units with childcare facility landscaped open spaces and associated work and services. Carrigtwohill, Co. Cork.

Dear Ms. Ryan,

Thank you for your email and associated attachment regarding the Pre-Application Scoping Request and Environmental Impact Assessment (EIA) in relation to the proposed Strategic Housing Development at Carrigtwohill, Co. Cork. Based on the information provided, IAA's Safety Regulation Division - Aerodromes has no requirements for incorporation into the Environmental Impact Assessment Report. Your email and scoping report has been forwarded to other domains within the Authority who may have further comments, i.e. IAA's Air Navigation Service Provider, En-route Engineering.

Kind regards.

Yours sincerely,

Deirdre Forrest
Planning Department



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From: Michael McPartland <Michael.McPartland@fisheriesireland.ie>
Sent: Wednesday 2 February 2022 10:56
To: Aine Ryan
Subject: Strategic Housing Development, Carrigtwohill, Co. Cork [Filed 02 Feb 2022 11:35]

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Aine

Thank you for your recent correspondence in relation to the above-mentioned.

It appears it may be proposed to dispose of septic effluent from the development to the public sewer. IFI would ask that Irish Water signifies there is sufficient capacity in existence so that it does not overload either hydraulically or organically existing treatment facilities or result in polluting matter entering waters. Should this not be the case then please forward proposals for alternative treatment and disposal options.

IFI would ask that there be no interference with, bridging, draining, or culverting of any watercourse its banks or bankside vegetation to facilitate this development, without a complete impact assessment including an electro-fishing survey and the prior approval of IFI.

The issue of management and control of sediment (and other potential pollutants) to prevent their entry to waters during the construction phase also needs to be addressed.

Indeed, under the Fisheries Acts it is an offence to

- (a) injure or disturb any riverbed, bank or shallow where the spawn or fry of salmon, trout or eels may be.
- (b) empty, throw, cause or permit deleterious matter (which may include silt or other suspended solids) to enter waters.

IFI would ask that the impact assessment of the scheme ensures there can be no potential for a contravention of the Fisheries Acts as a result of the development.

Regards

Michael Mc Partland
Senior Fisheries Environmental Officer.

Iascach Intíre Éireann
Inland Fisheries Ireland

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Sunnyside House, Macroom, Co. Cork, Ireland. P12 X602

Help Protect Ireland's Inland Fisheries

From: Joseph Johnson <JOSEPH.JOHNSON@irishrail.ie>
Sent: Friday 4 February 2022 11:30
To: Aine Ryan
Subject: RE: Carrigtwohill Strategic Housing Development [Filed 04 Feb 2022 11:31]

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Hi Aine

I have passed this onto our Senior Track and Structures Engineer – Andrew Wilson, who will revert back to you directly

Regards,

Joe

Joe Johnson, Regional Manager South (Acting)
Iarnród Éireann, Infrastructure Managers Office, Limerick Junction, Co. Tipperary
☎: 0876691958 ✉: joseph.johnson@irishrail.ie

From: Aine Ryan [mailto:Aine.Ryan@mwp.ie]
Sent: 04 February 2022 10:58
To: Joseph Johnson <JOSEPH.JOHNSON@irishrail.ie>
Subject: Carrigtwohill Strategic Housing Development

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Mr Johnson

MWP have been commissioned to prepare an EIAR and NIS for the above mentioned Strategic Housing Development (SHD) at Carrigtwohill, Co. Cork. Please find attached a consultation letter outlining the main aspects of the project.

If there is any key issue which Irish Rail considers should be addressed in the EIAR we would welcome your input at this stage.

Should you require any further information, please do not hesitate to contact me.

Best regards

Áine Ryan
Principal Environmental Consultant

e aine.ryan@mwp.ie
t +353 (0)21 453 6400 w www.mwp.ie

From: INFO <Information@tii.ie>
Sent: Friday 18 February 2022 08:07
To: Aine Ryan
Subject: TII Ref: TII22-117114 - EIAR Scoping - Strategic Housing Development, Carrigtwohill, Co. Cork. Your Ref: AR/Project No. 22461/Lt1008. [Filed 18 Feb 2022 10:17]

CAUTION: This email originated from outside MWP. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Ms. Ryan,

Thank you for your correspondence of 28 January 2022 regarding the above EIAR scoping exercise. The position in relation to your enquiry is as follows.

Transport Infrastructure Ireland (TII) safeguards the strategic function of Luas and national roads to promote the safe and efficient operation of both the national road and light rail networks.

The approach to be adopted by TII in making submissions or comments will seek to uphold official policy and guidance as outlined in the 'Spatial Planning and National Roads Guidelines for Planning Authorities' (DoECLG, 2012). Regard should also be had to other relevant guidance available at www.TII.ie.

With respect to EIAR Scoping issues, the recommendations indicated below provide only general guidance for the preparation of EIAR, which may affect the national road network. The developer should have regard, inter alia, to the following:

1. As set down in the DoECLG Spatial Planning and National Roads Guidelines (2012), it is in the public interest that, in so far as is reasonably practicable, that the national road network continues to serve its intended strategic purpose. The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network, in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network.
2. Consultations should be had with the relevant Local Authority/National Roads Design Office, with regard to the locations of existing and future national road schemes.
3. The Environmental Assessment should have regard to previous Environmental Assessment Statements/Reports and conditions and/or modifications imposed by An Bord Pleanála, regarding road schemes in the area.
4. Where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) should be carried out in accordance with relevant guidelines, noting construction and operational traffic volumes attending the site and traffic routes to/from the site, with reference to impacts on the national road network and junctions of lower category roads with national roads. TII's 'Traffic and Transport Assessment Guidelines' (2014) should be referred to in relation to proposed development, with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of TII's TTA Guidelines, which addresses requirements for sub-threshold TTA.
5. TII Standards should be consulted to determine the requirement for a Road Safety Audit (RSA) and Road Safety Impact Assessment (RSIA).

6. Assessments and design and construction and maintenance standards and guidance are available at TII Publications, which replaced the NRA Design Manual for Roads and Bridges (DMRB) and the NRA Manual of Contract Documents for Road Works (MCDRW).
7. Environmental Impact Assessment shall include provision for travel planning / mobility management planning in the interests of protecting national roads capacity and sustainable travel policy.
8. The developer, in conducting Environmental Impact Assessment, should have regard to TII Environment Guidelines that deal with assessment and mitigation measures for varied environmental factors and occurrences. In particular, evidenced assessment of the protection of the strategic function of the national road network in relation to the following matters is required:
 - a. TII's Environmental Assessment and Construction Guidelines, including the 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes' (National Roads Authority (NRA), 2006).
 - b. The EIAR should consider the 'Environmental Noise Regulations 2006' (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes' (1st Rev., NRA, 2004)).
9. TII will entertain no future claims in respect of impacts (e.g. noise and visual) on the proposed development, if approved, due to the presence of the existing road or any new road scheme which is currently in planning.
10. The developer is advised that any additional works/structures required as a result of the Assessment should be funded by the developer.

Notwithstanding, any of the above, the developer should be aware that this list is non-exhaustive, thus site and development specific issues should be addressed in accordance with best practice.

I hope that this information is of assistance to you.

Yours sincerely,

Alban Mills

Senior Regulatory and Administration Executive



In accordance with TII's Right to Disconnect policy, if you are receiving this email outside of normal working hours, I do not expect a response or action outside of your own working hours unless it is clearly noted as requiring urgent attention.

De réir pholasáí BIÉ An Ceart gan a bheith Ceangailte, má tá an ríomhphost seo á fháil agat lasmuigh de na gnáthuaireanta oibre, nílim ag súil le freagra ná le gníomh uait lasmuigh de do ghnáthuaireanta oibre féin mura bhfuil sé ráite go soiléir go bhfuil gá gníomhú go práinneach.

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Appendix 2.1

Construction Environmental Management Plan



Castlelake SHD, Carrigtwohill, Co. Cork.

Construction & Environmental Management Plan

Revision control table

Revision	Date	Issue	Prepared By	Checked By
A	23/04/2022	Review	T Finn	O Ryan
B	27/05/2022	Issue for Planning	T Finn	O Ryan

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Introduction

The development will consist of the construction of a strategic housing development of 716 no. units and a 2 no. storey creche. The proposed development comprises 224 no. houses, 284 no. duplex units and 208 no. apartments. The two storey houses comprise 48 no. detached, 126 no. semi-detached and 50 no. terraced Houses containing 60 no. two bed units, 139 no. three bed units and 25 no. four bed units. The part-one to part-three storey duplex units are contained in 122 no. buildings providing 82 no. one bed units, 142 no. two bed units and 60 no. three bed units. There are 7 no. apartments blocks ranging in height from part-1 to part- 5 no. storeys.

- Block 1 is 4 no. storeys and contains 34 no. units (7 no. one bed units, 19 no. two bed units and 8 no. three bed units).
- Block 2 is part-1 to part-5 no. storeys and contains 42 no. units (15 no. one bed units, 20 no. two bed units and 7 no. three bed units).
- Block 3 is 5 no. storeys and contains 17 no. units (8 no. one bed units and 9 no. two bed units).
- Block 4 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 5 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 6 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 7 is 5 no. storeys over basement and contains 76 no. units (23 no. one bed units, 41 no. two bed units and 12 no. three bed units).
- All blocks contain ancillary internal and external resident amenity space.

The proposed development also provides for: hard and soft landscaping; boundary treatments; public realm works; car parking; bicycle stores and shelters; bin stores; lighting; plant rooms; and all ancillary site development works above and below ground. The application site is positioned to the north-west of the centre of Carrigtwohill comprised of a series of land parcels with a combined area of 18.3 hectares.

This Construction Management Plan, inclusive of Environmental Management Plan, Waste Management Plan and Traffic Management Plan have been prepared and are being issued as part of Castlelake SHD planning application. These plans are working documents, but clearly outline the arrangements in place to manage the construction and environmental management aspects of this project.

These Plans will cover all our construction activities and that of its Subcontractors for the construction period.

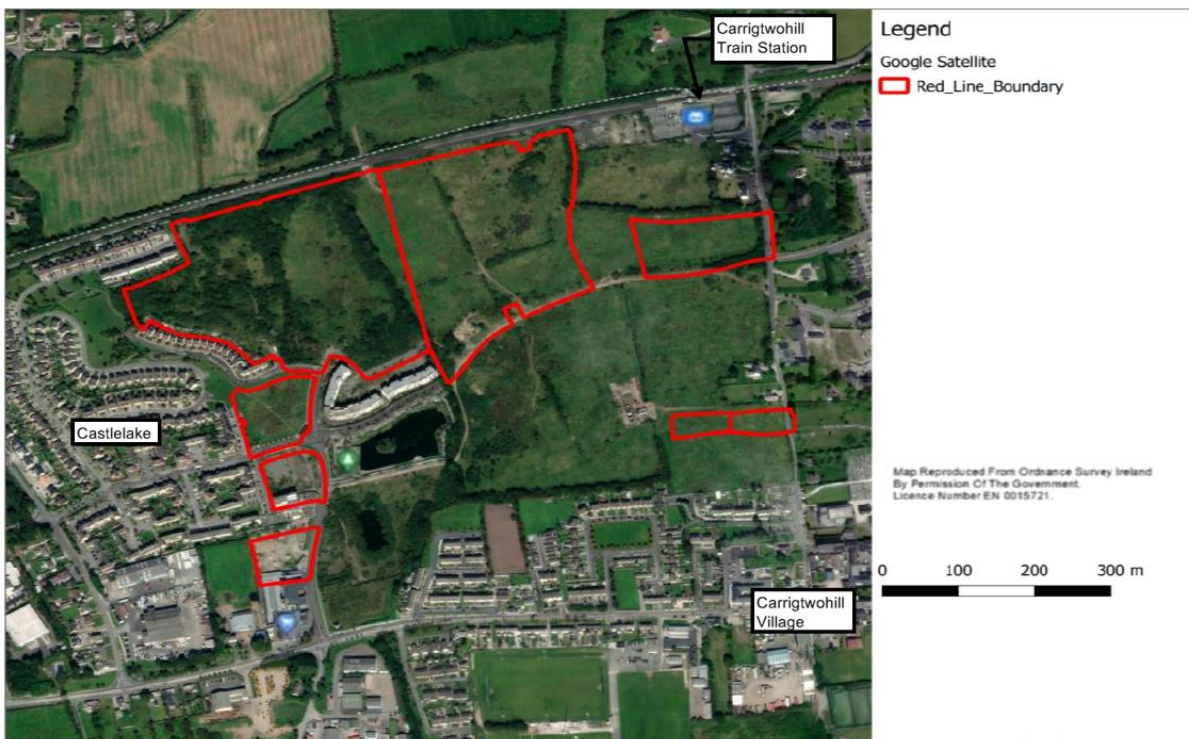
All documents are working documents and will be continually updated to reflect any changes necessary, but their authenticity will always be maintained to meet the project requirements.

Site location

The subject site is located 16km east of Cork City. It is a satellite town that has grown from a small village/hamlet situated along the side of the N25 main road between Cork and Waterford cities. The proposed development site is located circa 50m west of Carrigtwohill village. The site is bounded by agricultural lands to the North, Castlelake housing estate to the west and the Cork Road L3680 to the south. The site is accessed from the Cork Road L3680. Access is also possible from the west via the Castlelake housing estate. The N25 can be accessed to the west and east.

The proposed development bounds the Cork-Midleton Railway line to the north. Carrigtwohill train station is located to the north-east of the site. The train station serves Midleton and Cobh to the east and south and Cork to the west, with onward links to Dublin and the rest of the Country.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and providing an amenity for existing and future residents and visitors. An east-west link road is currently nearing completion along the Southern boundary of the main land block. A north-south link road is proposed to join with an existing rail underpass.





Long distant views looking south over the River Lee Valley from the top of the site.

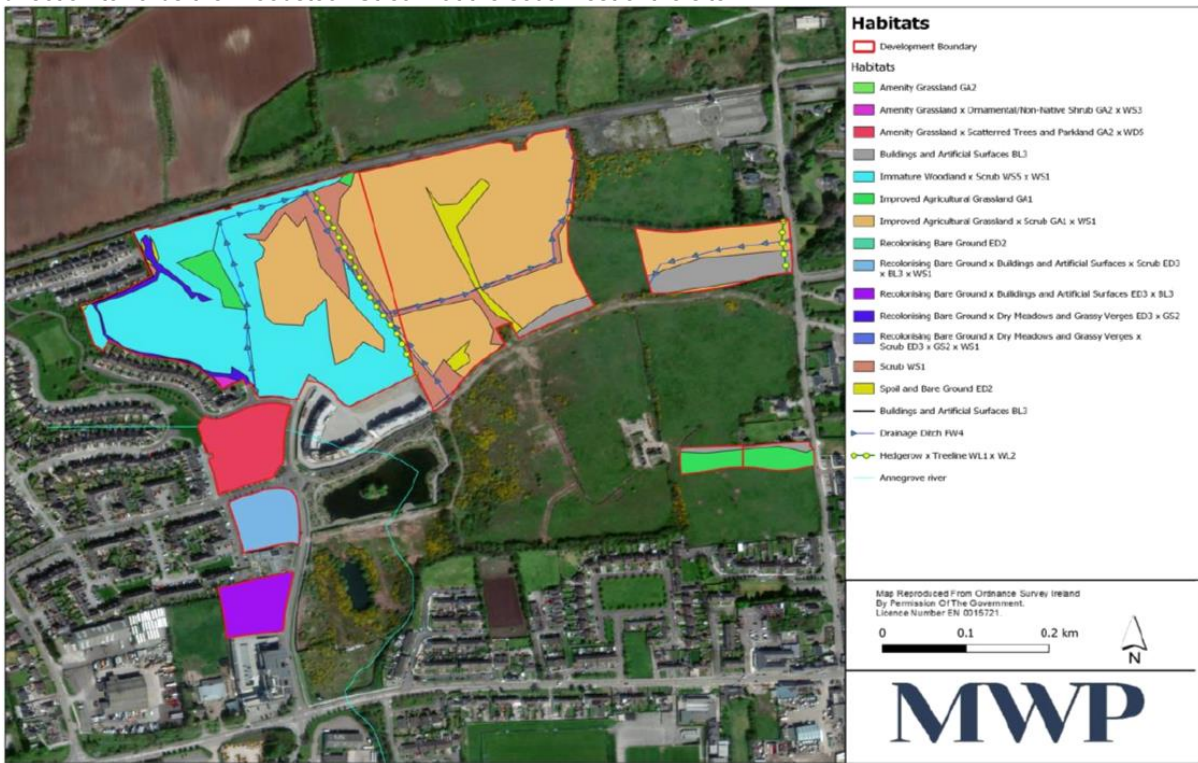


Attractive views of the Hills north of the site, with the band of vegetation along the railway line in the mid view.

Site Description

The proposed development is relatively flat land with the highest elevation of the proposed development being ca.9m AOD. The predominant landcover at the proposed development is classified as ‘agricultural Areas/Pastures’ with some sections at the Southwest of the site made of ‘artificial Surfaces – Discontinuous urban fabric’. Subsoil at the proposed development is classed as ‘Sandstone till (Devonian)’. The majority of the aquifer is designated as regionally important Aquifer – Karstified (diffuse) with a section at the northern end which is categorised as Locally Important Aquifer – Bedrock with is Moderately Productive only in Local Zones. The groundwater vulnerability of the aquifer is stated mostly as ‘moderate’ with small sections of the north side of the proposed development designated as ‘high’.

The proposed development is located within the ‘Lee, Cork Harbour and Youghal Bay’ Water Framework Directive catchment (Code:19) AND THE Tibbotstown _SC_010 sub-catchment. There are a few waterbodies on site. The Woodstock Stream is the largest stream which enters the eastern most land block near Station Road and flows in a westerly direction before turning south where it flows into the Slatty Pond, which is hydrological connected to Great Island SAC and Cork Harbour SPA. Another small stream bisects the main land block and flows in a southerly direction towards the Woodstock Stream at the southwest of the site.



There are no buildings on the subject lands and are largely characterised by overgrown scrub. There are existing powerlines located on the western edge of Castlelake North.

Proposed Development Works

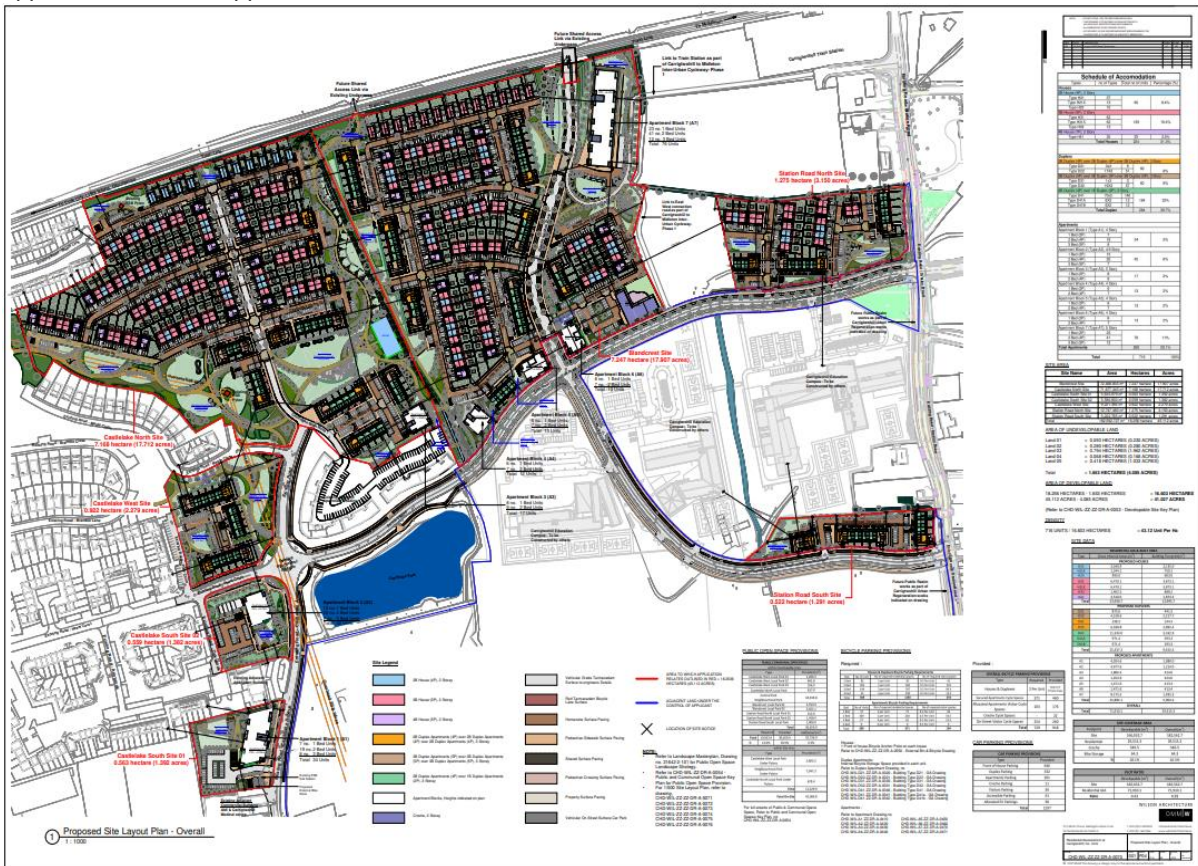
The proposed site area is 18.3 hectares. The proposed development to the East will link with the new east-west link road that connects Castlelake with Station Road and will abut the southern boundary of a significant portion of the site.

The proposed development may also benefit from the proposed Part 8 strategic cycleway scheme proposal. This scheme as proposed will provide connectivity to this proposed residential development, Carrigtwohill train station, adjacent new school development and Carrigtwohill village.

The proposed development will comprise of 224 no. houses, 284 no. duplexes and 208 no. apartments in a series of blocks ranging in height from 3-5 no. storey. In addition, the proposed development includes for a Creche and resident amenity spaces. Ancillary site works include public and communal open space, hard and soft landscaping, car parking, cycle parking, bin storage and lighting.

The proposed development is located close to established neighbourhoods with new connection points to existing local amenities through routes/walkways promoted by an active landscape scheme demonstrating the routes of individual destinations in the immediate and wider context.

The development will also complement the Carrigtwohill to Midleton Inter-Urban Cycleway Part 8 planning application that was approved on 14th March 2022.

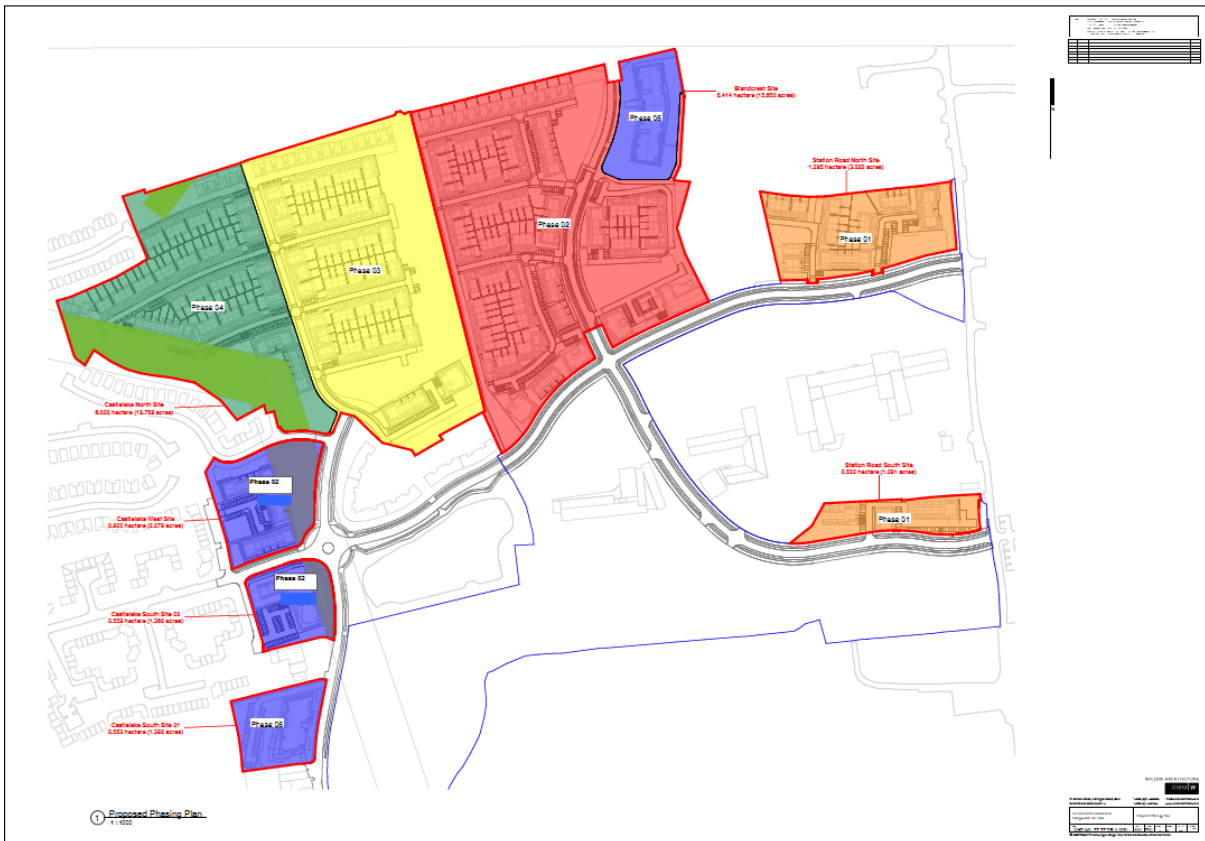


Proposed Development Layout

1.0 General Construction Works Phasing

1.1 Project Phasing Plan

The proposed works will be undertaken in several planned phases as demonstrated below. Infrastructural works required to support each element constructed will be prioritised for each phase of the development.



1.2 Construction Phase

Prior to excavation, a detail review of the final cut and fill requirements will be carried out to confirm cut and fill volumes. Detailed quantities of material to be excavated will be verified through accurate survey techniques by the groundwork’s contractor at the construction phase. It is anticipated that material offsite will be minimised as levels typically are raised to protect against flood risk. Note that all imported materials will be certified accordingly for their respective use in the development.

The construction will utilise the use of both off- site and traditional building techniques in the development of each phase. Select materials as noted on planning drawings will be sourced from sustainable sources with a view to minimising waste generation on site.

Works will commence with Phase 1 of the project to the East of the Site and progress accordingly as indicated.

Material to be removed off-site will be classified in a Waste Classification Report. The classifications are 'Hazardous', 'Non-Hazardous' and 'Inert'. Material to be removed offsite will be sent either for re-use subject to appropriate authorizations or if material cannot be re-used/recovered an appropriately permitted/licensed sites will be sent for disposal. This is discussed in detail in our EMP&WMP.

2.0 Construction Management Plan

2.1 Site Access

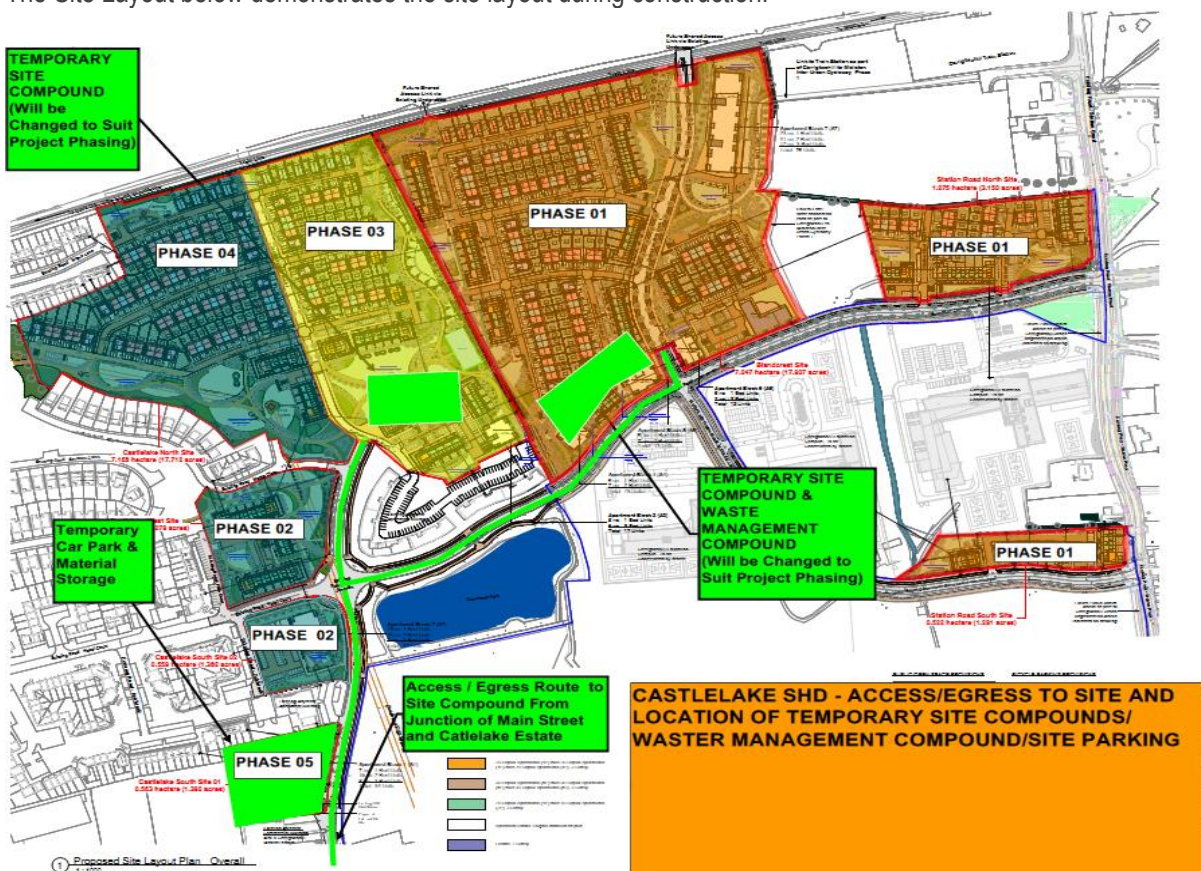
Access and egress to the development will be via the junction of Main Street and Castlake estate in general. This will minimise the impact on Carrigtwohill village.

Appropriate operated security will be maintained at the site access gates to secure the site, to control vehicular access and to monitor and record all deliveries and removals operations.

It is expected that all vehicles will be able to drive directly into the site and turn within before exiting, limiting any potential impact on the local road network. Construction vehicle access to various phases of construction will be minimised by careful planning of the works.

Pedestrian access will be strictly controlled via manned turnstile system. Only Safe pass accredited personnel will be permitted on site and daily in-out attendance records will be maintained. Appropriate segregation will be employed on site to separate pedestrians from heavy equipment. Fenced off pedestrian walkways will be provided close to the site offices. Operatives on site will be encouraged to use public transport or cycle while temporary parking will be provided on site.

The Site Layout below demonstrates the site layout during construction.



Site layout

2.2 Site Layout & Temporary Compounds

The site layout above provides an overview of the proposed site layout to highlight proposed location of temporary site compound, waste management compound, temporary parking area and entrance and exit to the site. Note that entrances to the construction site phases will always be secured.

The Site Layout plan also denotes the location of waste materials compound on site.

Drainage within the temporary site compound will be directed to an oil interceptor to prevent pollution if any spillage occurs.

Temporary toilet facilities will be managed by the Contractor during the construction phase.

A bunded containment area will be provided within the compound for the storage of fuels, lubricants, oils etc.

The compound will be in place for the duration of the construction phase and will be removed once commissioning is complete.

2.3 Working Hours

It is envisaged that working hours during the construction process will be primarily standard working hours for the construction industry. We are conscious of our neighbours and surroundings and will mitigate against any intrusion caused by preparing specific method statements for specific works that could cause any negative impact.

The expected hours of works are:

07.00 – 19.00 Monday to Friday

8.00 – 13.00 Saturdays

No works are envisaged to be carried out on Sundays, should the need to work Sundays be required a written submission will be made to Cork County Council for permission to do so. Every effort will be made to ensure that no works are required outside of the above periods.

However, there may be some instances where this may not be possible for a variety of reasons e.g., works in the public road which are subject to restricted working times to minimise traffic impact. In such instances, specific agreement will be required from Cork County Council in advance of any such works taking place.

As part of our stakeholder management, we will minimise the effects of our operations on our neighbours and others affected by the works by regular communications on our planned activities, current progress, significant milestones, and planned activities on the project.

2.4 Soil Stockpiles

Stockpiles will be located away from drainage systems and silt retaining measures (silt fence/silt curtain or other suitable materials) to reduce risk of silt run-off shall be installed along the downgradient edges of stockpiled earth materials.

- All excavated materials from the site or introduced materials for construction will be either used or removed from the site.
- No permanent spoil or stockpiles will be left on site, other than those materials required for landscaping, berm construction and construction generally.

- Temporary storage areas for fuels and other hazardous materials required by the contractor during construction will be stored in appropriately bunded facilities to prevent the accidental spillage of hazardous liquids that could cause soil and groundwater contamination.
- Collision with oil stores will be prevented by locating oils within a steel container in a designated area of the site compound away from vehicle movements.
- Long term storage of waste oils will not be allowed on site. These waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider.
- A designated wash area for concrete trucks will be provided utilising a small bunded lined settlement area for concrete residues.

2.5 Hoarding & Signage

The initial work on site will include the erection of an appropriate security fencing around the entirety of the site to protect/secure the works and members of the public. The boundary to the site will always be maintained intact with regular recorded inspections undertaken. Adequate site security will be maintained throughout the contract period.

Note that as part of our traffic management for deliveries, all subcontractors and suppliers will be provided with a detailed route to site.

2.6 Car Parking & Mobility Plan

The provision of car parking on-site will require balanced consideration. It will be a goal throughout the project to limit the number of workers travelling to the site by car through a variety of means including:

- Promoting the use of the public transport options, particularly given the proximity of the Rail service.
- Providing an adequate amount of on-site cycle parking.
- Promoting car sharing amongst workers where feasible.

Please refer to our site layout plan for area assigned for site car parking.

In addition, subcontractors will be informed as part of their works to comply with the requirement that parking in the local streets is prohibited.

2.7 Material Deliveries & Storage

Materials will be delivered to site in a planned sequence to reduce on-site storage yet maintain the planned progress of the works. Storage of excessive materials on site will be avoided. Appropriate protection will be provided to vulnerable materials to ensure their quality is maintained when required to be used and to protect the environment. Deliveries will be co-ordinated via a booking system. On placement of orders with subcontractors/suppliers, a copy of the site traffic management plan and site rules will all be issued to facilitate a co-ordinated approach to future deliveries.

The site lies relatively close to the N25, and M8 Motorway so moving material and resources can be co-ordinated with minimum impact on local environment. It is our intention to avoid access to the site via the village centre to minimise effects on the local environment and infrastructure.

2.8 Construction Traffic

Public Road/Footpath

As noted earlier, access and egress to the development will be via the junction of Main Street and Castl lake estate. This route will minimise our impact on Carrigtwohill village. Construction traffic will access from the N25 Carrigtwohill/Cobh Cross Junction and avoid Carrigtwohill Village.

Practices will be incorporated to ensure the roads are always kept tidy, especially when earth excavation vehicles are in operation. This will be done in the form of washing truck tyres leaving the construction site and the use of road sweepers at regular daily intervals as deemed necessary.

The footpaths to Castl lake will remain unaffected but will be regularly monitored and cleaned if required.

Vehicle Management

As noted previously, it is proposed to put in place a management system at the site to control the movement of vehicles insofar as is reasonably practicable. Measures to be put in place include:

- Scheduling of heavy goods vehicles – this relates to all stages of development and includes vehicles for removing waste/spoil from the site as well vehicles making deliveries. This system will allow the number of any such vehicles arriving/departing the site during the peak hours to be limited to prevent any impact on the local road network.
- Particular effort will be directed to avoiding such movements during the morning peak hour on the network between 8AM and 9AM.
- Unscheduled vehicles in this regard will not be permitted access to the site and all contractors and sub-contractors will be informed of this through advance notice.
- Mobility management for site workers as set out previously including a series of measures to encourage and facilitate travel by alternate means.
- Informing workers and expected visitors regarding access arrangements and parking provision to ensure an appropriate mode of travel is chosen.
- Clear and appropriate signage within the site to advise of permitted routes, speed limits, safety requirements etc.

2.9 Liaison

Cork County Council relevant departments will be contacted and liaised with prior to commencement. Where necessary Road Opening Licence applications will be submitted for approval from Cork County Council. We acknowledge that many parties will have an interest in this project throughout the duration of the contract. Our presence during the construction phase will have a direct impact on the local environment, particularly concerning the following:

- Residents and landowners
- Tenants and Residents Associations
- Planning Authority
- Other Statutory Authorities
- Building Control

- Environmental
- Local Schools
- Local Business
- Local Groups
- Utility Providers
- Iarnrod Eireann

The contract manager will be responsible for project strategic liaison whilst the project manager will be responsible for day-to-day liaison and logistics for all the construction related activities.

Both will be permanently based on site with the project manager as the first point of contact for all concerns, issues, and complaints. A display board will be erected outside the site, which as minimum will identify key personnel contact addresses and telephone numbers.

If works interface with local stakeholders' workshops and forums will be held on a regular basis to maintain open relationships and keep stakeholders up to date on construction progress and its impact on all third parties.

Newsletters, liaison meetings, progress photos, organised site visits are all methods by which we can communicate how we intend to carry out the works and keep people informed

2.10 Waste Management

Its BAM's intention to ensure that all waste materials arising from the Castlelake SHD are managed and disposed of in accordance with the:

- provisions of the Waste Management Acts 1996 – 2013 and associated regulations.
- Waste Management (Hazardous Waste) Regulations.
- Movement of Hazardous Waste Regulations.
- The Carriage of Dangerous Goods by Road Act.
- (Shipment of Waste) Regulations.
- Cork County Council Waste Management Plan.
- Environmental Protection Act 1990: Waste Management, the duty of Care
- Project Specific Construction Requirements (Contract Documents); and
- the Company Environmental Management System
- Best Practice Guidelines on the preparation of waste management plans for construction and demolition waste projects
- "Changing our Ways" Waste Management Policy Statement

A specific waste management plan has been developed for this project and appended to this plan. **Refer to Appendix A.**

2.11 Environmental Management

A Construction Environmental Management Plan will be implemented for the construction process. The Environmental Management Plan will describe how we will manage environmental performance for the Castlelake SHD project. The EMP has been developed in conjunction with our overall Environmental Management System as certified to ISO 14001:2015.

The plan identifies environmental obligations, planning, compliance, targets, and control measures to ensure the purpose of the plan is met. As the works evolve, this plan will be regularly reviewed and updated to reflect works best practice. This Plan is contained in the appendices attached. **Refer to Appendix B.**

2.12 Environmental Emergency Plan

A Construction Environmental Emergency Plan has been developed for the construction process. The Environmental Emergency Plan will describe how we will manage environmental emergencies for the Castlake SHD project, should such an unlikely event arise. The EEP has been developed in conjunction with our overall Environmental Management System as certified to ISO 14001:2015.

The plan identifies environmental emergency processes, maintains a state of preparedness and details controls required as the works evolve. Note that all such plans are regularly reviewed to ensure accurate and clear actions are available. This Plan is contained in the appendices attached. **Refer to Appendix C.**



Construction Waste Management Plan

Site Name: Castlelake SHD, Carrigtwohill, Co. Cork.



Revisions

Environmental Dept. Revision No: 01 27th May 2022			
Reason for Issue:			Client Approval (if required)
Originator	Reviewer	Approver	
Donal Keohane	Tim Finn	O Ryan	

Circulation

Copy	Circulation	Name	Company	Location
1	Construction Director	Ger Moloney	BAM	Little Island
2	Contract Manager	Ollie Ryan	BAM	Little Island
3	Project Manager	Tim Finn	BAM	Site
4	Engineer(s)	N/A	BAM	Site
5	General Foreman	Seamus Treacy	BAM	Site
6	Site Health, Safety & Environmental Officer	Donal Keohane	BAM	Site
7	Co. Environmental Coordinator	Elaine Maloney	BAM	Head Office, Kill

Document Control Sheet for Waste Management Plan

Originator		Reviewer/ Approver
Name:	Elaine Maloney	Kathy O' Leary
Date:	12.02.2021	12.02.2021

Site Name	Document revised	Env Dept Rev No.	Site Rev No.	Reviewd by	Date
Castlelake SHDI	WMP	Rev 10	Rev 00	HSE Officer	09/07/2021

Document:	WMP
Site Rev No:	00
Changes Made:	First Draft
Site Reviewer:	

Document:	WMP
Site Rev No:	
Changes Made:	
Site Reviewer:	

Document:	
Site Rev No:	
Changes Made:	
Site Reviewer:	

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Site Rev No:	
Changes Made:	
Site Reviewer:	

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1. INTRODUCTION

This Waste Management Plan (WMP) has been developed in accordance with BAM Contractors Environmental Procedures. The controlled copy of all environmental procedures is hosted on SharePoint.

This Plan is a working document, clearly stating the arrangements in place to manage the significant environmental aspects and legal requirements of this project. This Plan covers BAM Building activities and that of its subcontractors.

This Plan has been approved by BAM HSE Department at Kill and has the commitment of the Director, Construction Directors, Contract Manager, Project Manager and Project Team to fulfil the requirements of the Plan.

1.1. Purpose of the plan

The purpose of this plan is to ensure that all waste materials arising from the *Castlelake SHD* are managed and disposed of in accordance with:

- The provisions of the Waste Management Acts 1996 – 2013 and associated regulations;
- The project specific construction requirements (Contract Documents)
- The Company Environmental Management System, and;
- Best Practice Guidelines on the preparation of waste management plans for construction and demolition waste projects.

1.2. Project description

The development will consist of the construction of a strategic housing development of 716 no. units and a 2 no. storey creche. The proposed development comprises 224 no. houses, 284 no. duplex units and 208 no. apartments. The two storey houses comprise 48 no. detached, 126 no. semi-detached and 50 no. terraced Houses containing 60 no. two bed units, 139 no. three bed units and 25 no. four bed units. The part-one to part-three storey duplex units are contained in 122 no. buildings providing 82 no. one bed units, 142 no. two bed units and 60 no. three bed units. There are 7 no. apartments blocks ranging in height from part-1 to part- 5 no. storeys.

Block 1 is 4 no. storeys and contains 34 no. units (7 no. one bed units, 19 no. two bed units and 8 no. three bed units).

Block 2 is part-1 to part-5 no. storeys and contains 42 no. units (15 no. one bed units, 20 no. two bed units and 7 no. three bed units).

Block 3 is 5 no. storeys and contains 17 no. units (8 no. one bed units and 9 no. two bed units).

Block 4 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 5 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 6 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 7 is 5 no. storeys over basement and contains 76 no. units (23 no. one bed units, 41 no. two bed units and 12 no. three bed units).

All blocks contain ancillary internal and external resident amenity space.

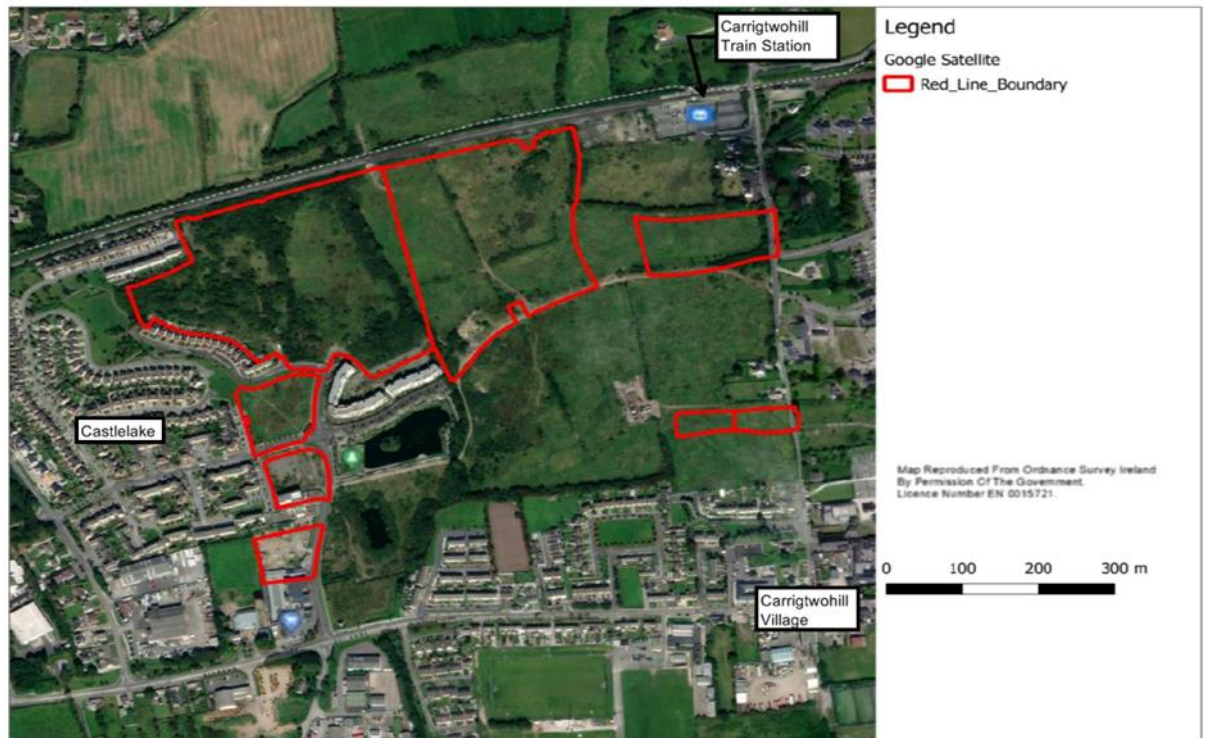
The proposed development also provides for: hard and soft landscaping; boundary treatments; public realm works; car parking; bicycle stores and shelters; bin stores; lighting; plant rooms; and all ancillary site development works above and below ground. The application site is positioned to the north-west of the centre of Carrigtwohill comprised of a series of land parcels with a combined area of 18.3 hectares.

1.3. Site location

The subject site is located 16km east of Cork City. It is a satellite town that has grown from a small village/hamlet situated along the side of the N25 main road between Cork and Waterford cities. The proposed development site is located circa 50m west of Carrigtwohill village. The site is bounded by agricultural lands to the North, Castlelake housing estate to the west and the Cork Road L3680 to the south. The site is accessed from the Cork Road L3680. Access is also possible from the west via the Castlelake housing estate. The N25 can be accessed to the west and east.

The proposed development bounds the Cork-Midleton Railway line to the north. Carrigtwohill train station is located to the north-east of the site. The train station serves Midleton and Cobh to the east and south and Cork to the west, with onward links to Dublin and the rest of the Country.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and providing an amenity for existing and future residents and visitors. An east-west link road is currently nearing completion along the Southern boundary of the main land block. A north-south link road is proposed to join with an existing rail underpass.



Carrigwohill SHD, Carrigwohill, Cork

1.4. Working hours

Working hours will be in accordance with the Planning Conditions and Environmental Legislation. The expected hours of works are:

07.00 – 19.00 Monday to Friday

8.00 – 13.00 Saturdays

1.5. Plan objectives

The objectives of this Plan are to detail:

- Wastes arising from the substructure works and waste construction materials.
- Methods and locations used for their handling and storage on site, including a site map showing waste management areas (in **Appendix A**)
- Waste Collection Permits required for the removal of waste from site
- The disposal facilities for the waste streams and their associated Waste License or Permit.

1.6. Update and review

This plan will be updated at a minimum of six-monthly intervals unless significant changes take place in works being undertaken on site.

2. RECYCLING/WASTE MANAGEMENT STRATEGY

2.1. Recycling/Waste management goal

The recycling/waste management goal for the Project is to manage all waste in accordance with the relevant statutory provisions and the waste hierarchy:

The waste management strategy for the Project will follow the accepted waste hierarchy.

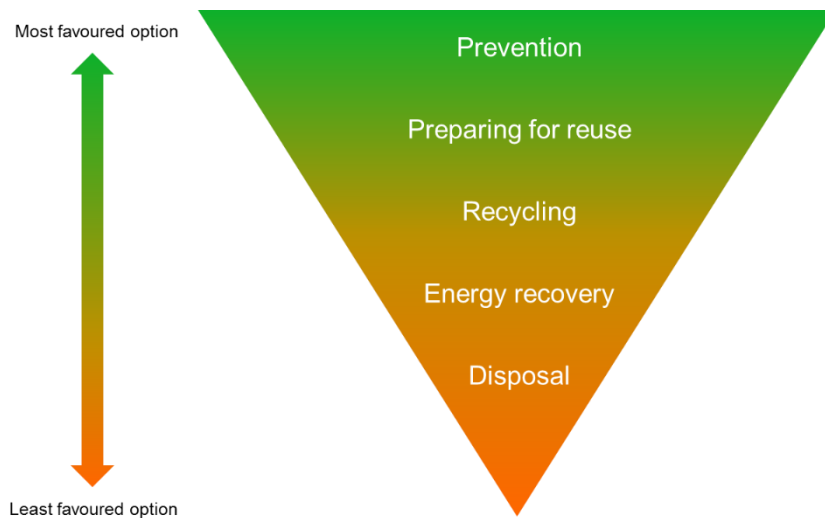


Figure 1: Waste management hierarchy

The waste management goals will include:

- Whenever possible materials for construction activities will be ordered as to prevent the minimum storage time and kept in the storage area before release to site for use.
- Materials will be ordered, where possible, in sizes to prevent wastage e.g. in form of offcuts and waste to be able to be returned to the original supplier (eg plastic pipe)
- Materials delivered to the project will be received and controlled by the Stores Manager (or similar). Materials will be stored to minimise the potential of damage or wastage. Measures will include off-ground storage (eg on pallets), remaining in original packaging, protection from rain damage or collision by plant or vehicles
- The materials storage area will be secured during out of hours to prevent unauthorised access
- A waste management compound will be set up to handle incoming waste from construction activities. This will be designed to facilitate the segregation of key waste streams to maximise the opportunity to re-use, recycle and return wastes generated on site



- The segregated waste will be placed in skip containers. Waste will be placed in the skips in such a way to minimise 'empty' void space.
- Skips will be labelled to clearly highlight waste stream for each skip. As a minimum skips and containers will be provided for segregating of the following key waste streams:

Mixed Metal	Timber	General/Mixed C&D	Packaging (Plastic & Cardboard)	Hazardous
-------------	--------	-------------------	---------------------------------	-----------

- Hazardous waste will be kept in a secure area away from other wastes to ensure no contamination takes place
- Separate areas within the waste compound will also be allocated for the storage of plastic piping awaiting return to supplier, waste tyres and WEEE (where applicable). The layout of the waste compound will be provided in Appendix 1 of the contract-stage version of this Plan.

Waste and recycling targets

Waste and recycling targets will be to achieve:

- 100% recycling of surplus reinforcement where possible
- Reuse of all earthworks materials on site – zero export where possible (excluding contaminated materials)
- No contamination of skips – no additional costs due to inappropriate materials being placed in skips designated for particular waste streams.
- 15% reduction of total construction waste (relative to total revenue over 5 years) compared to 2020.
- Achieve >98% recovery rate for all C&O waste.
- ≤ 9.0t C&D waste generated per 100m² (gross internal floor area) *Target only applicable to building sites.

2.2. How we will achieve our targets

The waste management goal will be achieved through the implementation of several guiding principles in accordance with the waste hierarchy, namely:

- Giving preference to the purchase of materials with minimum packaging
- Storing materials in designated areas and separate from wastes to minimise damage
- Establishing take back schemes and returning packaging and unused materials to the suppliers where possible
- No pallets to be placed in skips on site
- Maximising the reuse of soils and rock on site during the construction of the Project
- Segregating construction and demolition wastes into reusable, recyclable and non-recyclable materials
- Reusing and recycling materials on site during construction where practicable

- Recycling other recyclable materials through appropriately permitted/licensed contractors and facilities
- Disposing of non-recyclable wastes to licensed landfills.

2.3. Waste license/permit requirements

The following statutory restrictions apply with regard to the collection and treatment of waste in Ireland:

2.3.1. Waste Management (Collection Permit) Regulations 2008

- All types of waste may only be collected and transported from site by a contractor who holds a National Waste Collection Permit for the type of waste being collected
- Waste will only be disposed of or recovered at a site which holds a Licence or Permit under the Waste Management (Facility, Permit and Registration) (amend) Regs 2014
- We must obtain a copy of the 'end disposal site' Licence or Permit for the waste we are disposing of
- Copies of all relevant licenses and permits will be kept on site and attached to this plan in Appendix 2, namely waste collection permits and waste facility permits.

2.3.2. Waste Management (Hazardous Waste) Regulations 1998

- Hazardous waste removed from site must be accompanied by a Waste Transfer Form (WTF) as per European Communities (Shipments of Hazardous Waste Exclusively within Ireland) Regulations 2011
- Hazardous waste to be removed from Ireland for treatment elsewhere must be accompanied by a Transfrontier Shipment Form in accordance with the Waste Management (Shipment of Waste) Regulations 2007.

2.4. Hazardous wastes management

Hazardous wastes pose a risk to the health and safety of personnel as well as the environment. The Site Safety, Health & Environmental Officer should be notified of any hazardous waste or suspected hazardous waste, and consulted for assistance with handling procedures. Under the health and safety plan risk assessments and procedures are available for:

- Excavating in Contaminated Ground (PRA31-1)
- Buried asbestos in landfill (JSRA 31-2)
- Removing asbestos from existing buildings (PRA24-1)
- Environmental Bulletins 16 & 19 'Asbestos Removal' to be adhered to.

2.5. Duty of care

Responsibility for waste management lies with the principal contractor unless a contractual agreement with subcontractors to manage their own waste arisings exists.

3. WASTE IDENTIFICATION AND MANAGEMENT

3.1. General

Castlelake SHD will provide a dedicated waste handling and segregation area as shown on the site map in **Section 8** of this document.

Waste segregation should occur where possible.

The Site Agent/Foreman will:

- Oversee all waste handling operations
- Regularly check skips to ensure correct segregation has been achieved, void space is minimised and that no contamination has taken place
- Ensure the compound is kept tidy and in good appearance at all times
- Order and change skips as required.

Each waste skip and bin will be clearly labelled as to the type of waste contained.

3.2. Waste procedures

3.2.1. Excavation waste

There will be a certain amount of excavated materials re-used as fill. Any remaining material will be removed offsite via a licenced haulier to a licenced facility/ tip.

3.2.2. Demolition waste

N/A

3.2.3. Office waste

Office waste will be removed offsite via licenced carrier to a licenced waste facility.

3.2.4. Construction waste

Construction waste will be removed by licenced carrier to licenced waste facility. Expected wastes include general waster, timber and metal.

3.2.5. Hazardous waste

Not expected but should the need arise, any such waste will be removed via licenced carrier to licenced waste facility.

4. WASTE CONTRACTORS

Table 1: Waste contractors

Type	EWC code	Name of waste contractor	National Waste Collection Permit (NWCPO) No.	Waste Facility Permit No/ Waste Licence No./ COR No	
Office/ canteen Waste Contractor(s)	200301	Greenstar	NWCPO-13-11193-06	WFP-CC-38-2020	
C&D Waste Contractors(s)	170904	Greenvalley	NWCPO-14-11381-02	WFP-CK-20-0210-01	
Excavated Waste Contractors(s)	170504	Greenvalley	NWCPO-14-11381-02	WFP-CK-20-0210-01	
Hazardous Waste Contractors(s)	Asbestos	170605			
	Oil & Spill Kit Material	150202			
Recyclables/Mixed Waste Contractor(s)	Packaging	150106	Greenstar	NWCPO-13-11193-06	WFP-CC-38-2020
	Plastic	170203	Greenstar	NWCPO-13-11193-06	WFP-CC-38-2020
	Timber	170201	Greenstar	NWCPO-13-11193-06	WFP-CC-38-2020
	Metal	170407	Cork Metal	NWCPO-12-6-11798-01	WFP-CC-22/2019
	Gypsum	170802			
	Other (Specify)				

** Note all waste contractors must be included (e.g. excavated material, skip hire, port-a-loos, canteen waste, roadsweepings, office waste, hazardous waste).*

5. WASTE VOLUMES

5.1. Company reporting

BAM requests all waste contractors to submit waste reports to the Environmental Coordinator on a quarterly basis. Waste statistics are then compiled in accordance with the Company Corporate Social Responsibility (CSR) requirements, which has been developed in accordance with the Global Reporting G4 standard, Greenhouse Gas Protocol and CDP questionnaire. Under the reporting requirements, waste contractors issue reports detailing the volumes of waste generated and the waste destination for their sites.

5.2. Site reporting

The *Carrigtwohill SHD* site will maintain a waste log of all waste removed from site to ensure all movements are recorded on site for Local Authority Inspections. The waste log will contain the following information:

- Date of collection
- Waste description (as per the *List of Waste/European Waste Catalogue (EWC)**)
- Name of waste collector/hauler and National Waste Collection Number (NWCP)
- Destination of waste and Facility Permit/Licence Number
- Weight.

6. COMMUNICATION AND RESPONSIBILITY

6.1. Communication

All employees and contractors are required to undertake a site induction prior to conducting any work on site. At this induction the waste management goals and strategy will be made clear and the employees will be made aware that they are responsible for ensuring the management of waste in accordance with this management plan. Three Toolbox Talks on environmental and waste issues will be conducted quarterly. For further details refer to the *Environmental Management Plan*.

Progress on the implementation of the waste management plan will be communicated to staff at the monthly safety meeting and at internal progress meetings.

6.2. Cost tracking

The Quantity surveyor is responsible for tracking the costs associated with the implementation of the waste management plan. It is essential that waste costs are communicated back to personnel, particularly if additional charges are incurred due to contamination of skips with other wastes.

6.3. Responsibilities

The Project Manager is responsible for the implementation of this Waste Management Plan and for ensuring that activities on site comply with the requirements of the Waste Management Acts, 1996 to 2013 and associated regulations.

All site engineers and foreman will be responsible for monitoring the implementation of this management plan through regular site inspections. Monitoring should be recorded on the relevant checklists (refer to Section 7).

Table 2: Responsibilities

Task	Frequency	Responsible	Name and number
WMP implementation	Ongoing	Project Manager or Foreman	Tim Finn 0872515742
Tracking costs	Ongoing (updated monthly)	Project Manager or Foreman	Tim Finn 0872515742
Notification of skip contamination	At least weekly	Project Manager or Foreman	Tim Finn 0872515742
Inspections of skips, maintenance of skip area	At least weekly	Project Manager or Foreman	Tim Finn 0872515742
Order and exchange skips	As required	Project Manager or Foreman	Tim Finn 0872515742

Task	Frequency	Responsible	Name and number
Monitoring waste management implementation	Ongoing	General Foreman/ Site Safety, Health & Environmental Officer	Tim Finn 0872515742 Donal Keohane
Issuing warning for illegal dumping in skips	As required	General Foreman	TBC
Liaising with Client, neighbours, other contractors and regulatory bodies	As required	Project Manager	Tim Finn 0872515742
Return printer / copier cartridges	As required	Site Administrator / Receptionist	N/A
Provide advice on hazardous waste handling and disposal	Ongoing	Environmental Coordinator	EM
Undertaking toolbox talks on waste procedures	Three per quarter	Site Safety, Health & Environmental Officer	Donal Keohane
Keeping records (eg checklists)	Weekly	Site Safety, Health & Environmental Officer	Donal Keohane
Completing hazardous waste consignment note	As required	Specialist Hazardous Waste Contractor	N/A
Internal audit	Quarterly	BAM Environmental Coordinator & Site Safety, Health & Environmental Officer	EM/ CW/DK

7. MONITORING AND AUDIT

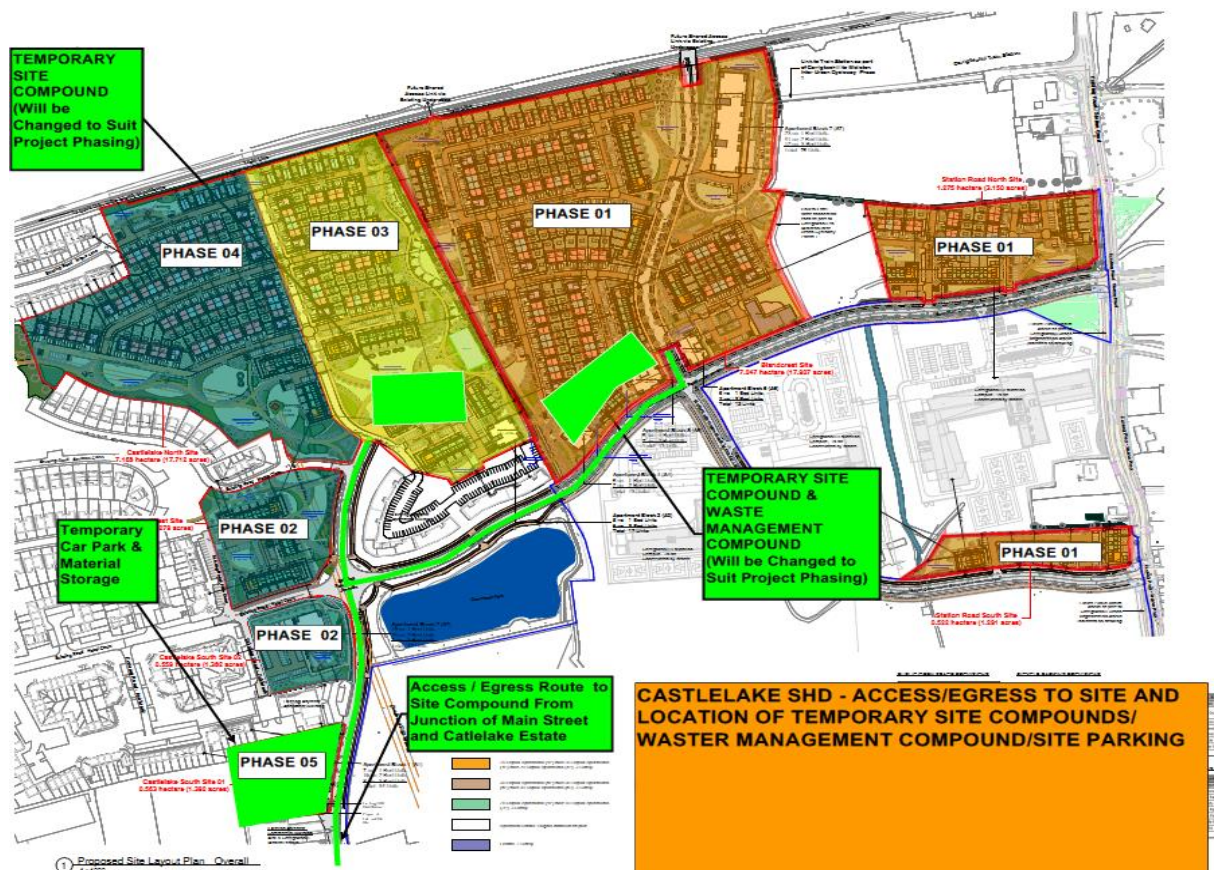
Monitoring of the waste management plan will be undertaken at various levels. The Project Manager (or similar) is responsible for tracking quantities of material sent for recycling, recovery or disposal and costs associated with each waste stream.

Monitoring the on-site implementation of waste handling procedures shall be undertaken by the General Foreman on an ongoing basis and should be reported weekly as part of the Foreman's Weekly Safety & Environment checklist. Monitoring of the skips in the main compound is undertaken by the Stores Manager or General Foreman as detailed before, and this is checked by the Safety, Health & Environmental Officer once a week as part of the general environmental inspection. Inspection reports are kept in a file on site by the Site Safety, Health & Environmental Officer. In consultation with the Site Safety, Health & Environmental Officer the General Foreman shall be responsible for any action required as a result of the weekly inspection to ensure compliance with the waste management procedures.

An audit of the waste management plan and procedures will be conducted by the Environmental Coordinator at three to six month intervals, as specified in the Site EMP.

8. APPENDIX 1. SITE MAP (SHOWING WASTE STORAGE AREAS)

On site in compound – changes through whiteboard meetings to be updated on site.



9. APPENDIX 2. WASTE LICENCES AND PERMITS

Will be located on site on site start up.

10. APPENDIX 3. WASTE CONTRACTOR CHECKLIST

Table 4. Waste contractor checklist

Question	Yes	No
Do you have a Waste Collection Permit (WCP) for EVERY Waste Contractor that collects ANY waste from the site (full copies including Appendices A, B, C & D)	✓	
Is the waste contractor permitted to collect the type of waste in question? Is the specific waste type being collected detailed in the waste collection permit?	✓	
Have you contacted the waste contractor and asked what licensed/ permitted facility our waste is being brought to?	✓	
Is this licensed/ permitted facility stated in the waste collection permit? If not, the waste contractor should be contacted and asked.	✓	
Have you checked the waste facility permit/ license to see if they can accept the waste in question? (It is very important to check this if the waste is hazardous)	✓	
Have you checked the waste transfer notes comply with EA-20 and EA-39 on Waste Transfer Notes	✓	
Have waste transfer forms been obtained for all hazardous waste removed off site?	✓	
Have waste export certificates (if applicable) been obtained for any hazardous waste shipped outside of the Republic of Ireland?		No
Have destruction certificates been obtained for all hazardous waste removed off site?		No

11. APPENDIX 4. DEFINITIONS

Re-use

Products or components that are not waste are used again for the same purpose for which they were conceived.

Recycling

Any recovery operation by which waste materials are reprocessed into products, materials or substances.

Recovery

Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfill a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

Disposal

Any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I sets out a non-exhaustive list of disposal operations.

Inert Waste

Waste that;

- Does not undergo any significant physical, chemical or biological transformations,
- Will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter, or be adversely affected by other matter, including waters, with which it comes into contact in a way that causes or is likely to cause environmental pollution, or
- Will not endanger the quality of surface water or groundwater.

Hazardous Waste

Waste which displays one or more of the hazardous properties listed below:

- Explosive
- Oxidizing
- Highly flammable (liquids, substance, solid liquid, gaseous substance)
- Flammable liquid substances
- Irritant
- Harmful
- Toxic
- Carcinogenic
- Corrosive
- Infectious
- Toxic for reproduction

- Mutagenic
- Waste which releases toxic or very toxic gases in contact with water, air or an acid
- Sensitizing substances
- Eco-toxic
- Waste capable by any means, after disposal, of yielding another substance, e.g. a leachate, which possesses any of the characteristics listed above.

12. APPENDIX - COVID 19 WASTE MANAGEMENT

Waste from a suspected case, the disposal of their PPE and the disposal of waste from cleaning the contaminated area cloths/mop heads etc

1. Waste should be placed in a plastic bag and sealed.
2. The plastic bag should then be placed in a second bag, which is then tied, and the date is labelled on the bag.
3. The waste must be stored safely and left for 72 hours.
4. Dispose of the waste as normal once the time has passed.
5. Ensure closed top pedal bin is in place in the isolation area.
6. The first aiders disposable PPE (apron, gloves etc) should also be removed as outlined above.
7. Arrangements to be made for the regular and safe emptying of bins.

In general, ensure enough bins are provided with regular removal and disposal, Dispose of used wipes/tissues/cleaning materials in a designated bin/sealed bag. Touch free bins to be provided where practical. Currently all other waste is to be disposed as usual. Refer to the BAM Good Practice Guide.



Environmental Management Plan

Site Name: Castlelake SHD, Carrigtwohill, Co. Cork.



Revisions

Environmental Dept. Revision No: 02 1 st June 2022			
Reason for Issue:			Client Approval (if required)
Originator	Reviewer	Approver	
Donal Keohane	Tim Flinn	Ollie Ryan	

Circulation

Copy	Circulation	Name	Company	Location
1	Construction Director	Ger Moloney	BAM	Little Island
2	Contract Manager	Ollie Ryan	BAM	Little Island
3	Project Manager	Tim Flinn	BAM	Site
4	Site Agent	TBC	BAM	Site
5	General Foreman	Seamus Treacy	BAM	Site
6	Site Health, Safety & Environmental Officer	Donal Keohane	BAM	Site
7	Co. Environmental Coordinator	Elaine Maloney	BAM	Head Office, Kill

Document Control Sheet for Environmental Management Plan

	Originator	Reviewer/Approver
Name:	Elaine Maloney	Kathy O'Leary
Date:	12.02.2021	12.02.2021

Site Name:	Document revised:	Env. Dept Rev No:	Site Rev. No:	Reviewed by:	Rev Date
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1. INTRODUCTION

This Environmental Management Plan (EMP) has been developed in accordance with BAM Contractors Environmental Procedures. The controlled copy of all environmental procedures is hosted on SharePoint.

This Plan is a working document, clearly stating the arrangements in place to manage the significant environmental aspects and legal requirements of this project. This Plan covers BAM Building activities and that of its subcontractors.

This Plan has been approved by BAM HSE Department at Kill and has the commitment of the Project Director, Project Manager and Project Team to fulfil the requirements of the Plan.

1.1. Purpose of the plan

This EMP describes how BAM will manage environmental performance for the Castl lake SHD Project.

This EMP has been developed within the framework of the BAM Contractors EMS. The BAM Contractors EMS is certified to ISO 14001:2015.

This Plan will:

- Identify the environmental obligations and the hazards and risks associated with the Castl lake SHD construction activities
- Assist in the prevention of unauthorised environmental harm
- Fulfil the environmental requirements as defined in the contract.
- Minimise potential impacts on the community that relate to the environmental aspects from BAM's construction activities.

1.2. Project description

The development will consist of the construction of a strategic housing development of 716 no. units and a 2 no. storey creche. The proposed development comprises 224 no. houses, 284 no. duplex units and 208 no. apartments. The two storey houses comprise 48 no. detached, 126 no. semi-detached and 50 no. terraced Houses containing 60 no. two bed units, 139 no. three bed units and 25 no. four bed units. The part-one to part-three storey duplex units are contained in 122 no. buildings providing 82 no. one bed units, 142 no. two bed units and 60 no. three bed units. There are 7 no. apartments blocks ranging in height from part-1 to part- 5 no. storeys.

Block 1 is 4 no. storeys and contains 34 no. units (7 no. one bed units, 19 no. two bed units and 8 no. three bed units).

Block 2 is part-1 to part-5 no. storeys and contains 42 no. units (15 no. one bed units, 20 no. two bed units and 7 no. three bed units).

Block 3 is 5 no. storeys and contains 17 no. units (8 no. one bed units and 9 no. two bed units).

Block 4 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 5 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 6 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).

Block 7 is 5 no. storeys over basement and contains 76 no. units (23 no. one bed units, 41 no. two bed units and 12 no. three bed units).

All blocks contain ancillary internal and external resident amenity space.

The proposed development also provides for: hard and soft landscaping; boundary treatments; public realm works; car parking; bicycle stores and shelters; bin stores; lighting; plant rooms; and all ancillary site development works above and below ground. The application site is positioned to the north-west of the centre of Carrigtwohill comprised of a series of land parcels with a combined area of 18.3 hectares.

1.3. Working hours

Working hours are in accordance with the Planning Conditions and Environmental Legislation. The expected hours of work are Monday to Friday 07:00 – 19:00hrs and on Saturdays 08:00 – 13:00hrs.

1.4. Plan objectives

The objectives of this EMP are to:

- Act as a continuous link and reference document for environmental issues between the design, construction, testing and commissioning stages of the Project
- Demonstrate how construction activities and supporting designs will properly integrate the requirements of environmental legislation, planning consent conditions, policy, good practice, and those of the environmental regulatory authorities and third parties
- Record environmental risks and identify how they will be managed during the construction period
- Record the objectives, commitments, and mitigation measures to be implemented together with programme and date of achievement

- Identify key staff structures and responsibilities associated with the delivery of the Project and environmental control and communication and training requirements as necessary
- Describe the proposals for ensuring that the requirements of the environmental design are achieved, or are in the process of being achieved, during the contract period
- Act as a vehicle for transferring key environmental information at handover to the body responsible for operational management. This will include details of the asset, short and long-term management requirements, and any monitoring or other environmental commitments
- Provide a review, monitoring and audit mechanism to determine effectiveness of, and compliance with, environmental control measures and how any necessary corrective action will take place.

1.5. Review and update

This plan will be updated at a minimum of six-monthly intervals unless significant changes take place in works being undertaken on site

2. ENVIRONMENTAL MANAGEMENT SYSTEM

2.1. Project organisation

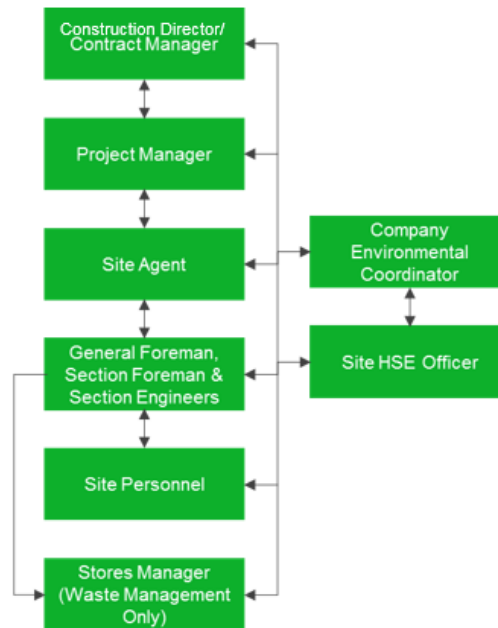


Figure 1: Environmental organisation chart

2.2. Communication

The principal lines of internal communication in relation to the EMP are shown above. Environmental issues are communicated to staff through the site induction, toolbox talks and HSE meetings.

Communication with other external parties will be in accordance with the consultation requirements (Section 6) and in response to complaints (Section 3).

2.3. Responsibilities

Table 1: Roles and responsibilities

Name	Initials	Company	Role (Job title)	Environmental management responsibilities
Elaine Maloney	EM	BAM	Company Environmental Coordinator	<ul style="list-style-type: none"> • Advises on environmental issues and controls, and conducts internal environmental audits.
		BAM	Construction Director/Contracts Manager	<ul style="list-style-type: none"> • Approves and implements EMP.
		BAM	Project Manager/Site Agent	<ul style="list-style-type: none"> • Monitors implementation of control measures, ensures that activities, including subcontractor activities, comply with the requirements of the relevant performance requirements.
		BAM	Site Safety, Health Environmental Officer	<ul style="list-style-type: none"> • Conducts weekly environmental checks and raises any non conformances with site management. • Carries out toolbox talks on environmental issues. Coordinates emergency response, including spills. • Checks spill kits and orders spill control materials when required. • Ensures the Environmental documentation is kept up to date in line with current works and is circulated. • Ensures Safety Data Sheets are communicated with users. • Coordinates water/noise/dust monitoring and remedial actions
		BAM	Site Engineer	<ul style="list-style-type: none"> • Ensures that works are carried out in accordance with the EMP and with the approved works method statement.
(Various)		BAM	Foremen/Supervisors	<ul style="list-style-type: none"> • Carries out toolbox talks • Ensures compliance with water/noise/dust monitoring and remedial actions • Ensures that works are carried out in accordance with the EMP and with the approved works method statement • Performs weekly environmental inspections.
		BAM	Quantity Surveyors	<ul style="list-style-type: none"> • Tracks the costs associated with the implementation of environmental matters and forwards to the Company Environmental Coordinator as required.

3. ENVIRONMENTAL MANAGEMENT ARRANGEMENTS

3.1. Environmental management

The environmental management system (EMS) complies with the ISO 14001:2015 standard. Those aspects of the EMS relevant to this Project are outlined in this document which also contains references to specific procedures.

3.2. Planning

The environmental planning for the project is based on information from:

- The clients project information and tender documentation
- Local Authority Planning Permission
- Appropriate Assessments

Such information has been used in the environmental assessment of the activities for this project.

3.2.1. Monitoring and checking

The significant environmental aspects of the project are monitored regularly by carrying out the following at the frequency stated below:

Table 2: Monitoring and checking

Monitoring and Checking	Frequency
Environmental Inspections by Project Managers	Monthly
Environmental Inspection by Foremen	Weekly
Environmental Audits by Env Co-ordinator	Quarterly/6monthly
<i>Surface Water Inspections (recorded)</i>	<i>As required when working on or around existing watercourses</i>
<i>Surface water inspection (visual)</i>	<i>Daily</i>
<i>Noise and Vibration Monitoring (where applicable)</i>	<i>N/A</i>
<i>Dust Monitoring (visual)</i>	<i>As required</i>
<i>Permit to pump water in use (where applicable)</i>	<i>As required.</i>

3.2.2. Action register

A record of environmental management actions is to be kept on site. The progress for all actions is reported regularly to the appropriate member of the Management Team. Such actions will include information taken from:-

- Environmental inspections
- Audit actions: non-conformances and observations
- Progress of actions following environmental incidents
- Significant communications with stakeholders
- Project issues requiring management action
- Complaints

These actions will be added to the action register, closed out in the suitable timeframe by the appropriate person.

3.2.3. Performance

Environmental Performance of the project is monitored by:

- Environmental review meetings as a part of the Monthly HSE Meetings
- Site inspections
- Audits conducted by the HSE Department, by external organisations or by the Client
- A review of the quantities of waste created
- External communications and feedback
- Review of objectives and targets (targets table Section 7)
- Sustainability (CSR) reporting

3.3. Communications

3.3.1. Environmental complaints

All environmental complaints will be recorded in the project Complaints Register. The Register is maintained on site by a nominated member of the Management Team who also allocates responsibility for resolving any issues and follows up complaints to ensure they are resolved. Any issues that are deemed to be significant will be reported to the Site Management Team and the relevant authorities as appropriate. Complaints are reviewed during internal audits by the Environmental Coordinator, where any additional measures to improve performance are discussed. Complaints are reported to Head Office also. See EP-24 Complaints Procedures for more details.

All complaints received from external sources and incidents must be reported to the Project Manager

Environmental incidents

Environmental incidents are categorised in terms of major or minor.

Major environmental incident is any situation which has resulted in significant pollution requiring high levels of resources for response and remedy and must therefore

be reported to Site/Company Management, the Client and or any relevant statutory authority.

Minor environmental incident is any situation which has resulted in environmental pollution which required minimal action to aid recovery from Site/Company Management. Non reportable to the Client and/or any relevant statutory authority unless this requirement is stated elsewhere.

Refer to Environmental Procedures EP-06 and EP-24 for more details.

The Site Team will:

- Inform relevant person(s) on site
- Report the environmental incident immediately to the HSE Department
- Investigate and issue reports on environmental incidents (using the incident reporting system on BIM)
- Ensure corrective action is taken

Actions regarding specific incidents including water pollution and exceeding the limit levels for dust, noise, and vibration, are detailed in Section 8.

Report all environmental Incidents immediately to the HSE Department.

3.4. Subcontractors and suppliers

3.4.1. Subcontractors

All subcontractors will be required to work in accordance with BAM Contractors Environmental Management Plan. Work operations will be managed by the relevant Project Managers / Site Agents to ensure appropriate procedures are being followed. ISO 14001:2015 states consideration should be given to the aspects related to the organisation's activities, products, and services such as environmental performance, lifecycle perspectives and practices of contractors and suppliers. In order to achieve this, we ensure our subcontractors sign contracts which state they must comply with our Environmental Policy, our EMS and work within the Environmental Legal Framework while working for us on our projects.

During the recruitment stage, we would enquire as to whether they had been prosecuted with regard to breaching environmental legislation and this would also be considered. We would also enquire to the progress of their environmental management system (or equivalent) to ensure they were working in a responsible fashion and in a way which would be similar to BAM Contractors. Lines of communication would also be outlined during this recruitment stage to ensure they were aware of our environmental management system and how this will affect them and what they need to achieve in order to be suitable candidates for our Projects.

BAM have developed an online appraisal system which assesses the performance of current and previous subcontractors contracted by the company. The system requires project staff to assess and grade individual subcontractors on categories including Health, Safety and Environment, Quality, Programme and Commercial. Under our Commercial procedures, staff contracting and procuring from subcontractors and

suppliers must review the appraisal system prior to any contractual agreement. Under the appraisal management system if subcontractors or suppliers fail to meet the minimum rating, a warning is issued, and the subcontractor is removed from our approved subcontractors and suppliers list.

A list of subcontractors has been identified in the following table.

Table 3: Subcontractors

Contract	Company	Environmental contact	Commencement date	Duration
Formwork/ Concrete	To be appointed			
Groundworks	To be appointed			
Blockwork	To be appointed			

3.4.2. Suppliers

All suppliers and sub-contractors are made aware of the company’s environmental and CSR policies and the project specific environmental requirements. BAM aim to collaborate with supply chain partners so as implement circular economic business models and achieve a positive environmental and economic impact. Innovative thinking between suppliers and subcontractors are therefore encouraged to promote recycling of materials and the use of sustainable materials.

An employee supervises all deliveries of environmental hazardous materials.

4. SUMMARY OF EMERGENCY PROCEDURES

Environmental emergency procedures relating to this Project include:

- Emergency Procedures for sediment release to water (EP-23)
- Containing and cleaning up spills (EP-15)
- Environmental Incident Procedure (EP-06)
- Environmental Complaints and Incidents Procedure (EP-24)
- BIM online incident tracking system.

For more detailed information please refer to <Environmental Emergency Plan>.

5. ENVIRONMENTAL PLANNING, ASPECTS AND CONTROLS

5.1. Environmental risk assessment

During the first visit to site, notes are produced which identifies any significant environmental aspects. These notes are compared with the environmental information supplied by the client (where applicable) and used as a basis for performing the environmental risk assessment.

5.2. Environmental risk assessment report

The significance of all the environmental aspects for each activity on the project have been assessed. The assessment followed the method defined in EP-02 Environmental Risk Assessment.

Refer to **Appendix 3** for the risk assessment report for this project.

5.3. Environmental assessment and management controls

The management controls, which have been put in place, are appropriate to the nature, duration, and scale of the activity on this project and the particular sensitivity of the local environment. They will be revised in the event of any significant changes to the scope of the activity during this Project, especially when there is additional works, or a change in the method of works.

Additional management controls will be adopted when there are changes to client requirements, stakeholder interests to a particular local environmental sensitivity.

The significant risks which are highlighted in the risk assessment and the management controls are communicated to the workforce by site inductions and toolbox talks.

5.4. Method statements

The significant environmental aspects and the actions to apply the required controls are described in the method statement.

Method statements are produced in accordance with the contract requirements by the Site Management Team and reviewed by the Project Managers/Site Agents prior to submission for approval. When developing method statements, the EMP, Site Maps and any other relevant environmental management documents will be reviewed to assess the potential impacts of the particular activity.

All method statements will include a section entitled *Environmental and Waste Management*. For activities that have significant potential to cause adverse environmental impacts reference will be made in this section of the method statement to the control measures in Section 8 of the EMP. Additional control measures may be included where those in Section 8 prove inadequate to suit the local conditions at the

site of the activity, and/or where specific measures are required by any of the authorities. The method statement must include:

- The proposed method of construction and how impacts will be mitigated
- Waste (storage, removal, end disposal sites where known)
- Hazardous substances (storage, removal, and end disposal sites where known)
- Works close to waterways (sediment controls if needed)
- Dust
- Noise and vibrations
- Refuelling
- Fuel storage
- Drip trays/spill kits and other precautionary measures

Prior to the commencement of the works, all Method statements will be reviewed by a competent person by referring to Section 8 of the EMP. Following the review, improvements will be made to the method statements as required.

6. ENVIRONMENTAL COMPLIANCE

In accordance with Environmental Procedure 01 (EP-01) Environmental Compliance Assessment, a review of all relevant literature and contractual requirements relevant to the contract will be completed.

- Planning Conditions
- Contract Documents
- Preliminary Health and Safety Plan
- All other contractual conditions and documents.

These requirements have been tabulated in Appendix 2 (table of contractual requirements) to demonstrate how each of the requirements is addressed in the EMP.

Evaluation of compliance

Compliance will be evaluated through inspections and audits and also reviewed at the regular site management meetings.

6.1. Consultation with relevant authorities

Consultation has been undertaken with the following authorities: Local Council

- EPA
- National Parks and Wildlife Services (NPWS)
- Inland Fisheries Ireland
- Irish Water.

6.2. Site restrictions and hold points

In accordance with the Contract clauses or notification from the Client or similar the following environmental restrictions apply to the construction of the works:

Table 4: Site restrictions and hold points

Clause	Restriction – refer to Contract for complete details
	Engagement with IFI when working on or around existing watercourses
	Consultation with site ecologist in advance of all works particularly to address measures to be undertaken with Invasive Species.

6.3. Environmental licences, permits and permissions

6.3.1. Maintaining arrangements for environmental licence, permits and permissions

These are all legal documents associated with the work and may be from a contractor/supplier/client, or it may be an EPA or Local Authority Licences/Permit and will be maintained by the Management Team on site.

6.3.2. Licences and permits

The Client will be requested to supply information on the licences and permissions that are required for the project. The responsibility for licence applications will be established at the start of the project or when changes occur.

The relevant environmental regulator may be informed early in the project of the environmental aspects of the work. A meeting on site will be arranged where applicable.

N.B. a copy of all formal licences is to be sent to the HSE Department, Kill.

The following table identifies the licences that may be required:

Table 5: Licences and permits

Licence/Permission	Regulator	Operations
Discharge consent into watercourse or sewer	Local Authority/Irish Water	Any solid or liquid entering controlled waters (river, pond, stream, ditch) unless it is clean water
Consent for work near a watercourse	Inland Fisheries Ireland	Any work which include work over or under the water
Permissions / Licences	National Parks and Wildlife Services	Cutting of protected trees, derogation licences for protected species (bats, badgers, frogs etc), work in or near any SPA, SAC, NHA. Licences for managing invasive species
Permissions / Licences	Department of Environmental, Communities and Local Government	Excavation work in any site containing archaeological remains or natural habitat, protected Monument.
Planning Permissions	Bord Pleanala/LA	All planning permission constraints
Waste licences/permits	EPA/LA/NWCPO	Transport and removal of waste offsite

6.4. Company policy and procedures

A copy of the Company Environmental Policy is displayed at the project site offices. The policy determines the company's overall approach to environmental management, which is developed through the EMS. This EMP has been developed taking into account the:

- Company Environmental Policy
- Objectives and targets as specified in the Yearly Environmental Plan
- Requirements of relevant specific procedures as contained in the Environmental Procedures Manual.

6.5. Relevant statutory provisions

A library of environmental legislation, relevant codes of practice, standards and best practice guidance documents is maintained at the BAM Head office in Kill, Co. Kildare.

This library is updated by the Company Environmental Coordinator through regular reviews or as required by changes in legislation and standards and developments in industry best practice. A register of legal and compliance obligations is on SharePoint for general viewing.

6.6. Design and life cycle perspectives

The environmental and sustainability requirements for the project design are reviewed by project designers and construction management team and incorporated into the project as appropriate. The design and lifecycle perspectives are also reviewed by the Project Managers and Engineers to ensure that the environmental and sustainability considerations relevant to the construction works are incorporated into the works.

All environmental impacts and aspects of the project's lifecycle, from the raw materials used, procurement processes, the transportation and delivery to site, material use in the building product or service, to the end-of-life treatment and final disposal of the materials and products will be assessed, with the most favourable environmental option used where possible.

Input and consideration from relevant stakeholders will also be incorporated into both the design and construction processes. Communication with stakeholders may take place at various stages and means e.g., planning process, community newsletters, project website, Client meetings etc.

6.7. Control of documents

All documents relevant to the construction works will be kept and stored in accordance with the below table. Documents that are part of the site environmental management system, including inspection reports, monitoring records and meeting minutes will be kept for the duration of the project as per UKAS (United Kingdom accreditation scheme).

Table 6: Control of documents

No.	Document	Raised by	Retained by	Statute or UKAS	Currently held	Retention times (years)
1	Register of Environmental Aspects	Env Co-ordinator	Env Co-ordinator	UKAS	Head Office and Sites	3
2	Waste Transfer notes (where applicable)	External	Env Co-ordinator Site	Statute	Sites	3
3	Hazardous waste transfer notes	External	Env Co-ordinator Site	Statute	Sites	5
4	Waste Collection Permits	Local Authority	Env Co-ordinator	UKAS	Sites	Period of validity +1
5	Waste Facility Permits/Licences	Local Authority/EPA	Env Co-ordinator	UKAS	Sites	Period of validity +1
6	Energy Monitoring Records	Env Co-ordinator	Env Co-ordinator	UKAS	Head Office and Sites	3
7	Water Monitoring Records	Env Co-ordinator	Env Co-ordinator	UKAS	Sites	3
8	Local Authority / Environmental Protection Agency Licences	Local Authority / EPA	Env Co-ordinator Site	UKAS	Sites	Period of validity + 1
9	Environmental communication from external sources	External	Env Co-ordinator	UKAS	Sites	3
10	Audit Reports	Env Co-ordinator	Env Co-ordinator Head Office	UKAS	Head Office and Sites	3
11	Corrective Action Forms	Env Co-ordinator	Env Co-ordinator Head Office	UKAS	Head Office and Sites	3
12	Env N/C or Env Incident Report	Any member of staff	Env Co-ordinator Head Office	UKAS	Head Office	3
13	Water treatment log sheets	Site Staff	Site Staff	UKAS	Site	3
14	Calibration Certificates	External testers	Site Staff/ Env Co-ordinator	Statue	Site	3
15	Environmental Management Plans	Site Staff	Site Staff	UKAS	Sites	3

No.	Document	Raised by	Retained by	Statute or UKAS	Currently held	Retention times (years)
16	Waste Management Plans	Site Staff	Site Staff	UKAS	Sites	3
17	Environmental Risk Assessment	Env Co-ordinator	Env Co-ordinator and HSE Officer	Best Practice	Head Office Sites	3
18	Department of Arts Heritage and Gaeltacht	Env Co-ordinator	Env Co-ordinator Site	Best Practice	Sites	3

Controlled documents will be:

- Reviewed at least annually and updated as appropriate;
- Marked as superseded once obsolete or destroyed;
- Dated and marked with dates of revisions.

7. ENVIRONMENTAL OBJECTIVES AND TARGETS

The objectives and targets are set in relation to the aspects identified from each site in order to reduce our significant aspects. As a minimum they should include:-

- The prevention of pollution, including missions to air, water, and land
- Nuisance impacts including dust, noise, and vibration
- Protection of habitat areas and individual species, if applicable
- Storage and use of fuels and hazardous substances, including spills
- Waste management.

7.1. Environmental management targets

The environmental management targets for the project are as follows.

Table 7: Environmental management targets

Targets	Measurable	Methodology	Responsibility	Timescale
Achieve zero incidents of contamination to ground water from concrete works	Incidents, site inspections, quarterly audits, complaints	BAM procedures to be followed when working with concrete and washing out concrete chutes	Site Management Team	Start to completion
Ensure sediment on roads is cleared.	Raise needs for road cleaning duties during wet or busy periods	Ensure roads are swept and cleaned on a regular basis. Road conditions within the site should be kept clean at all times.	Site Management Team	Start to completion
Generate <9.0t C&D waste per 100m ² (gross internal floor area)	Lean Construction Techniques, segregation more, reuse more (waste hierarchy)	Purchase less, ensure packaging is removed by supplier where possible and other materials reused & recycled	Site Management Team	Start to completion
Lower fuel and oil spillages from site activities. Bunds to be used with all fuels and oils	Environmental Incidents, spills contained in bunds	Ensure that drip trays are used at all times under static plant, when refilling, & storing, ensure fuel storage areas are banded.	Site Management Team	Start to completion
Ensure correct disposal of all hazardous wastes	Waste segregation, waste costs	All hazardous wastes to be disposed as per Irish Legislation and BAM requirements	Site Management Team	Start to completion

Targets	Measurable	Methodology	Responsibility	Timescale
Ensure no incidents of pollution to water.	Water monitoring and sampling activities. Environmental Incident.	Sediment controls to be used, no waters to be discharged to any controlled waters or drainage systems without approval. Work with CIRIA guidelines and apply BAM precautionary measures	Site Management Team	Start to completion
Lower consumption of materials and fuel on monthly basis (relative to project revenue)	Smart meters, energy bills, service costs	Ensure all energy using equipment is switched off when not in use. Select best value for money providers where possible	Site Management Team	Start to completion
Reduce site electricity on monthly basis (relative to project revenue)	Smart meters, energy bills, service costs	Ensure all energy using equipment is switched off when not in use. Select best value for money providers where possible	Site Management Team	Start to completion
Lower emissions of dust, smoke and fumes during works	Air quality, dust particle increase	Ensure all equipment is well serviced and maintained. Switch off equipment when not in use. Use dust suppression techniques when applicable	Site Management Team	Start to completion
Reduce amount of Public complaints	Complaints received to Site Management Team	Ensure when works which will impede public access are taking place, all residents are informed for the timescale (where applicable) and all restrictions are kept to a minimum	Site Management Team	Start to completion
Minimise water usage consumption	Water charges, waste water disposal (discharge volumes)	All grey water to be reused on site where possible. 'Fresh' water supply to be kept to a minimum where possible. TBT-12 Water on Construction Sites	Site Management Team	Start to completion

Targets	Measurable	Methodology	Responsibility	Timescale
Minimise risk of Aspergillus	Air quality, dust particle increase	National Guidelines for the Prevention of Noncomial Invasive Aspergillus during Construction / Renovation activities on Aspergillus Control will be adhered to	Site Management Team	Start to completion
Minimise airborne & ground bourne noise	Noise triggers breached (where applicable)	All construction noise limits set out in the requirements will be adhered to.	Site Management Team	Start to completion
Minimise vibration	Vibration triggers breached (where applicable)	All vibration limits set out in the works requirements will be adhered to.	Site Management Team	Start to completion
Ensure no vehicle movement and material placement does not cause damage to flora and fauna	Correct habitat protection used. Wildlife surveys where applicable	All fauna/animal species to be untouched where possible. Professional advice to be sought on removal procedures	Site Management Team	Start to completion

The standard environmental management goals for the project are to:

- Conduct all activities in accordance with the:
 - Company environmental policy and procedures;
 - Relevant statutory regulations and provisions;
 - Contractual requirements with the client; and
 - Requirements of relevant authorities;
- Minimise adverse environmental impacts during construction;
- Enhance natural environments during the course of construction, where practical
- Reduce the significance of our aspects and impacts through our working methods
- Increase subcontractor awareness of our EMS
- Increase company awareness of sustainability issues

BAM Contractors has established company environmental and sustainability targets which are documented in the 2021 Environmental Year Plan. These targets include;

- 3% reduction of total construction waste (relative to total revenue) compared to 2020.
- 5% reduction of the relative CO2 emissions (total CO2 per total revenue) compared to 2020.
- Achieve >98% recovery rate for all C&O waste.
- < 4 reported environmental incidents annually.
- Achieve zero spillages to water courses.
- < 10 reported environmental complaints annually.
- All sites to achieve 93% pass rate in environmental audits.
- ≤ 9.0t C&D waste generated per 100m² (gross internal floor area) *Target only applicable to building sites

In order to help achieve these targets, the below table highlights compliance tools.

7.2. Initiatives to achieve targets

Table 8: Initiatives to achieve targets

Sites	Area	Objectives and targets	Method for achieving	Assistance by HSE Dept. (method)	Responsibility
All sites and offices	Waste	Eliminate waste sent to landfill	Adhere to the waste hierarchy. Lean construction techniques	EA-30 Excavated materials on site (<i>Article 27 Notification Forms</i>). CIRIA documents on Lean Construction	Site Teams and HSE Dept.
		Increase site segregation of construction waste by 10%	Additional recycling skips on site Increase staff knowledge and participation	EP-16 waste definitions and classifications, TBT-03 Managing Waste, TBT-02 Environmental Awareness, EB-11 Site Set up	Site Teams and HSE dept.
		Increase recycling rates	Increase site awareness of improved waste management practices	Waste posters, environmental information to be issued focusing on new waste strategies	Site Teams and HSE Dept.
All sites and offices	Energy	SMART Meters for all sites	SMART meters installed in cabins	Advice on installation and data collected	Site Teams and HSE Dept
		Reduce CO ₂ emissions	Implement an energy reduction initiative in sites and offices	Environmental information to be issued focusing on new waste strategies	Site Teams and HSE Dept
		Temperature control in cabins	Thermostats installed	Advice on installation and data collected	Site Teams and HSE Dept

Sites	Area	Objectives and targets	Method for achieving	Assistance by HSE Dept. (method)	Responsibility
		Energy initiatives	SEAI Initiatives	Online calculation tools (energy) Energy posters Relatively paperless sites	HSE Dept IT Dept.
		Reduction in fuel usage / air emissions	Car Purchasing	Procurement of low emissions vehicles by Plant Department. Video conferencing capabilities in Offices to cut down on travel times, emissions.	Site Teams and HSE Dept
All sites and offices	Auditing And performance	All sites to achieve 'Pass' mark from quarterly audits >93%	Quarterly audits	Regular environmental information and directions to be issued to the sites	Sites Teams and HSE Dept.
		Appraisal system for environmental performance	Subcontractor appraisal system (COINS)	Detailed information of the systems and scores circulated to all.	Sites Teams and HSE Dept.

8. ENVIRONMENTAL CONTROL MEASURES

Control measures will be implemented both on an activity specific basis for the area of works, and independently of any specific activities as part of the general site management. Throughout this section reference may be made to standard procedures contained in the Environmental Procedures Manual that will be adopted on site. The Environmental Procedures are available on SharePoint.

The project will be developed in accordance with the control measures and with reference to the following guidance documents:

- BRE (2003) Control of dust from construction and demolition activities
- BS 5228-1: 2009+A1:2014 CoP for Noise and vibration control on construction and open sites: Part 1: Noise
- BS 5228-2: 2009+A1:2014 CoP for Noise and vibration control on construction and open sites: Part 2: Vibration
- BS 5837: 2012 Trees in relation to design, demolition and construction works
- BS8895-1:2013 Designing material efficiency in building projects Part 1: CoP for strategic definition
- CIRIA 741 (2015) Environmental Good Practice On Site (Fourth Edition)
- CIRIA 532 (2001) Control of Water Pollution from Construction Sites – Guidance for consultants and contractors
- IFI (2016) Guidelines on Protection of Fisheries during Construction Works in adjacent to Waters
- Fisheries Guidelines for Local Authority Works (Department of Marine and Natural Resources, 1998)

Other guidance documents may be referenced for specific issues throughout this section. Copies of these documents are held by the Company Environmental Coordinator and on SharePoint.

The control measures and monitoring requirements listed in this section must be implemented throughout the project.

8.1. Water Pollution Control

All watercourses that are potentially impacted by the works are identified on the site maps included in Appendix 4.

8.1.1. Water Pollution Control & Mitigation Measures

BAM as representative will secure the services of a suitably qualified Ecologist to act as an Ecological Clerk of Works (ECoW) to record the efficacy of water quality protection measures and measures to avoid noise disturbance to wintering birds set out in the following sections.

The following mitigation measures are included and will be completed as part of the Project.

Management of Water Quality

A Management Plan has been developed for the project to ensure that the construction works will not deteriorate the water quality and will safeguard existing water. The key to avoid impacts to water during the construction works is good site management practices, tight controls, regular inspections and ongoing vigilance with staff and employees on site.

Construction best practice measures (of relevance in respect of any potential ecological impacts) will be implemented throughout the project, including the preparation and implementation of detailed method statements. The works will incorporate the relevant elements of the guidelines outlined below:

- IFI (2016) *Guidelines on protection of fisheries during construction Works in and adjacent to waters* (IFI, 2016).
- Masters-Williams *et al.* (2001) *Control of water pollution from construction sites. Guidance for consultants and contractors (C532)*. CIRIA.
- E. Murnane, A. Heap and A. Swain. (2006) *Control of water pollution from linear construction projects. Technical guidance (C648)*. CIRIA.
- E. Murnane *et al.*, (2006) *Control of water pollution from linear construction projects. Site guide (C649)*. CIRIA.

In addition, the following construction surface water management measures will be implemented and monitored for the duration of the works. The potential for the construction works to have an impact on the quality of the local watercourses will be minimised through the implementation of the following control measures as outlined:

Contact will be maintained with the relevant authority such as the Inland Fisheries Ireland when required.

- Special attention will be paid to minimising the opportunities for wash-off of inert solids (usually from exposed soil mounds, embankments or excavated trenches etc.) from entering watercourses. Silt traps will be used where necessary around the open streams and watercourses.
- A sedimat will be utilised for the protection of streams from sedimentation damage during in stream construction activities for the installation of culverts,
- Care will be taken to avoid interference with the supply or quality of any groundwater resource.

- Waste products associated with the works will not be permitted to enter watercourses adjacent to the works through the use of French drains, petrol interceptors or other agreed methods.
- Water that is high in solids or contaminated with cement or oil, will not be pumped from excavations directly to watercourses without pre-treatment (e.g. sedimentation/ filtration and oil separation).
- All site run-off associated with the construction will be directed to storm control areas or tanks to prevent direct discharge into water courses.
- All operational machinery used in-stream will be kept to an absolute minimum.
- Spill kits will be provided at all river locations identified.
- Fuels, oils, greases and hydraulic fluids will be stored in bunded compounds well away from watercourses. Refueling of machinery, etc. must be carried out in bunded areas. Fuels will be stored during the construction phase in bunded fuel storage tanks with a 110% holding capacity. Where it is necessary to dispense fuels on site, this will be undertaken in areas covered with an impermeable surface to protect surface water and ground water;
- Construction works, especially ones involving the pouring of concrete, will be conducted in the dry. Precast concrete will be used in preference to uncured concrete, which kills aquatic fauna through alteration of stream pH. When cast-in-place concrete is required, all work will be done in the dry and allowed cure for 48 hours before re-flooding.
- To help prevent the contamination of the ground and groundwater, contaminated materials (oils, fuels, chemicals etc.) will be used and stored in an appropriate manner as outlined in the relevant guidance, i.e. CIRIA (2001) and DMRB Volume 11 (1994).

Should any monitoring or inspection indicate that pollution of the Castlake Roads Infrastructure or adjacent watercourses has occurred then the Site Management Team will immediately inspect all work activities to ascertain whether they are operating effectively. All works may be stopped and/or additional control measures installed to prevent further pollution or discharge to the watercourse. Appropriate action will be taken in consultation with the Site Agent. Water samples will be taken at the watercourse if required.

Silt Fencing

As an additional measure where the construction works are adjacent to a water course silt fencing will be installed. The purpose of the silt fence is to retain any soil and silt disturbed during construction and prevent it from entering into watercourses.

Inspection and Maintenance

The construction drainage system for the proposed development must be managed and monitored at all times and particularly after heavy rainfall events during the construction phase. The construction drainage system will be regularly inspected and maintained to ensure that any failures are quickly identified and repaired so as to limit/prevent water pollution.

Management of Concrete

To reduce the potential for cementitious material entering surface waters, concrete pours will be supervised by the Construction Manager, a suitably qualified Engineer and the Environmental Manager. 22461 Castlelake Strategic Housing Development EIAR 61 May 2022

Management Measures will include the following:

- The Construction Manager will ensure that the area of the pour is completely drained of water before a pour commences.
- Pours will not take place during forecasted heavy rainfall;
- Incidental rainfall from light showers during the period of a pour is typically absorbed into the concrete matrix but heavier showers can result in some run off from the top surface of the concrete pour. If run-off is encountered the Environmental Manager will block the outflow from the drains to retain or treat the run-off until the pH is neutral before discharge to the drainage network;
- In the event of a spillage on site, the Environmental Manager will temporarily block the dirty water drains in the immediate area and monitor the pH levels of the water in the open drainage channel and if necessary, will adjust the pH levels using CO2 entrainment. Any spillage will be cleared immediately and deposited in the Chute wash down area;
- To reduce the volume of cementitious water, washout of concrete trucks will not take place on site. Concrete trucks will be washed out off site at the source quarry. Only Concrete truck chutes will be allowed to be cleaned on site at a central concrete wash out area.

Fuel and Oils Management

Fuel Management Measures that will be employed during the Construction phase include:

- The potential for hydrocarbons getting into the existing drains and Lough Mahon will be mitigated by only refuelling construction machinery and vehicles in designated refuelling areas using a prescribed re-fuelling procedure;
- Refuelling will be carried out using 110% capacity double bunded mobile bowzers. The refuelling bowser will be operated by trained personnel. The bowser will have spill containment equipment which the operators will be fully trained in using;
- To reduce the potential for oil leaks, only mechanically sound vehicles and machinery will be allowed onto the site. An up to date service record will be required from the main contractor;
- Mobile bowzers, tanks and drums should be stored in secure, impermeable storage area, away from drains and open water.
- Collision with oil stores will be prevented by locating oils within a steel container in a designated area of the site compound away from vehicle movements.
- Potential leaks from delivery vehicles will be reduced by visually inspecting all delivery vehicles for major leaks. Contractors supplying concrete and crushed stone to the site will be contractually required to supply their products using roadworthy vehicles;
- Should there be an oil leak or spill, the leak or spill will be contained immediately using oil spill kits. This contaminated material will be properly disposed of in a licensed waste facility;
- The Environmental Manager will be immediately informed of the oil leak/spill, and will assess the cause and the management of the clean-up of the leak or spill. They will inspect nearby drains for the presence of oil, and initiate the clean-up if necessary;
- Immediate action will be facilitated by easy access to oil spill kits. An oil spill kit that includes absorbing pads and socks will be kept at the site compound and also in site vehicles and machinery;
- Corrective action in the event of a leak or spill will be facilitated by training all vehicle/machinery operators in the use of the spill kits and the correct containment and cleaning up of oil spills or leaks. This training will be provided by the Environmental Manager at site induction;
- In the event of a major oil spill, a company who provide a rapid response emergency service for major fuel spills will be immediately called for assistance, their contact details will be kept in the site office and in the spill kits kept in site vehicles and machinery.

- Long term storage of waste oils will not be allowed on site. These waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider.

Stream Enhancement Works

Some reaches of the Woodstock Stream within the study area have been modified in the past and/or degraded due to adjacent land practices and/or re-sectioning (straightened and realigned). The physical character of the Woodstock Stream will be diversified by using guidance in '*Channels and Challenges - the Enhancement of Salmonid Rivers* (O'Grady, 2006) as well as O'Grady *et al*, (2017). This will increase the quality and quantity of salmonid spawning, nursery and holding habitat. This will offset past degradation and compensate for any impacts that may occur during construction stage on these reaches of the Woodstock Stream.

The following is proposed regarding enhancement of the Woodstock Stream:

- Instream enhancement and riparian enhancement;
- Removal of most of concrete rubble. Some can be used in conjunction with imported gravel to create instream features;
- Creation of riffle, glide¹ and pool sequences along both reaches by installation of rock pools. This installing a series of stone weirs (notched and vortex) at gradient breaks and higher gradient stretches along the channel. Weir construction would be at least seven channel widths in distance apart;
- Introduction of instream random boulders;
- The works will commence at the top of the reach and progress downstream;
- The works would be undertaken outside the salmonid spawning season, so would have to be carried out between June (or July) – September inclusive; and
- Riparian enhancement will involve the sporadic planting of native trees and shrubs.

These works would be overseen by the ECoW who will be familiar with rivers work and have a good knowledge of salmonid habitat requirements. To this end, the ECoW will have a general knowledge of content outlined in publications such as '*Ecology of the Atlantic Salmon*' (Hendry and Cragg-Hine, 2003) and '*Trout and Salmon - Ecology, Conservation and Rehabilitation*' (Crisp, 2000). Duties will include the delivery of toolbox talks and monitoring of construction phase to ensure all environmental controls with reference to IFI (2016) are implemented in full. The ECoW would consult/liaise with the IFI during the works.

Under the Fisheries (Consolidation) Act, 1959, and as revised (2010), it is an offence to disturb the bed of a river; therefore it will be necessary to get written permission from Inland Fisheries

Ireland to proceed with the works in any areas where disturbance to the spawning and nursery areas of salmonids will occur as a result of the proposed development.

8.1.2. Water Pollution Incidents

Should any monitoring or inspection indicate that pollution of the *Castlelake SHD Project* or adjacent watercourses has occurred then the Site Management Team will immediately inspect the all work activities to ascertain whether they are operating effectively. All works will be stopped and/or additional control measures installed to prevent further pollution or discharge to the watercourse. Appropriate action will be taken in consultation with the Project Manager. Water samples will be taken at the watercourse if required. The incident will be logged on the incident reporting system on BIM.

8.2. Invasive Species Action

During an ecological survey site visit in August 2021 in relation to the preparation of a report to inform the appropriate assessment screening (“AA screening report”), the following invasive species were identified within the redline boundary of the proposed development site:

- Himalayan balsam (*Impatiens glandulifera*);
- Japanese rose (*Rosa rugosa*)



Figure 2: Showing areas of Himalayan balsam (*Impatiens glandulifera* – green hatching) within and adjacent to site and Japanese Rose location (*Rosa rugosa*) within the site redline boundary (pink circle)

8.2.1. Himalayan Balsam (*Impatiens glandulifera*) Eradication

Best Practice Management Measures

Himalayan balsam (*Impatiens glandulifera*) is listed on the Third Schedule of the Birds and Habitats Regulations and is considered a high-risk invasive species, which has the ability to create competition for resources such as pollinators, light and space, posing a threat to native plant species.

In line with guidance published by the National Roads Authority, now Transport Infrastructure Ireland (The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads, 2010) the following control options were identified:

Option 1 – Physical control: Physical removal should be attempted where the ground is level and good access is possible. In the circumstances, plants can be strimmed, cut, or mown back to ground level before flowering in June. The plant should be cut as low as possible, or at least below the lowest node, otherwise re-sprouting will occur. Any mechanical removal of Himalayan balsam before June will promote greater seed production in re-growth. The area should be mown regularly to prevent sprouting and flower formation and repeated annually until area is under complete control.

Hand pulling is also another effective method of removal given the shallow rooting of Himalayan balsam. Hand pulling should be repeated in August to deal with sprouting of seeds. Plant material can be disposed of via compost, though due to potential presence of seeds, disposal of landfill or disposal by burning may be favourable.

Option 2 – Chemical control: Effective control of Himalayan balsam using chemical application of glyphosate or 2, 4-D amine applied during the active growth phase in late spring targeting germinating seedlings. However, it should be noted that glyphosate is a broad-spectrum herbicide so care should be taken when applying amongst sensitive species or adjacent to waterbodies where there should be a buffer zone of no chemical application, according to the product instructions.

Grasses are unaffected by glyphosate; therefore, chemical control may be preferable in circumstances wherein grass types are present. Guidelines recommend repeat treatments for five or more year. Ongoing monitoring of the site will also be required in spring and summer to assess seedling presence and possible further control measures.

Proposed Measures for Eradication of Himalayan Balsam at Carrigtwohill

It is recommended that a combination of the options outlined above is undertaken to eradicate and avoid the spread of the plant both within and outside of the site. The proposed measures are outlined in the following section.

Due to the extensive nature of the established Himalayan balsam on site, existing plants will be mowed to ground level before flowering occurs in June and where ground is level. Hand-pulling methods may also be employed during the pre-flowering season and is most effect following rainfall. Pulled and mown sites will be revisited in August for follow-up pulling. Stockpiled material should be removed, covered and fenced off, to prevent any

further spread of seeds on site. Works will be undertaken always using a single designated piece of machinery, e.g., one strimmer, mower, cutter etc. Vegetation material removed via physical controls should be disposed of via landfill or burning to remove risk of by propagation by seeds. Coincidentally, chemical control measures may be employed in late April to May, during the active growth phase in late spring, using glyphosate. The chemical treatment may be applied using foliar spray, wiper application or spot treatment. Areas treated with glyphosate will require retreatment in later summer months to target seedling germination and again annually for ongoing control. Given the extensive nature of Himalayan balsam at the site, it is recommended that follow up monitoring is undertaken on the site and spraying of regrowth carried out as necessary. Further to the above, toolbox talks will be carried out to communicate measures to all personnel involved.

Biosecurity Measures

In addition to the above, the following biosecurity measures will be implemented:

- Any vehicles/plant operating within the infested areas will be cleaned thoroughly when entering and / or leaving the exclusion zones.
 - o Designated wash-down areas will be set up within the exclusion zone, and away from drains and watercourses; plant/equipment will be washed down on geotextile membrane, so that any potential contaminated material will be contained.
 - o Vehicles will be cleaned of all earth and loose sediments, with particular attention paid to tyre treads, wheel arches and hinged joints.
 - o The minimum amount of machinery possible will be used to minimise the potential spread of the species.
 - o All tools, materials and work wear will be inspected, and cleaned as necessary, with particular attention paid to footwear and hand tools.
- Work boots will be dipped in or scrubbed with a disinfectant solution and thoroughly dried afterwards before being used on the site for the first time;
- PPE and tools will remain on site for the duration of construction;
- All PPE will be visually inspected and any attached vegetation or debris removed.

8.2.2. Japanese Rose Eradication

Best Practice Management Measures

Though not a species listed under Third Schedule, control of Japanese rose to prevent its spread within the area should be implemented to avoid inadvertent propagation of this species. Physical removal of the entire plant, at both small- and large-scale infestations, is recommended. Chemical control using herbicide is also an effective control.

Proposed Measures for Eradication of Japanese Rose at Carrigtwohill

Physical removal of the plant by hand-pulling is effective for small populations but roots and rhizomes must also be removed to prevent recolonisation. Hand-pulling can be combined with application of glyphosate. Applications of the herbicide can be made with

brush to avoid affecting other plants. As per chemical control of Himalayan balsam, use of herbicide must be fully in keeping with manufacturer instructions and with consideration to appropriate buffer zones when adjacent to water bodies. Follow up monitoring and treatment will be necessary to ensure full long-term eradication (Weidema, 2006).

Biosecurity Measures

Japanese rose is suspected to disperse via rhizomes, water, and seeds within fruit. Therefore, a similar protocol as that described for 8.2.1 should be employed when removing Japanese rose.

8.3. Noise & Vibration Control

The primary sources of noise and vibration associated with the project have been identified as follows:

- Machinery
- Concrete Pours
- Hand tools
- Generators.

Noise criteria used for assessing the significance of construction impacts are as follows: *example given below – amend as per contract requirements or use BS 5228-1:2009+A1:2014)*

Period	Hours	Ambient Noise Level, Leq measured on site (dB(A) Note 1	Period of hours over which Leq, is applicable	Maximum allowable sound level on site (dB(A) Note 2
Days	0700 – 1900	65	1 hour	80
Evening	1700 – 2200	55	1 hour	65
Weekends	0800-1300	55	1 hour	65

Note 1: Determined from Methodology in BS 5228 Noise & Vibration from Open and Construction Sites.

Note 2: Sourced from National Roads Authority Guidelines for the Treatment of Noise and Vibration in National Road Schemes.

These levels apply at 1m from the façade of neighbouring noise sensitive buildings.

Operating limits for vibration are as follows:

Frequency	Vibration Limit	Intervention Value
<10 Hz	8mm/s	6mm/s
10 to 50 Hz	12.5mm/s	10mm/s
50 to 100 Hz	20mm/s	16mm/s

All works are scheduled to be completed within the *Working hours are in accordance with the Planning Conditions and Environmental Legislation in that we will operate between Monday to Friday 07:00 – 19:00hrs and on Saturdays 08:00 – 13:00hrs. No works will occur on Sundays or Bank Holidays & as specified in the contract.*

Best practicable means should be employed to minimise noise levels, in accordance with the British Standard BS 522: 2009+A1:2014. Noise and vibration control on construction and open sites (Parts 1 and 2) for basic information and procedures for noise and vibration control. A copy of this standard is available at the site or from SharePoint.

8.3.1. 8.2.1 Noise & Vibration Control Measures

Noise reduction measures will be undertaken in accordance with the Procedure EP-09 Noise and Vibration Control, which has been developed taking into account the requirements of BS 5528, particularly Section 10, and include:

*Plant and machinery in good order
Working within the allowed site hours
Turning off machinery/ plant when not in use.
RAMS to include specific noise controls*

8.3.2. Noise and vibration monitoring

Noise will be monitored regularly and recorded for high noise generating activities via a handheld monitor as required.

All boundary walls/ structures will be surveyed and recorded prior to any works commencing and will be visually monitored during construction works.

8.3.3. Noise and vibration incidents

Should any monitoring indicate that noise or vibration levels have exceeded the intervention values then the plant or equipment causing the noise / vibration will be powered down immediately. Appropriate action will be taken in consultation with the Project Manager to reduce the noise and/or vibration levels. Actions may include:

- Servicing and or modifying the plant / equipment
- Replacing the plant / equipment
- Moving the operation away from sensitive receptors
- Rescheduling the activity
- Erecting noise barriers where other measures are not practical

When noise and vibration monitoring is taking place, all monitors should take into account the background noise and situation when monitoring. External noise and vibration reports to reference to this fact also.

The incident will be logged in the Incident Register if levels have been breached and background noise was deemed not a factor at the time of the occurrence.

8.4. Air pollution control

The main types of air pollution that will result from the works are dust and exhaust emissions from combustion engines, and plant machinery and vehicles. Activities with the potential to produce dust are:

- Plant and vehicle movement
- Bulk materials handling
- Stockpiles
- Vehicle movement off site
- Include any additional sources

8.4.1. Dust minimisation plan

Dust will be minimised on site through the implementation of the following control measures developed in accordance with the Procedure EP-08 Air Pollution Control:

The site will use a water bowers to dampen site roads during dry conditions.

Water suppression will be used at source to reduce the amount of nuisance dust becoming airborne.

8.4.2. Other air quality control measures

- Exhaust emissions where practical will be minimised by ensuring that all plant, equipment and vehicles are in good working order and regularly serviced to ensure efficient running, by using the smallest engine-sized plant and equipment suitable for the task and by ensuring that engines are not left idling unnecessarily.
- Burning of materials on site will not be permitted.

8.4.3. Dust monitoring

Dust Monitoring will be carried out visually by the site team during the course of the working day.

8.5. Habitat (Flora & Fauna) Protection

Generally ecological mitigation measures are incorporated into the project design and the requirement during the construction stage is to ensure that all mitigations are fully implemented. Additional measures may be implemented during construction to limit additional habitat and fauna disturbance outside the area of works as listed below.

All work activities will comply with the Environmental Protection Agency Act 1992 and Wildlife Act 1976 and amendments 2000 to 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011.

8.5.1. Construction mitigation measures

Control measures will be implemented in accordance with EP-12 Habitat, Flora and Fauna Protection *and the following site specific measures:*

An Ecologist to be engaged for works prior to commencing on site.

No nighttime construction works will take place.

Scrub clearance and tree felling will take place outside of the bird nesting season which is from 1st March -30th August inclusive.

Noisereduction measures will include:

Locate plant known to emit noise in one direction away from sensitive receivers.

Ensure plant & equipment is well maintained and lubricated.

Prevent machine idling.

Start up plant sequentially

Plan noisy activities to minimise effects on sensitive receivers.

Plant selection to minimise effects on sensitive receivers.

8.5.2. Fish and Fisheries Habitat Mitigation Measures

Refer to the mitigation measures in section 8.1 for water pollution.

Additional measure to mitigate potential pollution to fish and fisheries habitat are as follows:

Refuelling of all plant and machinery will be carried out with bunds in place.

Drip trays will be in place for all re-fueling and storage of liquids/ fuels.

Pumping of any water will be done via permit system.

All works undertaken to existing watercourses to include any ecological requirements and advice of IFI.

8.5.3. Bats

Mitigation for bats will follow:

Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes (NRA, 2005a);

- Guidelines for the treatment of bats during the construction of National Road Schemes (NRA, 2005b); and

- NPWS Irish Wildlife Manuals, No. 28: Bat Mitigation Guidelines for Ireland – V2 (Marnell et al., 2022).

If felling trees with bat roosting potential, trees will be inspected for the presence of bats and/or other bat activity by a suitably qualified bat ecologist during daylight hours and night time using a bat detector.

Where examination of the tree has shown that bats have not emerged or returned to tree, felling may proceed the following day. Should a delay in felling be encountered, resurveying is required.

In areas where bat activity has been recorded, tree-felling must not be conducted in June to early August. Note there are no trees that would be considered as obviously of value as roost habitat. As such, any vegetation and tree removal should be carried out during winter (December to February) to avoid impacts on bats, corresponding to a time when even best bat roost habitat recorded on site would be highly unlikely to be used as winter roosts. Winter hibernation roosts are generally restricted to places that are sheltered from extremes of temperature (Marnell et al., 2022) and trees present on site are deemed unlikely to be mature enough to provide appropriate winter roosting habitat on the basis of the habitat suitability survey carried out on-site.

It is recommended that any trees on site with ivy should be dropped to the ground as gently as possible and left on the ground for a period of 24hrs post felling under the supervision of the ECoW. This soft felling approach will give any bats, if present, the opportunity to vacate.

8.6. Waste management (including hazardous waste)

A Waste Management Plan will be established and the waste management measures for the Project are detailed in a separate document, which includes:

- Waste management targets
- The potential waste materials produced during the project
- Waste handling procedures
- Waste Permits required
- Waste reuse, recycling and disposal techniques
- A map showing designated waste handling areas.

The Waste Management Plan also covers the handling and disposal of hazardous wastes such as asbestos, fuels and used absorbent materials.

With regard to potential nuisance from temporary site offices and canteen, the following measures will be observed:

- Site offices will be maintained in a tidy condition.
- Litter will be cleaned up daily, particularly around skip bins, in accordance with EP-19 Litter Management.

8.7. Hazardous materials handling & storage

During the works there will be a requirement for the use of hazardous substances, including but not limited to:

- Fuel oil
- Diesel
- Hydraulic oil
- Shuttering oil
- Liquid cement
- Concrete curing agent.

The management of such substances will be carried out in accordance with the procedures for:

- Bulk Fuel and Oil Storage (EP-13)
- Storage and Handling of Hazardous Substances (EP-14)
- Containing and Cleaning Up Spills (EP-15).

All chemicals not covered by EP13, EP14 and EP15 will be managed in accordance with the requirements of the relevant safety data sheet (SDS) and the Health and Safety Plan.

- Hazardous materials are kept in lockable stores located in the main compound. Spill kits are also kept at these locations. Any hazardous materials must be returned to the stores at the end of each day and not left on site
- Oil and fuel will be stored in bunded areas and will be stored well away from any water discharge point or, where not possible, the discharge point will be adequately protected to prevent spills from entering
- Diesel pumps, generators or similar will be placed on impervious drip trays to capture minor spills and leaks and located at least 10m from any water discharge point
- Tools and equipment will not be washed in or near any watercourses and if undertaken on site wash water will be directed to appropriate retention controls and not allowed to directly enter any watercourse.

Fuels, lubricants and hydraulic fluids for equipment used on the construction site will be carefully handled to avoid spillage, properly secured against unauthorised access and provided with spill containment. Fuelling and lubrication of equipment will not be carried out in the vicinity of water discharge points. Waste oils and hydraulic fluids will be collected in leak-proof containers and transported off-site for disposal or recycling at appropriately licensed facilities.

8.8. Vermin control

Control measures associated with vermin are as follows:

Rentokil have been engaged to carry out Monthly site visits or as required.

All waste will be controlled by the site team.

8.9. Landscape

Landscape measures will be implemented in accordance with the Landscape Design required by the contract, to be prepared by the Designer.

8.10. Archaeology

N/A

9. MANAGEMENT REVIEW

The implementation of the EMP is reviewed monthly on site at the internal site meetings. These meetings are attended by site management and by personnel responsible for the implementation of the EMP. During the meeting all aspects of the environmental management are considered, including:

- Upcoming work
- Environments risks foreseen
- Control measures for the protection of the environment
- Internal and external audit results
- Inspection and monitoring results;
- Environmental alerts and bulletins
- Any issues raised by site staff or in relation to environmental management
- Site goals and targets
- Control measures for protection of the environment
- Any other significant issues.

Changes are made to the on-site management as required to achieve a continual improvement in environmental performance.

Environmental issues will be brought to the attention of the workforce through toolbox talks and through the Monthly HSE Meeting.

The EMP itself shall be reviewed at least every six months by the Site Management Team to ensure that it continues to be adequate and effective and changes made as required. Any changes shall be made by the Site HSE Officer and a new revision of the EMP issued to all personnel on the circulation list on page 1 of this document.

10. TRAINING AND COMPETENCE

The environmental management requirements shall be communicated to all staff and contractors at the HSE induction. All employees and contractors are required to undertake an online induction and a site specific induction prior to conducting any work on site (for further details refer to the Health and Safety Plan) and employees shall be made aware of their responsibilities in accordance with this management plan. A record of inductions shall be kept by the Safety, Health & Environmental Officer.

Toolbox talks will be conducted with relevant employees on various aspects of the environmental management plan, activity control measures and environmental procedures. Three toolbox talks on environmental, sustainability or waste issues must be conducted per quarter.

Toolbox talks shall be conducted by the Site Management Team. The schedule for toolbox talks shall be at the discretion of the Site Management Team and additional toolbox talks will be given in response to complaints, or where the particular environmental risks have been identified.

Table 9: Recommended toolbox talks

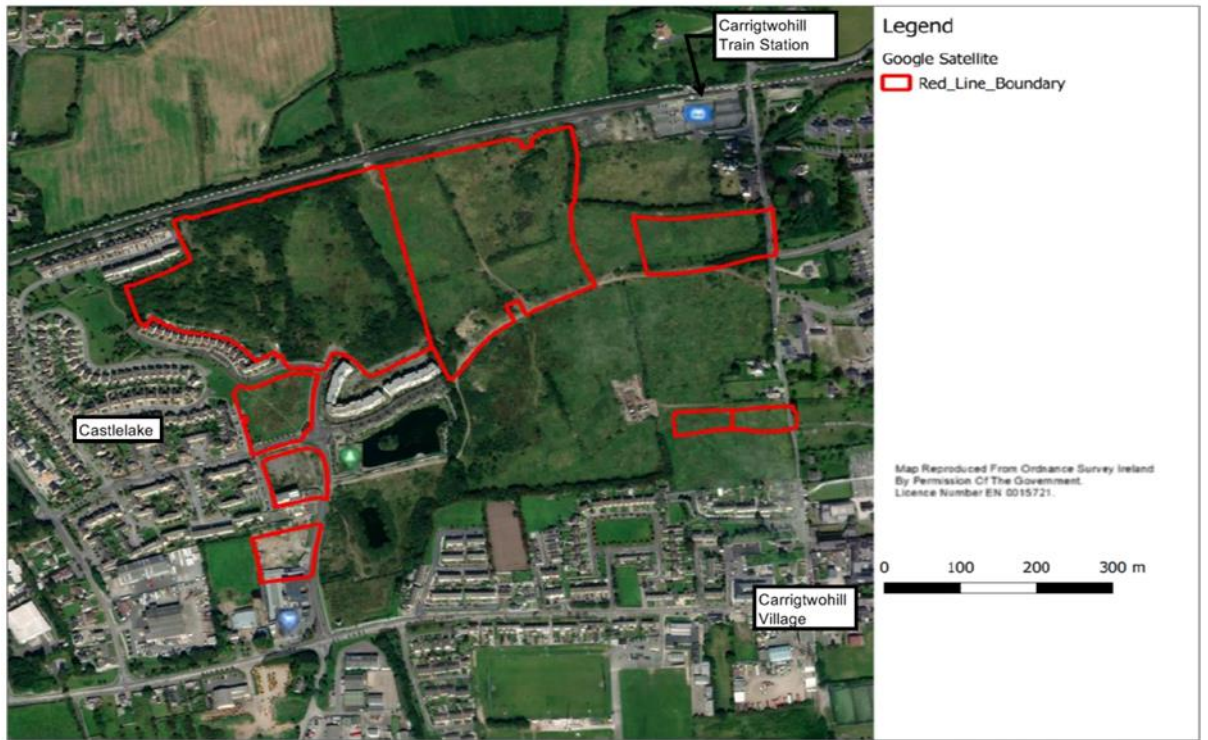
Toolbox talk topic	Reference material	When*	Recipients
Environmental Management	Environmental Policy, EMP, Environmental Procedures Manual	Commencement of site activities	All site crews
TBT 01	Hazardous Substances	Regular Intervals	All site crews
TBT 02	Environmental Awareness	Regular Intervals	All site crews
TBT 03	Managing Waste	Regular Intervals	All site crews
TBT 04	Spill Control	Regular Intervals	All site crews
TBT 05	Waste Pollution Prevention (Fuel & Oil)	Regular Intervals	All site crews
TBT 06	Silt Management	Regular Intervals	All site crews
TBT 07	Fire	Regular Intervals	All site crews
TBT 08	Storage of Hazardous Waste on Site	Regular Intervals	All site crews
TBT 09	Japanese Knotweed	Regular Intervals	All site crews
TBT 10	Chemical & Fuel on site	Regular Intervals	All site crews
TBT 11	Trees	Regular Intervals	All site crews
TBT 12	Water on Construction Sites	Regular Intervals	All site crews
TBT 13	Dust and Air Quality	Regular Intervals	All site crews
TBT 14	Noise and Vibration	Regular Intervals	All site crews
TBT 15	Archaeology	Regular Intervals	All site crews
TBT 16	Working in previous developed areas	Regular Intervals	All site crews
TBT 17	Pumping and over pumping	Regular Intervals	All site crews

Toolbox talk topic	Reference material	When*	Recipients
TBT 18	Water pollution - cement and concrete	Regular Intervals	All site crews
TBT 19	Material handling and housekeeping	Regular Intervals	All site crews
TBT 20	Washing down plant and equipment	Regular Intervals	All site crews
TBT 21	Energy conservation - electricity and fuel	Regular Intervals	All site crews
TBT 22	Bentonite	Regular Intervals	All site crews
TBT 23	Be a good neighbour	Regular Intervals	All site crews
TBT 24	Sustainability	Regular Intervals	All site crews
TBT 25	Eco driving	Regular Intervals	All site crews
TBT 26	Fuel efficiency	Regular Intervals	All site crews
TBT 27	Material handling and storage	Regular Intervals	All site crews
TBT 28	Segregation of waste	Regular Intervals	All site crews
TBT 29	Storage of waste	Regular Intervals	All site crews
TBT 30	Energy efficiency	Regular Intervals	All site crews
TBT 31	Void space	Regular Intervals	All site crews
TBT 32	Waste hierarchy	Regular Intervals	All site crews

Appendix 1: Table of requirements for ISO14001:2015

Ref	ISO14001:2015	EMP	Section
5.2	Environmental Policy	Company Environmental Policy	Appendix 5
6.1.2	Environmental aspects	Environmental planning, aspects and control Site Environmental Risk Assessment	5 5.1
6.1.3	Compliance obligations	Relevant Statutory Provisions	6.5
		Contract Requirements/ ERA	Appendix 2 & 3
6.2 6.2.1 6.2.2	Environmental objectives and planning to achieve them	Environmental objectives and targets	7
5.3	Organizational roles, responsibilities and authorities	Organisation & Responsibilities	2.1 2.3
7.2 7.3	Competence and awareness	Training and competence	10
7.4	Communication	Environmental Management Arrangements Communication	3 2.2
7.5.3	Control of documented information	Control of Documents	6.7
8.1	Operational planning and control	Environmental Control Measures	8
8.2	Emergency preparedness and response	Summary of emergency procedure	4
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Appendix 3: Site map/s



Appendix 4: Environmental policy



The organisation promotes a responsible and proactive approach to environmental and waste management at every level of the business and on all sites of operation.

BAM Building recognise that business aims must be balanced against environmental considerations. We are committed to continually improving our environmental performance and managing our operations to minimise potentially adverse impacts on the environment.

Specifically, where it is within the organisation's control or influence, BAM Building will:

Identify the significant environmental aspects of our activities by assessing their potential impact on the environment.

Based on our significant environmental aspects, set specific objectives and targets, against which we shall monitor and review our performance.

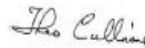
Comply with legal and other requirements that are applicable to our activities and relevant to the environmental aspects of the business.

Develop management processes and procedures that prevent pollution, protect native species and habitat, minimise waste generation, promote recycling and the use of recyclable materials, and maximise the efficient use of material and energy resources. In order to enable Ireland to fully decarbonise the construction sector, BAM commit to encouraging the use of EPDs.

Implement strategies to communicate our environmental commitments and requirements to employees, customers, suppliers, subcontractors and other interested parties.

Provide training and support to employees, so they understand and can fulfil their responsibilities with regard to environmental impact and performance.

It is the individual responsibility of all persons working for or on behalf of BAM Building to support and apply the Environmental Policy and Environmental Management System as it pertains to their activities.



T. Cullinane, CEO
Date: May 2021



Environmental Emergency Plan

Site Name: Castlelake SHD, Carrigtwohill, Co. Cork



Revisions

Environmental Dept. Revision No: 01 27 th May 22			
Reason for Issue:	Planning Permission		Client Approval (if required)
Originator	Reviewer	Approver	
Donal Keohane	Tim Finn	O Ryan	

Circulation

Copy	Circulation	Name	Company	Location
1	Construction Director	Ger Moloney	BAM	Little Island
2	Contract Manager	Ollie Ryan	BAM	Little Island
3	Project Manager	Tim Finn	BAM	Site
4	Site Agent	TBC	BAM	Site
5	General Foreman	Seamus Treacy	BAM	Site
6	Site Health, Safety & Environmental Officer	Donal Keohane	BAM	Site
7	Co. Environmental Coordinator	Elaine Maloney	BAM	Head Office, Kill

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1. INTRODUCTION

This Environmental Emergency Plan (EEP) has been developed in accordance with BAM Contractors Environmental Procedures. The controlled copy of all environmental procedures is hosted on SharePoint.

This Plan is a working document, clearly stating the arrangements in place to manage the significant environmental aspects and legal requirements of this project. This Plan covers BAM Building activities and that of its subcontractors.

This Plan has been approved by BAM HSE Department at Kill and has the commitment of the Project Director, Project Manager and Site Teams to fulfil the requirements of the Plan.

1.1. Purpose of the plan

This EEP describes how BAM will manage environmental emergencies for Castlelake SHD.

This EEP has been developed within the framework of the BAM Contractors EMS. The BAM Contractors EMS is certified to ISO 14001:2015.

This Plan will:

- Identify the emergency processes required to take control of an emergency
- Maintain a state of preparedness to prevent or reduce injury to personnel or the environmental as a result of an emergency that may occur on site or in an office
- Minimise property loss or damage to the environment.

This procedure will be updated when additional hazards are identified and controls of the same are required

This plan will be sent to all subcontractors prior to commencing on site.

1.2. Project description

The development will consist of the construction of a strategic housing development of 716 no. units and a 2 no. storey creche. The proposed development comprises 224 no. houses, 284 no. duplex units and 208 no. apartments. The two storey houses comprise 48 no. detached, 126 no. semi-detached and 50 no. terraced Houses containing 60 no. two bed units, 139 no. three bed units and 25 no. four bed units. The part-one to part-three storey duplex units are contained in 122 no. buildings providing 82 no. one bed units, 142 no. two bed units and 60 no. three bed units. There are 7 no. apartment blocks ranging in height from part-1 to part- 5 no. storeys.

- Block 1 is 4 no. storeys and contains 34 no. units (7 no. one bed units, 19 no. two bed units and 8 no. three bed units).

- Block 2 is part-1 to part-5 no. storeys and contains 42 no. units (15 no. one bed units, 20 no. two bed units and 7 no. three bed units).
- Block 3 is 5 no. storeys and contains 17 no. units (8 no. one bed units and 9 no. two bed units).
- Block 4 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 5 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 6 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 7 is 5 no. storeys over basement and contains 76 no. units (23 no. one bed units, 41 no. two bed units and 12 no. three bed units).
- All blocks contain ancillary internal and external resident amenity space.

The proposed development also provides for: hard and soft landscaping; boundary treatments; public realm works; car parking; bicycle stores and shelters; bin stores; lighting; plant rooms; and all ancillary site development works above and below ground. The application site is positioned to the north-west of the centre of Carrigtwohill comprised of a series of land parcels with a combined area of 18.3 hectares.

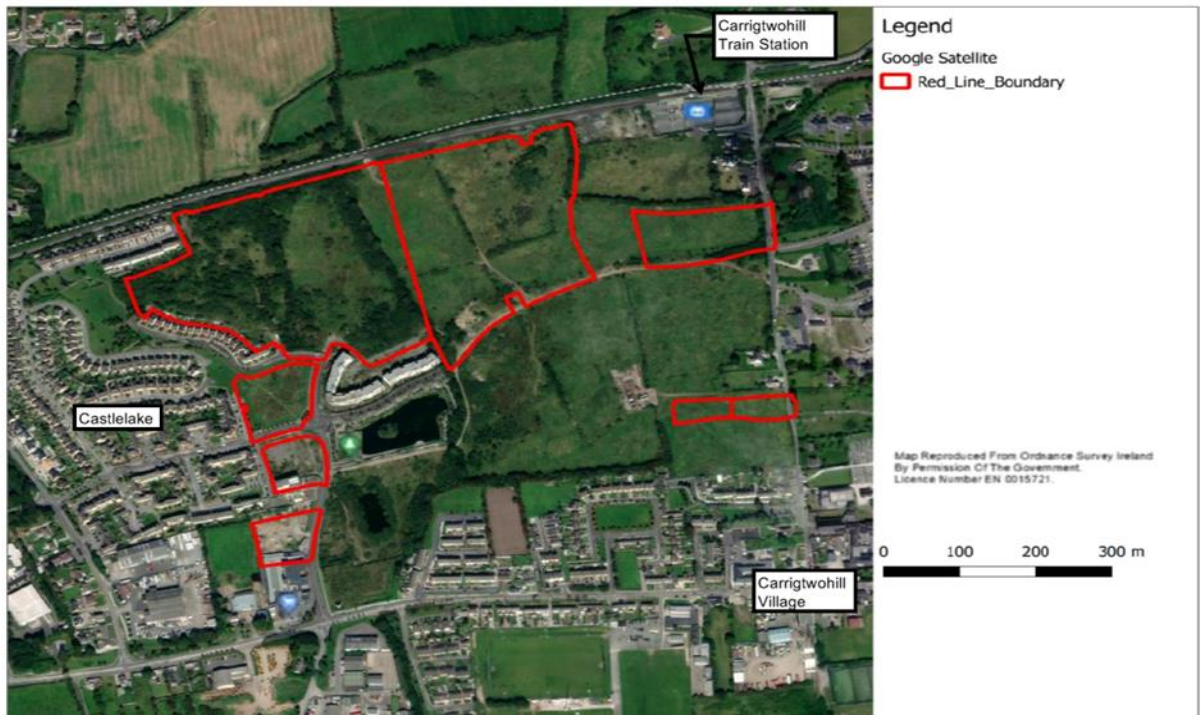
1.3. Site location

Castlelake SHD, Carrigtwohill, Co. Cork

The subject site is located 16km east of Cork City. It is a satellite town that has grown from a small village/hamlet situated along the side of the N25 main road between Cork and Waterford cities. The proposed development site is located circa 50m west of Carrigtwohill village. The site is bounded by agricultural lands to the North, Castlelake housing estate to the west and the Cork Road L3680 to the south. The site is accessed from the Cork Road L3680. Access is also possible from the west via the Castlelake housing estate. The N25 can be accessed to the west and east.

The proposed development bounds the Cork-Midleton Railway line to the north. Carrigtwohill train station is located to the north-east of the site. The train station serves Midleton and Cobh to the east and south and Cork to the west, with onward links to Dublin and the rest of the Country.

The new Glounthaune to Midleton Greenway will pass to the south of the site providing an alternative commuter link to Cork and Midleton and providing an amenity for existing and future residents and visitors. An east-west link road is currently nearing completion along the Southern boundary of the main land block. A north-south link road is proposed to join with an existing rail underpass.



1.4. Working hours

Working hours are in accordance with the Planning Conditions and Environmental Legislation in that we will operate between Monday to Friday 08:00 – 19:00hrs and on Saturdays 08:00 – 13:00hrs.

1.5. Plan objectives

The objective of this EEP is to seek to enhance the protection of the environment and human health in environmental emergency situations by promoting prevention and ensuring preparedness, response and recovery.

1.6. Update and review

This plan will be updated at a minimum of six-monthly intervals unless significant changes take place in works being undertaken on site. Environmental aspects (water/chemicals/fire)

1.7. Water (surface and groundwater) controls

Water pollution or sediment release will be treated as follows:

- Measures described in *EP-23 Emergency Procedure for Sediment Release* will be implemented

- *EP-10 Surface Water Control* and *EP-15 Containing & Cleaning Up Spills* will be adhered to
- All leaks or flows will be contained immediately
- Where the risk of flooding may arise, additional steps will be taken to ensure all filtration methods or silt ponds are checked regularly to ensure no build-up of water / materials increases the risk of flooding and possible contamination
- Environmental Incident reported to the HSE Department and all incidents must be submitted on the BIM Incident Tracking system within seven days.

1.8. Chemical/Hazardous substance controls

Chemical / hazardous substance spills should be treated with great care:

- Person discovering the spill must raise the alarm immediately
- Main environmental controller must be informed and will then decide if the spill/leak can be dealt with internally or whether the emergency services must be called (**112 or 999**)
- Only minor spills will be dealt with using absorbent material available
- The area must be evacuated, and this procedure carried out promptly
- If a chemical or hazardous substance has come in contact with a person you can contact the NATIONAL POISON CENTRE ON (01) 8092166 for advice on first aid treatment
- Environmental Incident reported to HSE Department, and all incidents must be submitted on the BIM Incident Tracking system within seven days.

1.9. Fire

In the event of a fire, the following emergency steps must be followed:

- Persons discovering a fire must raise the alarm immediately. Immediately contact a member of the BAM Management Team
- The offices or area effected must be evacuated
- Only minor fires will be dealt with, if safe to do so, using fire extinguishers or fire blankets
- In cases of major fires or chemical fires, the emergency services must be contacted (**112 or 999**)
- If tackling a minor fire, ensure there is enough suitable firefighting equipment in place
- Employees must be trained to use firefighting equipment
- Redundant fire water must not be allowed to enter surface water areas (*connected sewerage systems must be protected from our construction site run off as per environmental procedures*)
- Fire drills must be carried out on site and in offices every six months.

Please see below for the following types of extinguishers and their uses:

Table 1: Extinguishers

Type	Use
Water fire extinguishers	Cloth, paper and wood fires only
Dry powder	Most fires including electrical fires
CO ₂	Electrical fires and flammable liquids
Foam	Class A fires such as paper, wood and cloth

2. SAFETY AND SPILL CONTROL PROCESSES

2.1. Personnel safety

Personnel safety measures with regards to spills includes:

- Immediately alerting area occupants to evacuate area if necessary
- If a volatile, flammable material has been spilled, switch off or remove any sources of ignition close to the spill. Ventilate the area if indoors
- Put on personnel protective equipment, as appropriate to the substance spilled. As a minimum, gloves and goggles must be worn. Gloves and goggles will be available in the spill kit (*replenish spill kits when required*)
- Consider the need for respiratory protection. Never enter a contaminated atmosphere without training or use a respirator without training.

2.2. Spill control and clean up

Spill control and clean up measures include:

- Identify the source of the pollutant and, if possible and safe to do so, stop the flow
- Get a spill kit(s) and apply absorbent materials appropriate to the spill type. Ensure that waste containers are available in which to place used absorbents
- Prevent the spill from spreading and contain it in as small an area as possible, using absorbent sausages, sand, earth or polythene to damn the flow. Divert any flow away from drains, sewers or watercourses or prevent pollutants from entering drains by placing sausages and/or polythene around or over the opening
- If any pollutant has entered water system, absorbent booms must be positioned on the water. If there is not enough flow in the water to push the pollutant into the boom you may need to apply absorbent pads to the surface to soak up the pollutant
- If an oil interceptor is located nearby, any oil or oil/water mixture may be pumped into this, as long as the capacity of the interceptor is not exceeded, and we have permissions
- Place used absorbent pads and shovel contaminated sand/earth/absorbent granules into sacks or containers. Store large volumes of contaminated soil/material in a contained impervious area, such as a plastic-lined bund
- Used absorbent pads / sausages / booms that are not fully laden with pollutant (*i.e. not dripping when they are held up*) may be stored in appropriate containers for reuse. Any such containers must be sealed and clearly labelled as to their contents and stored in a bunded area.

3. ENVIRONMENTAL INCIDENTS/DEFINITIONS

3.1. Environmental incident definitions

Major environmental incident: any situation which has resulted in significant pollution requiring high level of resources for response and remedy and must therefore be reported to Site/Company Management, the Client and/or any relevant statutory authority.

Minor environmental incident: any situation which has resulted in environmental pollution which requires minimal action to aid recovery from Site/Company Management. Non-reportable to any relevant statutory authority.

Main environmental incident controller: takes responsibility for control of the emergency, contacting emergency services and maintains a continuous review of possible developments (*has received fire extinguisher training and spill control advice as a minimum*).

An environmental incident may include but it not limited to:

- Spillage of hazardous materials (as defined by the Waste Management Acts,)
- A breach of any specified environmental limits as detailed in contractual documents or EIS documents (noise, vibration, air)
- Uncovering contaminated land
- Any spillage which cannot be rapidly contained and controlled, these include diesel, oil spills etc
- Inappropriate disposal of waste
- Runoff of sediment-laden or otherwise polluted water to a waterway
- Spills of fuel, oil or hazardous substances into water or a waterway
- Hazardous waste mixed with non-hazardous waste or stored in an inappropriate manner
- Mixing of hazardous wastes
- Concrete waste/washings disposed in a non-designated area
- Working within a protected area.

3.2. Emergency response procedure process

In the event of a **major** or **minor** environmental incident occurring, BAM will immediately:

- Clean up spill as per Section 3.2 of this Plan (*if applicable*)
- Isolate the source of any such emission / pollution
- Identify and execute measures to prevent / minimise the emissions / malfunction and the effects thereof
- Evaluate the environmental pollution, if any, caused by the incident
- Corrective actions taken to remedy the situation

- Carry out an investigation to identify the nature, source and cause of the incident and any emission arising there from
- All related information will be gathered concerning the environmental incident and photographs will be taken
- All relevant parties will be spoken with regarding this matter
- When all the information has been gathered, it will be added to the BIM Incident Tracking system. If any further actions have to be taken, these will be agreed, and timescales set.
- All incidents must be submitted on the BIM Incident Tracking system within 7 days.
- All environmental incidents that are added to the Incident Tracking System are reviewed by the HSE department prior to final approval and are included on the monthly 'Loss Events Report'.

This EEP will be communicated to all BAM Personnel and will be reviewed and updated (*where necessary*) on a 6-monthly basis (unless significant change) in conjunction with the EMP and WMP. A spill response drill will also be completed on each site by relevant personnel.

4. REFERENCES

EP-23 Emergency Response for sediment release to water

EP-24 Complaints and Incidents Procedure

EP-15 Containing and Cleaning Up Spills

SP-13 Fire Safety

Appendix 2.2

Masterplan Site Layout

NOTE: DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
 THE DIMENSIONS TO BE USED IN CONNECTION WITH ALL NECESSARY SPECIFICATIONS AND DRAWINGS SHALL BE THE DIMENSIONS SHOWN ON THIS DRAWING. IN THE EVENT OF ANY DISCREPANCIES BETWEEN DRAWINGS THE CONTRACTOR SHALL FOLLOW THE DIMENSIONS INDICATED ON THIS DRAWING.

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	DATE
1	15/03/2024	ISSUE FOR TENDER	MM	MM	2024

Schedule of Accommodation

Types	no of Types	Total no of Units	Percentage (%)
Houses			
2B House (4P), 2 Story			
Type H21	37		
Type H21X	13	60	8.4%
Type H23	10		
3B House (5P), 2 Story			
Type H31	63		
Type H31X	63	139	19.4%
Type H33	13		
4B House (6P), 2 Story			
Type H41	25	25	3.5%
Type H41	224	224	31.3%
Duplexes			
2B Duplex (4P) over 2B Duplex (4P) over 2B Duplex (4P), 3 Story			
Type D21	263	9	
Type D22	17X3	51	6%
3B Duplex (5P) over 3B Duplex (5P) over 3B Duplex (5P), 3 Story			
Type D31	113	3	
Type D32	19X3	57	6%
2B Duplex (4P) over 1B Duplex (2P), 3 Story			
Type D41	70x2	140	
Type D41A	6x2	12	16%
Type D41B	6x2	12	16%
Total Duplex			
		284	39.7%
Apartments			
Apartment Block 1 (Type A1), 4 Story			
1 Bed (2P)			
2 Bed (4P)	19	34	5%
3 Bed (5P)	7		
Apartment Block 2 (Type A2), 4.5 Story			
1 Bed (2P)	15		
2 Bed (4P)	20	42	6%
3 Bed (5P)	7		
Apartment Block 3 (Type A3), 5 Story			
1 Bed (2P)	8	17	2%
2 Bed (4P)	6	13	2%
Apartment Block 4 (Type A4), 4 Story			
1 Bed (2P)	6	13	2%
2 Bed (4P)	6	13	2%
Apartment Block 5 (Type A5), 4 Story			
1 Bed (2P)	6	13	2%
2 Bed (4P)	6	13	2%
Apartment Block 7 (Type A7), 5 Story			
1 Bed (2P)	41	76	11%
2 Bed (4P)	41	76	11%
3 Bed (5P)	12	28	4%
Total Apartments			
		208	29.1%
Total			
		716	100%

SITE AREA

Site Name	Area	Hectares	Acres
Blandcrest Site	72,468.823 m ²	7.247 hectare	17.907 acres
Castlelake North Site	71,677.945 m ²	7.168 hectare	17.712 acres
Castlelake South Site 01	5,633.979 m ²	0.563 hectare	1.392 acres
Castlelake South Site 02	5,590.900 m ²	0.559 hectare	1.382 acres
Castlelake West Site	9,221.394 m ²	0.922 hectare	2.279 acres
Station Road North Site	13,247.460 m ²	1.275 hectare	3.150 acres
Station Road South Site	5,222.765 m ²	0.522 hectare	1.291 acres
Total	182,562.727 m²	18.256 hectare	45.112 acres

AREA OF UNDEVELOPABLE LAND

Land 01	= 0.093 HECTARES (0.230 ACRES)
Land 02	= 0.280 HECTARES (0.280 ACRES)
Land 03	= 0.794 HECTARES (1.982 ACRES)
Land 04	= 0.088 HECTARES (0.168 ACRES)
Land 05	= 0.418 HECTARES (1.033 ACRES)
Total	= 1.653 HECTARES (4.085 ACRES)

AREA OF DEVELOPABLE LAND

18.256 HECTARES - 1.653 HECTARES	= 16.603 HECTARES
45.112 ACRES - 4.085 ACRES	= 41.027 ACRES

(Refer to CHD-WIL-ZZ-DR-A-0053 - Developable Site Key Plan)

DENSITY

716 UNITS / 16.603 HECTARES = 43.12 Unit Per Ha

SITE DATA

Type	RESIDENTIAL GIA & BUILD AREA	
	Gross Internal Area (m ²)	Building Footprint (m ²)
PROPOSED HOUSES		
H21	3,540.9	2,135.0
H21X	1,244.1	750.1
H23	993.0	603.0
H31	6,470.1	3,873.1
H31X	6,470.1	3,873.1
H33	1,462.5	888.2
H41	3,510.0	1,873.3
Total	23,690.7	13,995.7
PROPOSED DUPLEXES		
D21	873.6	441.5
D22	4,518.6	2,237.7
D31	338.5	144.3
D32	6,330.8	2,890.4
D41	11,333.0	3,332.9
D41A	971.4	293.3
DM18	971.4	293.3
Total	25,337.3	9,635.4
PROPOSED APARTMENTS		
A1	4,024.0	1,080.0
A2	4,477.6	1,234.0
A3	1,806.3	424.0
A4	1,454.9	424.0
A5	1,471.0	413.4
A6	1,471.0	413.4
A7	8,375.5	1,935.3
Total	22,882.1	5,904.2
OVERALL		
Total	71,930.1	29,515.3

SECURED APARTMENTS VISITOR CYCLE SPACES

Type	Required	Provided
Secured Apartments Cycle Spaces	271	460
Allocated Apartments Visitor Cycle Spaces	104	176
Creche Cycle Spaces	-	22
On-Street Visitor Cycle Spaces	254	260
Total	729	918

SITE COVERAGE AREA

Type	Developable (m ²)	Overall (m ²)
Site	166,032.7	182,562.7
Residential	29,515.3	29,515.3
Creche	546.5	546.5
Bike Storage	64.3	64.3
Total	196,169.0	213,684.8

PLOT AREA

Type	Developable (m ²)	Overall (m ²)
Site	166,032.7	182,562.7
Residential GIA	71,930.1	71,930.1
Ratio	0.43	0.39

WILSON ARCHITECTURE
 OMMW

St. Patrick's Place, Wellington Road, Cork
 36 Pembroke Road, Dublin 4
 Residential Development at Carrigrohilly, Co. Cork
 CHD-WIL-ZZ-DR-A-0070 S01 P04



Site Legend

	2B House (4P), 2 Story		Vehicular Grade Tarmacadam Surface to engineers Details
	3B House (5P), 2 Story		Red Tarmacadam Bicycle Lane Surface
	4B House (6P), 3 Story		Homezone Surface Paving
	2B Duplex Apartments (4P) over 2B Duplex Apartments (4P) over 2B Duplex Apartments (4P), 3 Story		Pedestrian Sidewalk Surface Paving
	3B Duplex Apartments (5P) over 3B Duplex Apartments (5P) over 3B Duplex Apartments (5P), 3 Story		Shared Surface Paving
	2B Duplex Apartments (4P) over 1B Duplex Apartments (2P), 3 Story		Pedestrian Crossing Surface Paving
	Apartment Blocks, Heights indicated on plan		Property Surface Paving
	Creche, 2 Story		Vehicular On-Street Surface Car Park

AREA TO WHICH APPLICATION RELATES OUTLINED IN RED = 18,256 HECTARES (45.112 ACRES)

ADJACENT LAND UNDER THE CONTROL OF APPLICANT

LOCATION OF SITE NOTICE

NOTE:

- Refer to Landscape Masterplan, Drawing no. 21642-2-101 for Public Open Space Landscape Strategy.
- Refer to CHD-WIL-ZZ-DR-A-0054 - Public and Communal Open Space Key Plan for Public Open Space Provision.
- For 1/500 Site Layout Plan, refer to drawing:
 - CHD-WIL-ZZ-DR-A-0071
 - CHD-WIL-ZZ-DR-A-0072
 - CHD-WIL-ZZ-DR-A-0073
 - CHD-WIL-ZZ-DR-A-0074
 - CHD-WIL-ZZ-DR-A-0075
 - CHD-WIL-ZZ-DR-A-0076

PUBLIC OPEN SPACE PROVISIONS

Public Communal Open Space with Developable Area	Type	Provided (m ²)
Castlelake West Local Park 01	1,020.3	
Castlelake West Local Park 02	921.8	
Castlelake West Local Park 03	556.3	
Castlelake North Local Park	817.9	
Central Park	18,336.8	
Blandcrest Local Park 01	2,533.8	
Blandcrest Local Park 02	3,653.1	
Station Road North Local Park 01	412.0	
Station Road North Local Park 02	1,458.4	
Station Road South Local Park	1,006.0	
Total	30,659.9	
Required	30,659.9	
%	12.0%	18.5%
Additional (m²)	0	6.5%

BICYCLE PARKING PROVISIONS

Required:

House & Duplexes Bicycle Parking Requirements	House	Duplex	No of required residential spaces	No of required visitor spaces
1 Bed	20	20	20	20
2 Bed	202	202	404	202
3 Bed	109	109	218	109
4 Bed	25	25	50	25
Total	356	356	712	356

Apartment Bicycle Parking Requirements:

Apartment	1 Bed	2 Bed	3 Bed	4 Bed
1 Bed	72	1 per unit	72	0.5 per unit
2 Bed	309	2 per unit	218	0.5 per unit
3 Bed	27	3 per unit	81	0.5 per unit
4 Bed	0	4 per unit	0	0.5 per unit
Total	208	4 per unit	371	104

Household Bicycle Parking Anchor Point on each house. Refer to CHD-WIL-ZZ-DR-A-0050 - External Bin & Bicycle Drawing

Duplex Apartments: Internal Bicycle Storage Space provided in each unit. Refer to Duplex Apartment Drawing, no. CHD-WIL-ZZ-DR-A-0050 - Building Type D21 - GA Drawing CHD-WIL-ZZ-DR-A-0051 - Building Type D22 - GA Drawing CHD-WIL-ZZ-DR-A-0052 - Building Type D31 - GA Drawing CHD-WIL-ZZ-DR-A-0053 - Building Type D32 - GA Drawing CHD-WIL-ZZ-DR-A-0054 - Building Type D41 - GA Drawing CHD-WIL-ZZ-DR-A-0055 - Building Type D41A - GA Drawing CHD-WIL-ZZ-DR-A-0056 - Building Type D41B - GA Drawing

Apartment: Refer to Apartment Drawing, no. CHD-WIL-A1-ZZ-DR-A-0410 CHD-WIL-A2-ZZ-DR-A-0420 CHD-WIL-A3-ZZ-DR-A-0430 CHD-WIL-A4-ZZ-DR-A-0440 CHD-WIL-A5-ZZ-DR-A-0450 CHD-WIL-A6-ZZ-DR-A-0460 CHD-WIL-A7-ZZ-DR-A-0470 CHD-WIL-A8-ZZ-DR-A-0480

1 Proposed Site Layout Plan - Overall
 1 : 1000