

Clare Carmody

1050 1 01 1

From: Planninginfo  
Sent: 10 July 2017 16:15  
To: Clare Carmody  
Subject: FW: Rowan View Developments\_Passage West  
For attention.

17/5739

Regards,

Assumpta.

From: M Byrne Architecture [mailto:martin@byrnearchitecture.co.uk]  
Sent: 10 July 2017 16:04  
To: Planninginfo  
Subject: Rowan View Developments\_Passage West

Hi al,

I recent submitted a planning application on behalf of Rowan View Developments Limited at Pembroke Woods, Pembroke, Passage West, Co.Cork.

Your attention is drawn to question No. 23 & 24 on the planning application forms. I incorrectly marked both questions yes instead of No. Can you update the planning file with this information **(Answer No to both 23 & 24)** please and confirm receipt of this email.

Does the application relate to development which affects or is close to a monument or place recorded under section 12 of the National Monuments Act, 1994 as amended.				X
23. Do you own any of the land which adjoins, abuts or is adjacent to the site?	YES	X	NO	
24. If yes, have you outlined it in blue on the site location maps submitted?	YES	X	NO	

8

Thank you,

Martin Byrne BSc. Arch. Tech.  
Director | M Byrne Architecture Ltd.  
M | +353 87 1492431  
E-mail [martin@byrnearchitecture.co.uk](mailto:martin@byrnearchitecture.co.uk)

**M · BYRNE | architecture**

M. Byrne Architecture Ltd.,  
Phoenix House,  
Monahan Road,  
Cork, T12 H1XY,  
Ireland.  
Tel: +353 21 2376150

**Planning Department**  
  
10 JUL 2017  
**Cork County Council**  
**County Hall**  
**Cork**

**3. Name of Relevant Planning Authority:**

Cork County Council

Planning Department

07 JUL 2017

Cork County Council  
County Hall  
Cork.

**4. Please tick  the relevant Planning Office where you are lodging your application:**

County Hall, Cork

Norton House, Skibbereen, West Cork

**5. a) Type of planning permission (please tick  appropriate box):**

Permission

Permission for Retention

Outline Permission

Permission Consequent on the Grant of Outline Permission

**b) Where planning permission is consequent on the grant of outline permission:**

Outline Permission Register Reference Number:

Date of Grant of Outline Permission:

**6. Person/Agent to whom all Correspondence will be sent:**

(Address to be supplied in question 61 at the back of the application form)

M Byrne Architecture

**7. Person primarily responsible for preparation of Drawings and Plans:**

(Address to be supplied in question 62 at the back of the application form)

M Byrne Architecture

**8. Where the Applicant is a Company (registered under the Companies Acts 1963 to 2009):**

Name(s) of company Director(s)	(Address & Contact details to be supplied at question 63 of additional contact information page.) Jorge Macedo and Rui Macedo
Company Registration No.	474032

**9. Description of Proposed Development:**

planning permission to construct 24 no. apartments over 3 floors and all associated development works including access, car parking, landscaping and amenity areas, bicycle storage and service/refuse storage facilities

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 County Hall  
 Cork.

**10. Are you satisfied that the proposed development does not constitute a 'Strategic Infrastructure Development' as defined in the Planning and Development Acts 2000-2010? (Please tick)**

YES

**11. Legal Interest of Applicant in the Land or Structure:**

Please tick <input checked="" type="checkbox"/> appropriate box to show applicant's legal interest in the land or structure	A. Owner	<input checked="" type="checkbox"/>	B. Contracted to Purchase	
	C. Lessee		D. Other	
Where legal interest is 'Other', please expand further on your interest in the land or structure				
If you are not the legal owner, please state the name of the owner and supply a letter from the owner consenting to the making of this application.	<i>(Owner's Address to be supplied at question 64 of this form)</i>			

**12. Site Area:**

Area of site to which the application relates in hectares	<b>0.29 ha</b>
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**13. Where the application relates to a building or buildings:**

Gross floor space of any existing building(s) in m <sup>2</sup>	n/a
Gross floor space of proposed works in m <sup>2</sup>	<b>Apartment building = 2,019.6 sq. m.</b> <b>Refuse storage = 10.5 sq. m.</b>  <b>Total = 2,030.1 sq. m.</b>
Gross floor space of work to be retained in m <sup>2</sup> (if appropriate)	n/a
Gross floor space of any demolition in m <sup>2</sup> (if appropriate)	n/a



14. In the case of mixed development (e.g. residential, commercial, industrial, etc), please provide breakdown of the different classes of development and breakdown of the gross floor area of each class of development:  
 In the case of Housing Estates please provide a breakdown of the gross floor area of each individual house type. (This may be provided on a separate sheet if necessary)

Class of Development/ House Type	Gross floor area in m <sup>2</sup>
Class 1 - Dwelling House/flat	2,019.6 sq. m.
Class 13	Bike store and refuse store

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**15. Materials and External Finishing:**

(i) Description of buildings and materials used in them:	Nature	Colour
(a) Floors	Conc.	natural
(b) Walls and partitions	Conc./brick	Natural/ red
(c) Roof	Continuous membrane	Blue/black
(ii) Nature and colour of proposed external facing materials:		
(a) Roofs	Continuous membrane	Blue/black
(b) Front Walls	Plaster/brick	Natural/red
(c) Side Walls	Plaster/brick	Natural/red
(d) Rear Walls	Plaster/brick	Natural/red
(e) Road boundary walls	n/a	n/a
(f) Other boundary walls		
(g) Buildings other than main buildings		

16. Where an application is for an extension to a dwelling, please tick  if it is intended to use it as a separate dwelling unit/ 'Granny Flat':

YES

NO

If so, then please note that a fee of €65 is payable

Note: This must also be stated in Press Notice and Site Notice.

17. If Permission is granted do you intend to: Please tick  as appropriate:

Sell the house/site	<input checked="" type="checkbox"/>
Use the house as your permanent house for year round occupation	<input type="checkbox"/>
Let the house long-term	<input type="checkbox"/>
Let the house short-term	<input type="checkbox"/>
Use as a second home/holiday home	<input type="checkbox"/>
Other : (Please state intended use)	<input type="checkbox"/>

Note: If the use is for Short Term/Holiday Letting, this must be stated in the Press Notice and Site Notice

18. In the case of a residential development please provide the breakdown of the residential mix: You are advised that applications for residential developments should be accompanied by a design statement in order to facilitate the proper evaluation of the proposal relative to key objectives of the Development Plan with regard to the creation of sustainable residential communities.

Number of :	Studio	1 Bed	2 Bed	3 Bed	4 Bed	4+ Bed	Total
Houses		6	18				24
Apartments							
Number of car parking spaces to be provided	Existing:		Proposed: 30			Total: 30	

19. If stables are part of the proposed development please tick  the 'Yes' box and complete question 44 on this form.

YES

NO

20. Where the application refers to a change of use to any land/structure or the retention of such a change of use, please complete the following section:

Existing use (or previous use where permission for retention is sought)	n/a
Proposed use (or the use it is proposed to retain)	n/a



Has a pre-application consultation taken place in relation to the proposed Development?

YES

NO

If Yes, Please give details:

Meeting at Cork County Hall with Greg Simpson and John Lalor 9<sup>th</sup> February 2017. See letter attached further details.

Was this consultation conducted under Section 247\* of the Planning and Development Act 2000?

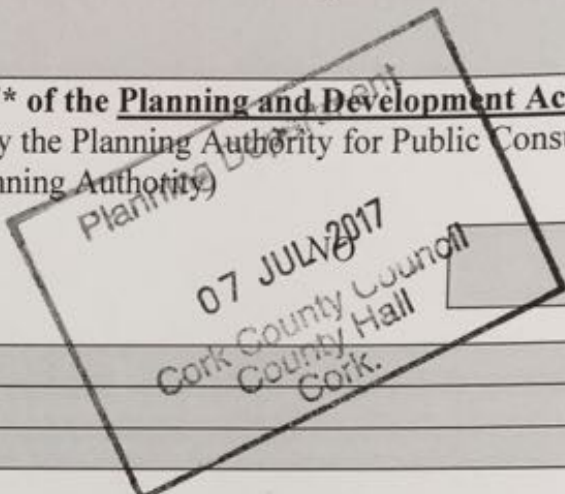
(\* Section 247 – where a time and place is specified by the Planning Authority for Public Consultation and a written record of this consultation is kept by the Planning Authority)

YES

Reference No. (if any):

Date(s) of consultation:

Persons involved:



26. Site History:

Details regarding Site History (If known):

Please tick appropriate box ✓

Has the site in question, to your knowledge ever been flooded?

YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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If yes, please give details e.g. year, extent.

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Are you aware of previous uses of the site? (e.g. dumping or quarrying)

YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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If yes, please give details.

--	--	--	--

Are you aware of any valid planning applications previously made in respect of this land/structure?

YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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If yes please state planning reference number(s) and the date(s) of receipt of the Planning application(s) by the planning authority if known:

REFERENCE NO.	DATE OF RECEIPT
14/6127	02/10/2014

**NOTE:** If a valid planning application has been made in respect of this land or structure in the 6 months prior to the submission of this application, then the site notice must be on a **YELLOW BACKGROUND** in accordance with Article 19(4) of the Planning and Development Regulations 2001 as amended.

Is the site of the proposal subject to a current appeal to An Bord Pleanála in respect of a similar development?

YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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9

**Existing Water Supply Connection**

Please specify Public Mains, Group Water Scheme, Private Well or Other.

**Proposed Source of Water Supply:**

Please tick as appropriate ✓

**Give Details/Name**

New connection

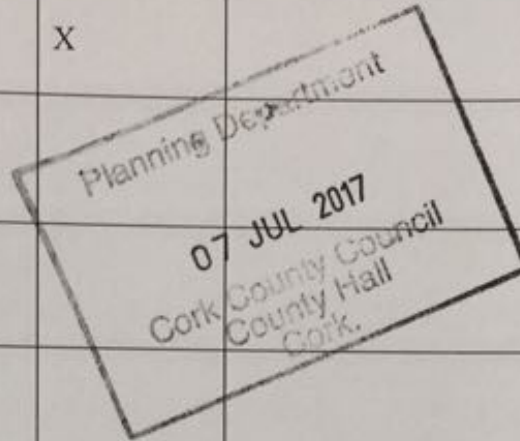
Public Mains

X

Group Water Scheme

Private Well

Other (please specify)

**Existing Wastewater Treatment:**

Please specify Public Foul Mains, Treatment System or Other.

**Proposed Wastewater Management/Treatment:**

Please tick as appropriate ✓

**Give Details/Name**

New

Public Sewer

X

Conventional septic tank system

Other on-site treatment system

**Existing Surface Water Disposal**

Please specify Public Sewer/Drain, Soak Pit, Watercourse or Other

**Proposed Surface Water Disposal:**

Please tick as appropriate ✓

**Give Details/Name**

Public Sewer/Drain

X

Soak Pit

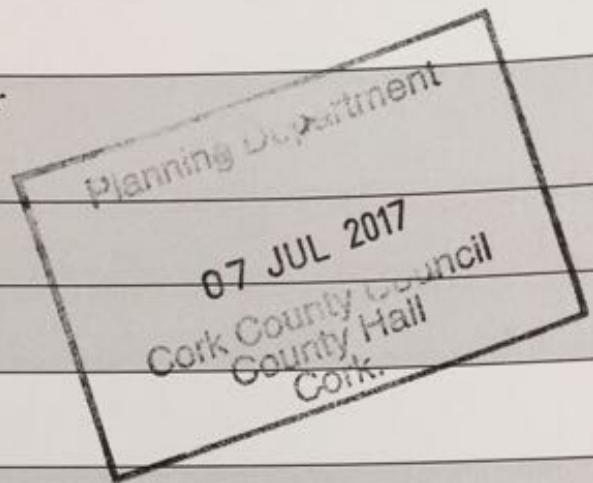
Watercourse



Other

**28. Details of Public Notice:**

Approved newspaper in which the notice was published	The Southern Star
Date of publication	24 <sup>th</sup> June 2017
Date on which site notice was erected	24 <sup>th</sup> June 2017



**29. Application Fee:**

<i>Fee Payable</i>	€1,640
<i>Basis of Calculation</i>	Class 1 x 24 = €1,560 Class 13 = €80

**If your application is for a Domestic Development or for Outline Permission please proceed to question 59 of this form.**

**59. Declaration:**

**I hereby declare that, to the best of my knowledge and belief, the information given in this form is correct, accurate and fully compliant with the Planning and Development Acts 2000 - 2010 and the Regulations made thereunder:**

<i>Signed</i> <i>(Applicant or Agent</i> <i>As appropriate)</i>	
Date	24 <sup>th</sup> June 2017

An applicant will not be entitled solely by reason of a planning permission to carry out the development. The applicant may need other consents, depending on the type of development. For example, all new buildings, extensions and alterations to, and certain changes of use of existing buildings must comply with building regulations, which set out basic design and construction requirements.



Pembroke Meadows

Site Notice No. 1 located right hand side of main entrance to Pembroke woods from the main R610 road.

Position of Public Notice 2







PERSPECTIVE VIEW 1 - FRONT ELEVATION

M Byrne Architecture  
 produced for Planning Permission purposes only and under no circumstances should be used for construction  
 responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect  
 details of R.C. structures, or mechanical and electrical details, see specified drawings by specialists  
 be fixed in strict accordance with manufacturers instructions.  
 shall be checked with manufacturer.  
 responsible for the co-ordination of structure, finishes and services.

ISSUE STATUS	REVISION	INITIALS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application	● 1 Planning Submission July 2017	
Tender		
Fire Certificate		
Construction		
As built		
Compliance		



**M·BYRNE** | architect

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376150 info  
 Client: Rowan View Developments Limited Drawing: 005 Persp  
 Project: Pembroke Woods, Pembroke, Passage West, Co. Cork Dwg. No.: 1048-c



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PERSPECTIVE VIEW 2 - FRONT ELEVATION

Designed by M Byrne Architecture  
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 The architect is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect.  
 For details of R.C. structure, or mechanical and electrical details, see specified drawings by specialists.  
 All work shall be fixed in strict accordance with manufacturers instructions.  
 All materials shall be checked with manufacturer.  
 The architect shall be responsible for the co-ordination of structure, finishes and services.

ISSUE STATUS	REVISION	INITIALS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application	1	Planning Submission July 2017
Tender		
Fire Certificate		
Construction		
As built		
Compliance		



**M. BYRNE** | archite

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND — T +353 21 2376150 — info@mba.ie  
 Client: Rowan View Developments Limited Drawing: 02/ Perspective  
 Project: Pembroke Woods, Pembroke, Passage West, Co Cork Dwg no: 1545-d



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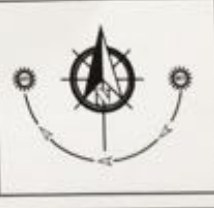
Cork County Council  
County Hall  
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**PERSPECTIVE VIEW 3 - REAR ELEVATION**

Byrne Architecture  
used for Planning Permission purposes only and under no circumstances should be used for construction.  
The architect shall be responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect.  
The architect shall be responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect.  
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ISSUE STATUS	REVISION	INITIALS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application	1	Planning Submission July 2017
Tender		
Fire Certificate		
Construction		
As built		
Compliance		



**M • BYRNE | architect**

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376150 - info@byrne.ie  
 Client: Rowan View Developments Limited Drawing: 03 Perspective View  
 Project: Pembroke Woods, Pembroke, Passage West, Co. Cork Dwg. no.: 1546-e Scale:



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**PERSPECTIVE VIEW 4 - REAR ELEVATION**

Drawn by M Byrne Architecture  
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 The architect is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect  
 For details of R.C. structures, or mechanical and electrical details, see specified drawings by specialists  
 All work shall be fixed in strict accordance with manufacturers instructions.  
 Material items shall be checked with manufacturer.  
 The architect shall be responsible for the co-ordination of structure, finishes and services.

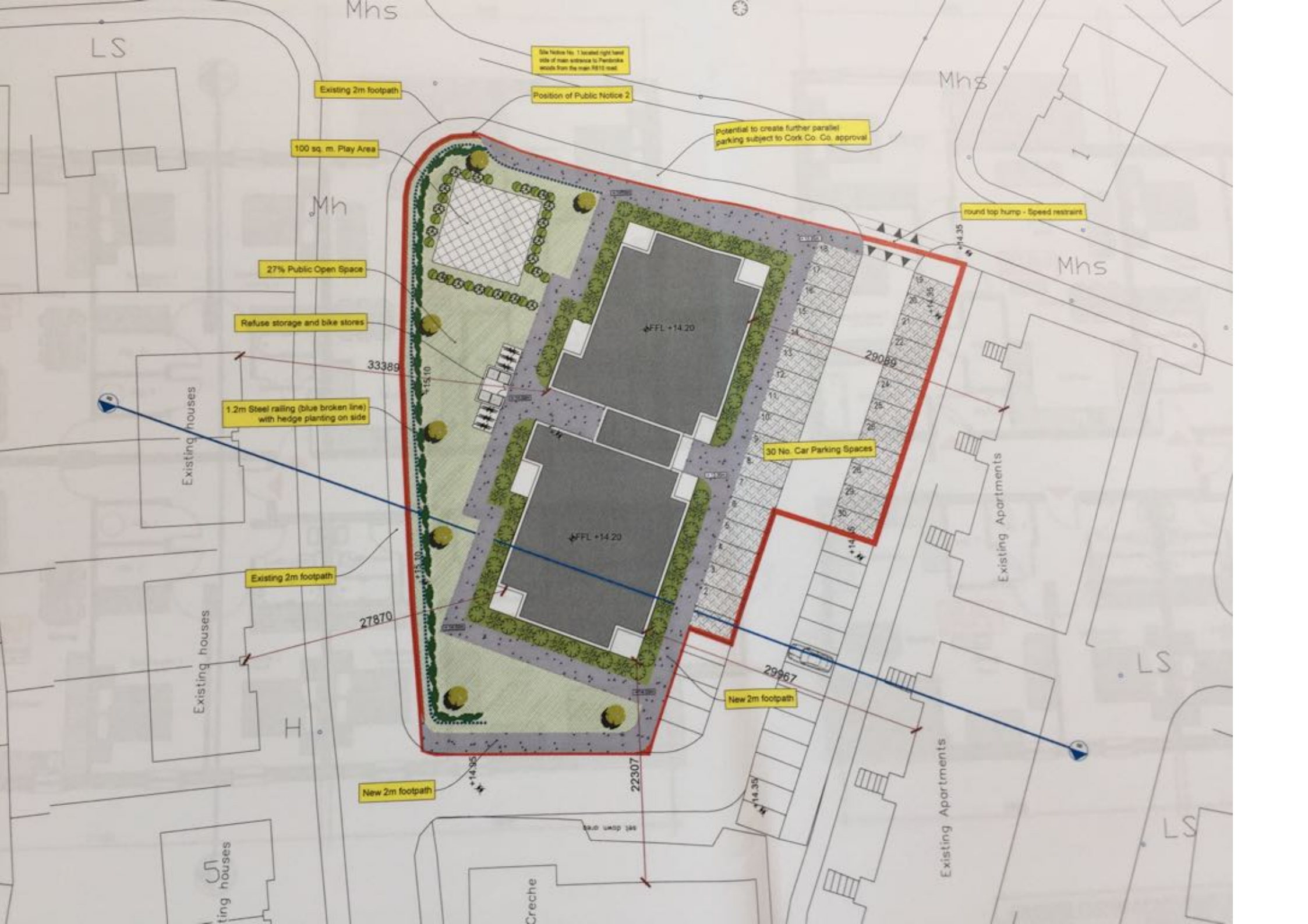
ISSUE STATUS	REVISION	INITIALS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application ● 1	Planning Submission July 2017	
Tender		
Fire Certificate		
Construction		
As built		
Compliance		



**M • BYRNE** | architect

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376150 - info@byrne-architect.com  
 Client: Rowan View Developments Limited Drawing: CGI Perspective  
 Project: Pembroke Woods, Pembroke, Passage West, Co. Cork Draw. no.: 1545-1





LS

Mhs

Mhs

Mhs

LS

LS

Mh

Existing houses

Existing houses

Existing houses

Creche

Existing Apartments

Existing Apartments

Existing 2m footpath

100 sq. m. Play Area

27% Public Open Space

Refuse storage and bike stores

1.2m Steel railing (blue broken line) with hedge planting on side

Existing 2m footpath

New 2m footpath

Potential to create further parallel parking subject to Cork Co. Co. approval

round top hump - Speed restraint

30 No. Car Parking Spaces

New 2m footpath

Site Notice No. 1 located right hand side of main entrance to site

Position of Public Notice 2

33389

27870

22307

29089

29967

FFL +14.20

FFL +14.20

set down area





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# Ground Floor Plan

Scale 1:125

Total internal floor area 673.2 sq. m.

### GROUND FLOOR APARTMENT MIX:

Apartment 1:	1 Bedroom Unit 51.6 sq. m.	Apartment 5:	2 Bedroom Unit 80.0 sq. m.
Apartment 2:	2 Bedroom Unit 80.5 sq. m.	Apartment 6:	2 Bedroom Unit 80.8 sq. m.
Apartment 3:	2 Bedroom Unit 80.8 sq. m.	Apartment 7:	2 Bedroom Unit 80.5 sq. m.
Apartment 4:	2 Bedroom Unit 80.0 sq. m.	Apartment 8:	1 Bedroom Unit 51.6 sq. m.

The proposed Apartments are designed in accordance with the recommendations outlined in:  
 Sustainable Urban Housing: Design standards for new apartments guidelines for planning authorities.  
 DOE - December 2013

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Fire Certificate		
Construction		
As built		
Compliance		



**M·BYRNE** | architectu

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376130 info@mbarchitectu

Client: Rowan View Developments Limited Drawing: Ground Floor Plan

Project: Pembroke Woods, Pembroke, Passage West, Co. Cork Dwg. no.: 1545-3 Scale: 1:125

**LEGEND**  
 Brick Finish  
 Smooth Plaster Render Finish.  
 15mm smooth plaster girth.  
 Grey Zinc clad or similar.  
 uPVC Windows.  
 uPVC Doors.  
 Cedar Cladding or similar

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**FRONT ELEVATION**

scale 1/125



**REAR ELEVATION**

scale 1/125

- NOTES**
1. Copyright reserved by M Byrne Architecture
  2. These drawings are produced for Planning Permission purposes only and under no circumstances should be used for construction
  3. Do not scale drawings
  4. The contractor is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect
  5. Where appropriate, for details of R.C. structure, or mechanical and electrical details, see specified drawings by specialists
  6. Preliminary items shall be fixed in strict accordance with manufacturers instructions.
  7. Issues of proprietary items shall be checked with manufacturer
  8. The contractor shall be responsible for the co-ordination of structure, finishes and services.

ISSUE STATUS	REVISION	DETAILS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application	1	Planning Submission July 2017
Tender		
Fire Certificate		
Construction		
As built		
Compliance		



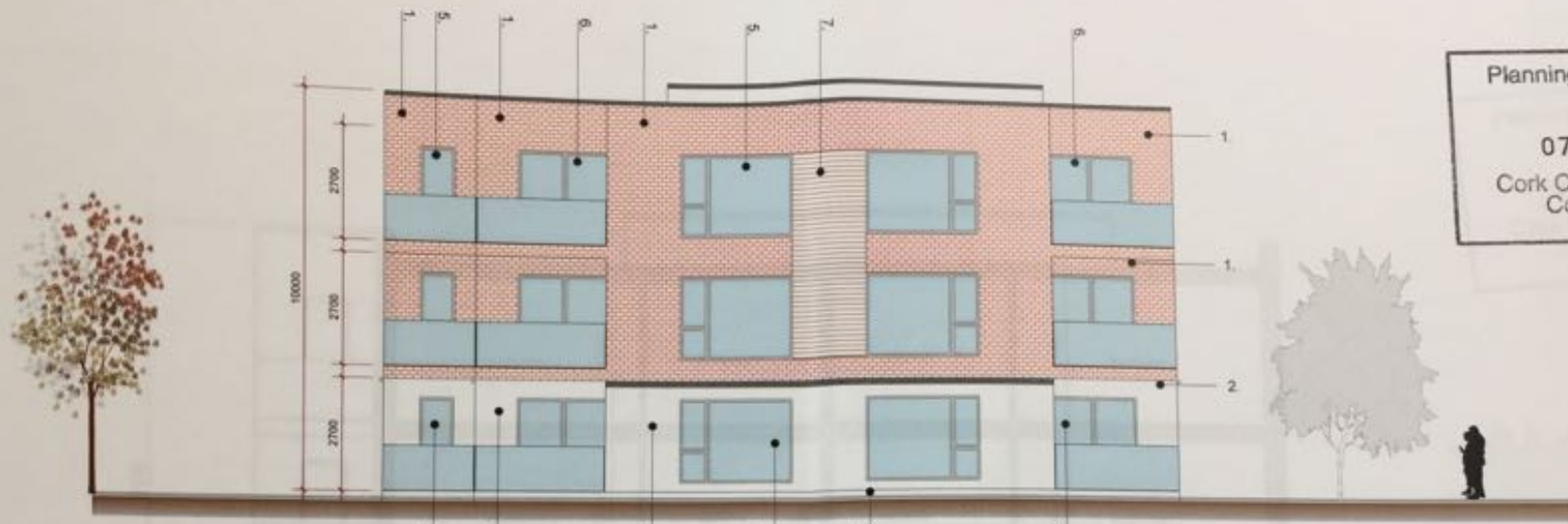
**M·BYRNE | architecture**

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376150 info@byrnearchitecture.co.uk  
 Client: Rowan View Developments Limited Drawing: Front and rear elevation  
 Project: Pembroke Woods, Pembroke, Passage West, Co Cork Dwg. no.: 1545-4 Scale: 1:125



1. Plaster Finish  
 2. Smooth Plaster Render Finish  
 3. Smooth plaster plinth  
 4. Zinc clad or similar  
 5. Windows  
 6. Doors  
 7. Cladding or similar

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**SIDE ELEVATION**  
 scale 1/125



**SIDE ELEVATION**  
 scale 1/125

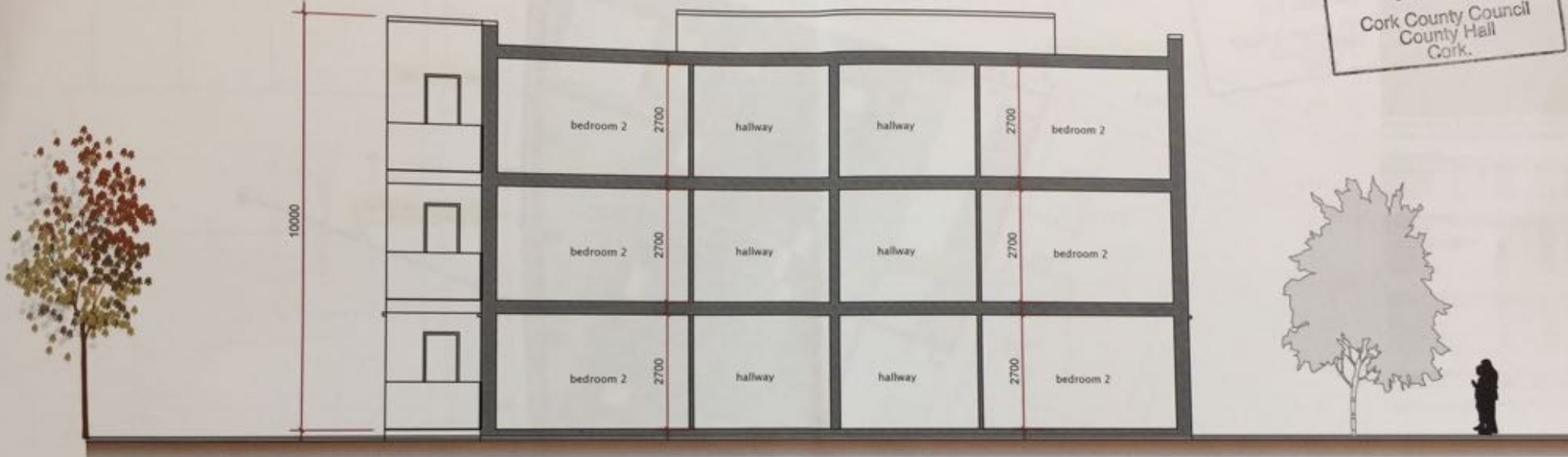
M. Byrne Architecture  
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 The architect is not responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect.  
 Details of R.C. structures, or mechanical and electrical details, see specified drawings by specialists.  
 All work shall be carried out in strict accordance with manufacturer's instructions.  
 The architect shall be responsible for the co-ordination of structure, finishes and services.

ISSUE STATUS	REVISION	INITIALS
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**M. BYRNE | architect**  
 PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND - T +353 21 2376150 info@byrnearchitects.com  
 Client: Rowan View Developments Limited Drawing: Side elevations  
 Project: Pembroke Woods, Pembroke, Passage West, Co Cork Dwg. no: 1545-I Scale:

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**CROSS SECTION A-A**  
 scale 1/100

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 scale drawing  
 contractor is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect,  
 appropriate, for details of R.C. structure, or mechanical and electrical details, see specified drawings by specialists  
 any items shall be fixed in strict accordance with manufacturers instructions  
 if proprietary items shall be checked with manufacturer  
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**M·BYRNE | architect**

PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND T +353 21 2276150 info@byrne.ie  
 Client: Rowan View Developments Limited Drawing: Cross Section A-A  
 Project: Pembroke Woods, Pembroke, Passage West, Co. Cork Dwg no.: 1545-iv Scale:



Pembroke Meadows

Mhs

LS

100 sq. m. Play Area

27% Public Open Space

1.2m Steel railing (blue broken line) with hedge planting on side

Potential to create further parallel parking subject to Cork Co. Cll. approval

Mhs

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Cork.



Sample of 2m High Railing to Western boundary



Proposed paving to parking spaces to demonstrate ownership of proposed apartment development.

PROPOSED PAVING	AREA (sq. m)	UNIT PRICE (€)	TOTAL (€)
BRICK PAVING	100	12.00	1200.00
GRAVEL	50	8.00	400.00
TOTAL			1600.00

PROPOSED PLANTING	QUANTITY	UNIT PRICE (€)	TOTAL (€)
1.2m STEEL RAILING	100	12.00	1200.00
BRICK PAVING	100	12.00	1200.00
GRAVEL	50	8.00	400.00
TOTAL			2800.00

PROPOSED PLANTING	QUANTITY	UNIT PRICE (€)	TOTAL (€)
1.2m STEEL RAILING	100	12.00	1200.00
BRICK PAVING	100	12.00	1200.00
GRAVEL	50	8.00	400.00
TOTAL			2800.00

PROPOSED PLANTING	QUANTITY	UNIT PRICE (€)	TOTAL (€)
1.2m STEEL RAILING	100	12.00	1200.00
BRICK PAVING	100	12.00	1200.00
GRAVEL	50	8.00	400.00
TOTAL			2800.00

NOTE: THE PLANT MATERIALS MUST BE ACQUAINTED TO LOCAL CONDITIONS AND CLIMATIC CONDITIONS.

PROPOSED PLANTING: ALL PLANTING MATERIALS SHALL BE SPECIFIED AS PRACTICAL TO GROW IN THE CLIMATIC CONDITIONS OF THE SITE. ALL PLANTING MATERIALS SHALL BE SPECIFIED AS PRACTICAL TO GROW IN THE CLIMATIC CONDITIONS OF THE SITE. ALL PLANTING MATERIALS SHALL BE SPECIFIED AS PRACTICAL TO GROW IN THE CLIMATIC CONDITIONS OF THE SITE.

CLAIMED: ALL PLANTING MATERIALS SHALL BE SPECIFIED AS PRACTICAL TO GROW IN THE CLIMATIC CONDITIONS OF THE SITE. ALL PLANTING MATERIALS SHALL BE SPECIFIED AS PRACTICAL TO GROW IN THE CLIMATIC CONDITIONS OF THE SITE.

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Site Note No. 1: Level right hand side of road entrance to Pembroke Meadows from the main M17 road  
Position of Public Notice 2

Round top hump - Speed restraint

30 No. Car Parking Spaces

New 2m Footpath

New 2m Footpath

Existing houses

Existing houses

Existing houses

Doodlebugs Creche

Existing Apartments

Existing Apartments

ISSUE STATUS	REVISION	INITIALS
Issue No.		
Draft / Concept		
Pre-planning		
Planning Application	1	
Tender		
Final Certificate		
Construction		



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PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND | T +353 21 2376150 | info@mbyrnearchitecture.co.uk  
 Floor: 2nd Floor, Monaghan Road, Cork, Ireland | www.mbyrnearchitecture.co.uk



**CONTINUOUS ELEVATION - CROSS SECTION B-B**

scale 1/250

- NOTES**
1. Copyright reserved by M Byrne Architecture
  2. These drawings are produced for Planning Permission purposes only and under no circumstances should be used for construction
  3. Do not scale drawing
  4. The contractor is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the architect
  5. Where appropriate, for details of R.C. structures, or mechanical and electrical details, see specified drawings by specialists
  6. Proprietary items shall be fixed in strict accordance with manufacturers instructions
  7. Sizes of proprietary items shall be checked with manufacturer
  8. The contractor shall be responsible for the co-ordination of structure, finishes and services

ISSUE STATUS	REVISION	INITIALS
Issue no.		
Draft / Concept		
Pre-planning		
Planning Application	1	
Tender		
Fire Certificate		
Construction		
As built		
Compliance		

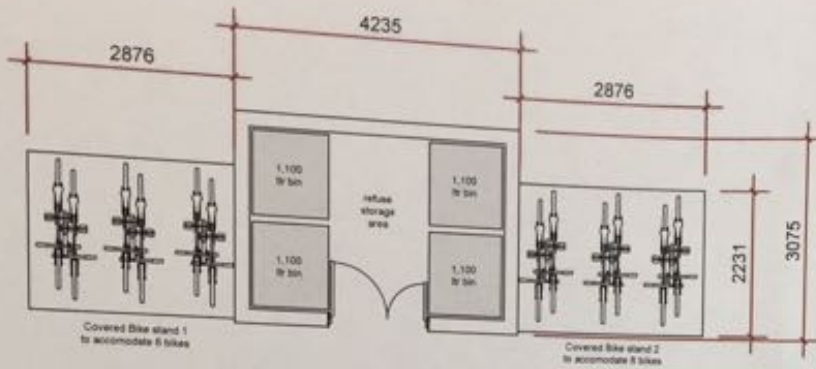


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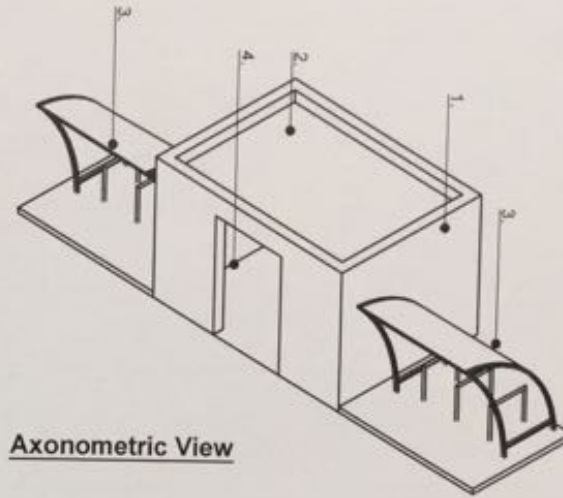
PHOENIX HOUSE, MONAGHAN ROAD, CORK, IRELAND | T +353 21 2316150 | info@byrnearchitecture.co.uk  
 Client: Rowan View Developments Limited | Drawing: Continuous elevation - Cross Section B-B  
 Project: Pembroke Woods, Pembroke, Passage West, Co. Cork | Dwg. no.: 1040-0 | Scale: 1:250



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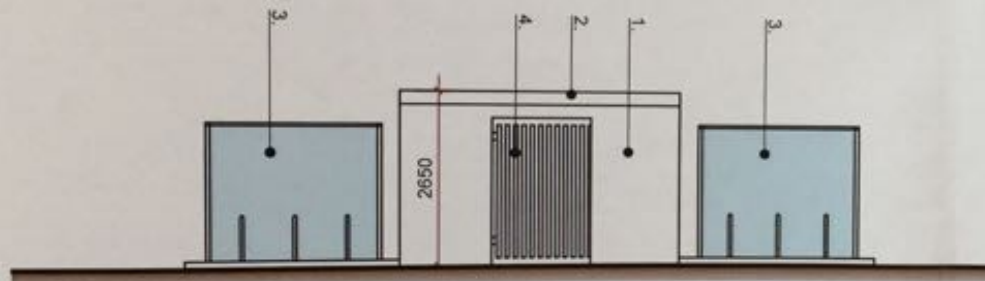


**Plan View of Bicycle and refuse storage**  
scale 1/100

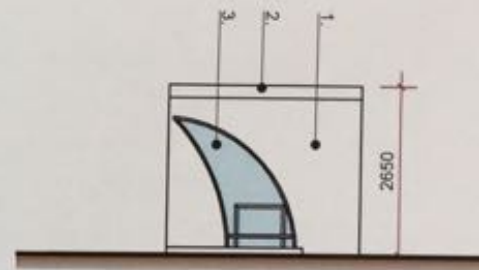


**Axonometric View**

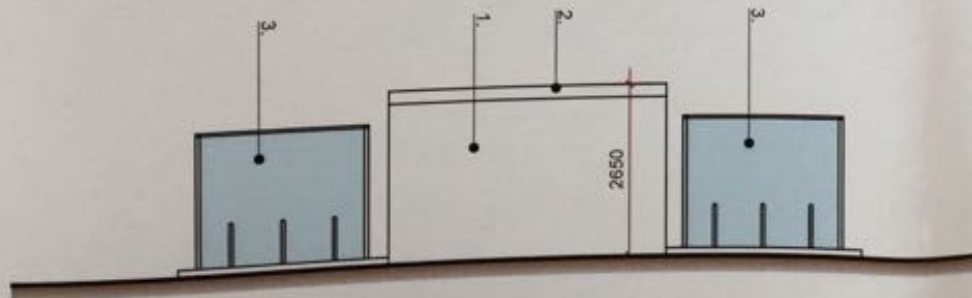
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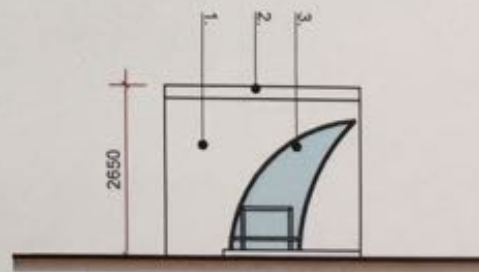
**Front Elevation**  
scale 1/100



**Side Elevation**  
scale 1/100



**Rear Elevation**  
scale 1/100



**Side Elevation**  
scale 1/100

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## 1.0 Introduction

### 1.1 General

OLS Consulting Engineers were commissioned by Rowan View Developments Ltd to undertake the design and specification of the Engineering Services for a proposed residential development at Pembroke, Passage West, Co. Cork.

The proposed development is located approximately 0.8km west of Passage West Village and circa 10km southeast of Cork City Centre and is to comprise of 24No. Apartments and Ancillary Siteworks.

The site is located on a greenfield site within an existing residential area.

The site is bounded on the west and north sides by existing estate roads and there is similar residential units located on the eastern side of the proposed development. There is a Crèche located to the south of the proposed development.

The development will necessitate the construction/provision of new site infrastructure to service the proposed Apartment Complex. Such infrastructure will include foul and surface water drainage, water, electrical and telecommunication services, access roads and common areas.

### 1.2 Scope of this Report

This report outlines the proposed means of servicing the development with foul sewers, storm water sewers, storm water attenuation, water supply and other services required to service a housing development.

This Report should be read in conjunction with the engineering drawings which illustrate and detail the servicing proposals. It should be also read in conjunction with the submissions of other members of the Applicants' design team.



## 2.0 Foul Sewage Collection and Disposal

It is proposed to discharge foul effluent arising within the development to the Public Foul Sewer located on the Estate Road which adjoins the northern boundary of the Site.

The Apartment Complex shall be served by 160/225mm diameter gravity foul sewers which collect foul effluent generated on site.

The foul sewer shall comprise of two 160mm diameter foul sewer lines which shall be laid at the front and rear of the building. Both sewers will merge at FW-MH04 where a single 225mm diameter sewer shall convey effluent to the connection to the existing Public Sewer located on the Estate Road (Manhole F3.1.1).

The Foul Sewerage System shall be designed and installed in accordance with the guidance contained in the "Draft Code of Practice for Wastewater Infrastructure - A Design and Construction Guide for Developers" published by Irish Water.

The following key guidance criteria has been established from the above publication:-

- The sewers have been designed on the basis of 6 times Dry Weather Flow (6DWF). Dry weather flow (DWF) is taken as 600 litres per dwelling (three persons per house and a per capita wastewater flow of 200 litres per head per day).
- All sewers have been designed with gradients that ensure self cleansing velocities are achieved. This is based on a minimum flow velocity of 0.75m/second at one third design flow or during average flow conditions (2 times DWF).

In addition to satisfying the criterion on self cleansing velocity the following conditions shall also be satisfied:-

- 150mm nominal internal diameter gravity sewer shall be laid at gradients not flatter than 1:150 where there is at least ten dwelling units connected;
- 225mm nominal internal diameter gravity sewer shall be laid at gradients not flatter than 1:225 where there is at least twenty dwelling units connected;

Details of the Foul Sewer Layout and Sections are shown on Drawings 1783-PL01, 1783-PL02.

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### 3.0 Stormwater Disposal

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- Stormwater shall be collected in a series of stormwater drains that will be laid in the curtilage of the building. The drains will collect stormwater arising from roof of the building via a series of downpipes and stormwater arising from hard-standing areas shall be collected via the gullies located in the car-parking area and on the building perimeter.
- The stormwater system will include an Attenuation Chamber designed for the 1/100 Year event. The Attenuation Zone shall comprise of Wavin Aquacell Plus Cells installed as per manufacturers' instructions in each zone.
- An outfall pipe from the attenuation chamber shall be sized to cater for a flow equal to the Greenfield Run-Off Rate for the Site and it shall be connected to the existing storm sewer system located on the estate road to the north of the proposed development site.

### 3.1 Stormwater Attenuation Design

#### Design Flood Event

The attenuation volume is calculated on the basis of a 1 in 100 year return period and the outflow from the attenuation chamber shall be equal to the Greenfield Run-Off Rate calculated for each zone.

Detailed attenuations calculations for the 1 in 100 Year Event are contained in Appendix 1 of this Report. The greenfield runoff rates, required and proposed attenuation volumes can be summarised as follows:-

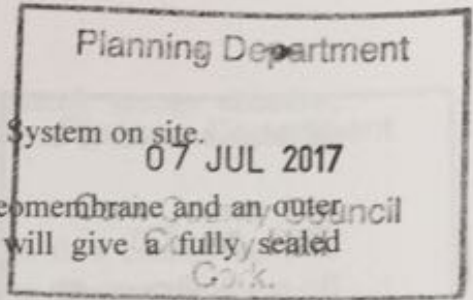
**Table 3.1 – Attenuation Volume Summary**

Zone	Storage Volume Required (m <sup>3</sup> )	Storage Volume Provided (m <sup>3</sup> )*
Zone 1	110.59	121.60 8m x 8m x 2m Deep 640 Aquacell Plus Units laid in 5 Layers 128 Units/Layer
<p><b>*Note Volume Provided is calculated on 95% Void Ratio for Aquacell Plus Units which have a volume of 0.19m<sup>3</sup>/Unit</b></p>		

#### Siting of Attenuation Chambers

The attenuation chamber shall be sited in the green area/soft landscaped areas within the site.



Attenuation Storage Proposal

It is proposed to install a Wavin Aquacell Underground Attenuation System on site.

The Aquacell Plus Cells are wrapped in a fully sealed & welded geomembrane and an outer protective layer to prevent damage to the geomembrane. This will give a fully sealed installation with no potential for groundwater infiltration.

The units shall be installed as per manufacturers' instructions. The outline method of construction as prescribed by the manufacturer is as follows:-

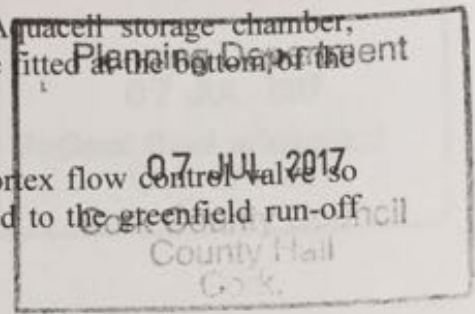
- a) Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the Aquacell units.
- b) Lay 100mm bed of coarse sand, level and compact.
- c) Lay the geotextile over the base and up the sides of the trench.
- d) Lay the geomembrane on top of the geotextile over the base and up the sides of the trench.
- e) Lay the Aquacell units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided. AquaCell units can be laid in a 'brick bonded' formation (i.e. to overlap the joints).
- f) Wrap the geomembrane around the Aquacell structure and seal to manufacturers recommendations.
- g) If side connections into the Aquacell units is required, (other than the preformed socket), use the appropriate Flange Adaptor (6LB104 or 6LB106). Fix the flange adaptor to the unit using self-tapping screws. Drill a hole through the Flange Adaptor and connect the pipework. (6LB106 should not be used with Aquacell Eco).
- h) In order to prevent silt from entering the tank, clogging inlet pipework and reducing storage capacity, it is recommended that the Domestic Silt Trap (6LB300) or the standard Silt Trap (6LB600) is installed prior to the inlet pipework.
- i) Wrap and overlap the geotextile covering the entire AquaCell structure, to protect the geomembrane.
- j) Lay 100mm of coarse sand between the trench walls and the AquaCell units and compact.
- k) Lay 100mm bed of coarse sand over the geotextile and compact. Backfill with suitable material.

The outfall manhole from the attenuation chamber shall be fitted with a Vortex Flow Control Valve to limit the flow to outfall to a rate equal to the Greenfield Run-Off Rate.

The outfall discharge works by gravity as follows:-

- The Outfall Manhole which shall be constructed with a weir fills with water and continues to discharge normally for flows up the greenfield runoff rate.
- As flows increases, the outfall manhole fills with water up to the top of the weir wall.
- Water overflows the weir wall and enters the Aquacell Storage Chamber.
- The Aquacell Chamber fills with water for the duration of the rainfall event.

- After the rainfall event; water flows back out of the Aquacell storage chamber, finding its own level and through the non-return flap valve fitted at the bottom of the weir wall.
- The water discharges from the outfall manhole via the vortex flow control valve so that flow from the attenuation zones at all times is limited to the greenfield run-off rate.



### 3.2 Stormwater Sewer Design

Stormwater sewer design shall be based on the guidance contained in "Recommendations for Site Development Works for Housing Areas"

The sewers shall be designed using the following rainfall intensities:-

- 75mm/hour for roof surfaces
- 50mm/hour for paved surfaces.

Surface Water from the car-parking area will be collected via a series of Heavy Duty Road Gullies.

### 3.3 Silt Interception

The attenuation chamber will be preceded by a Wavin Silt Trap (6LB600) to prevent excessive silt build up in the Aquacell Chambers.

## 4.0 Water Supply

There is an existing 4" (100mm) watermain serving the existing residential units immediately east of the proposed development which in turn is connected to a 150mm water main located on the estate road immediately north of the proposed development. This information has been provided by Irish Water during consultation re. existing water and foul sewer services.

It is proposed to connect to the existing 100mm watermain and install a new 100mm watermain which will be looped around the perimeter of the apartment complex to ensure no dead ends. The apartments will be served by individual 19mm diameter supplies via proprietary manifold units located around the perimeter of the building.

There are existing fire hydrants within close proximity of the building and therefore there is no requirement to install additional fire hydrants to service this development.

Sluice valves will be installed on the principal water main connection to ensure the development can be isolated for maintenance and repair as required.



## 5.0 Other Services/Engineering Matters

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Regional Road adjoining  
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- **Electricity & Telecommunications**

Electricity and telecommunications facilities are available on the Regional Road adjoining the Site.

- **Public Lighting**

There is existing public lighting in the vicinity of the proposed development which was installed as part of the original housing estate development. It is not proposed to alter this installation as the development does not require any alterations to the existing installation.

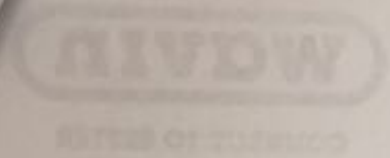
The existing public lighting installation will be supplemented with some additional external lighting which will be mounted to the external facades of the building.

- **Traffic Assessment**

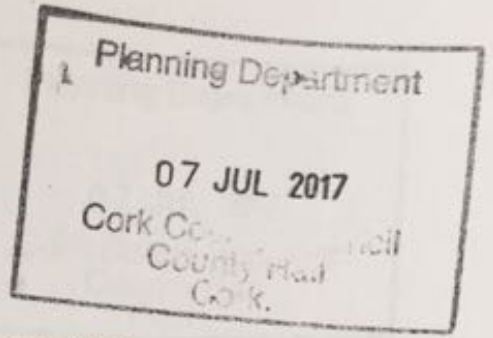
Traffic Impact has been assessed for the proposed development and the traffic impact associated with the proposed development is considered extremely low in the context of the surrounding environment with additional traffic being estimated at 10-15 movement at peak (two way). This will have little or no impact on the existing roads infrastructure capacity.

Sight/Splay Distances have been assessed for both entrances that will serve the development. Guidance on Sight/Splay Distances has been taken from the "Design Manual for Urban Roads and Streets.

The guidance for a 30km/hour area requires a setback 'X' dimension of 2.4m and a sight distance 'Y' dimension of 23m. The assessment using the above criteria demonstrates that there is adequate sight distances at both entrances.



# Overview Components AquaCell Systems



AquaCell units are a fully tried and tested modular technique for managing excessive rainfall. Units are assembled to create an underground structure as either a temporary storage tank or soakaway.

Continuing urban development, a changing climate and the consequences of intensified rainfall: all are increasingly prominent issues on the political and environmental agenda.

In combination, they represent a complex need for the most intelligent, effective Stormwater Management solutions possible.

There are 4 types of unit:

### AquaCell Eco

AquaCell Eco is manufactured from specially reformulated, recycled material and has been designed for shallow, non-trafficked, landscaped applications (see page 6).

### AquaCell Prime

AquaCell Prime is manufactured from specially reformulated, recycled material. It is ideal for use in both shallow and deep applications, subject to either regular traffic loading – such as car parks (for vehicles up to 12 tonnes) – or for landscaped areas (see page 7).

### AquaCell Core

AquaCell Core has been designed for use in deep applications, subject to both regular and heavy traffic loadings, such as cars and HGV's (for vehicles up to 44 tonnes) – (see page 8).

### AquaCell Plus

AquaCell Plus has been designed primarily for use in applications where inspectability is required, and is suitable for use in all applications from landscaped areas to heavily trafficked areas (for vehicles up to 44 tonnes) (see page 9).

### For quick, versatile assembly

The lightweight polypropylene, high void units are securely linked together using special clips and shear connectors.

They can be assembled quickly on site into whatever configuration suits each specific location.

AquaCell geocellular systems also allow 'brick-bonding', which can give extra stability, without the need for additional connector pieces. See Installation Guidance page 12.

### Wrapped for infiltration or storage

The complete assembly is wrapped in either geotextile sheet or a geomembrane:

For **pervious** soils, the geotextile option allows infiltration of stormwater into the surrounding ground.

For **impervious** ground (e.g. clay) or where infiltration is not desirable, the geomembrane holds stormwater in temporary storage until local drainage flows can accept it for normal disposal.

### Benefiting community and environment

AquaCell units contribute the following benefits:

- ⊙ Significantly reduced flooding risk
- ⊙ Controlled, reduced-volume release of stormwater into existing sewer systems or watercourses
- ⊙ Recharging of local groundwater (if infiltration/soakaway application)
- ⊙ Aerobic purification to improve water run-off quality
- ⊙ Sustainable, cost effective management of the water environment

### Helping SUDS and planning approval

The proven qualities and performance of AquaCell systems not only support the achievement of SUDS, they can also help reinforce and enhance planning applications, and enable development to proceed.

