

DECLARATION UNDER SECTION 5 OF THE
PLANNING & DEVELOPMENT ACT 2000, AS AMENDED

REFERENCE: DEC 24/38

NAME OF APPLICANT: Noelle Egan,

ADDRESS FOR CORRESPONDENCE: Springpark, Ballycumber, Tullamore, Co. Offaly.

NATURE OF APPLICATION: Request for Declaration under Section 5 of the Planning & Development Act 2000, as amended as to whether or not the renovation of existing dwelling is or is not development and is or is not exempted development.

LOCATION OF DEVELOPMENT: Church Road, Clara, Co. Offaly.

WHEREAS a question has arisen as to whether the renovation of existing dwelling which consists of:

- **Demolition and Removal of:**
 - Old roof and a full replacement installed with concrete ring beam to underside of roof.
 - Removal of two chimney stacks to make the home energy efficient.
- **Flooring**
 - Replacement of floors and radon barrier and DPC added.
- **Interior**
 - Full replacement of plaster throughout
 - Fire doors installed throughout
 - New skirting and architrave
- **Electrical and Plumbing Upgrades:**
 - Complete full replacement plumbing first and second fix to replace old plumbing fixtures.
 - Kitchen renovation
 - Removal of existing cabinetry, countertops, and appliances.
 - Installation of new custom cabinetry, including base cabinets, wall cabinets, and pantry storage.
 - Installation of new countertops.
 - Upgrade of kitchen appliances to energy-efficient models.
 - Installation of under-cabinet lighting.
- **Bathroom Renovation:**
 - Removal of existing fixtures, including bathtub, toilet, and vanity.
 - Installation of a new walk-in shower with glass enclosure and rainfall showerhead.
 - Installation of a new dual-flush toilet.
 - Installation of a modern vanity with storage cabinets and integrated sink.
 - Installation of new ceramic tile flooring.
 - Upgrade of bathroom ventilation system.
- **Insulation Enhancement:**
 - Addition of insulation in the attic to improve energy efficiency.
 - Insulation of exterior walls to enhance thermal performance.
 - Insulation of all flooring

Contd

PHYSICS DEPARTMENT

PHYSICS 551 - QUANTUM MECHANICS

PROBLEM SET 1

Due: Monday, September 10, 2018

1. (10 points)

Consider a particle in a 1D potential

$$V(x) = \begin{cases} 0 & x < 0 \\ \frac{1}{2}kx^2 & x > 0 \end{cases}$$

where k is a constant. The wave function of the particle is given by $\psi(x) = A e^{-\alpha x^2}$ for $x > 0$ and $\psi(x) = 0$ for $x < 0$. Find the value of α such that $\psi(x)$ is an eigenfunction of the Hamiltonian operator.

2. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the energy eigenvalue E_n corresponding to this wave function.

3. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the probability of finding the particle in the region $0 < x < \frac{L}{2}$.

4. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the momentum operator \hat{p} .

5. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the kinetic energy operator \hat{T} .

6. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the potential energy operator \hat{V} .

7. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the total energy operator \hat{H} .

8. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the position operator \hat{x} .

9. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the momentum squared operator \hat{p}^2 .

10. (10 points) A particle of mass m is confined to a 1D infinite potential well of width L . The wave function of the particle is given by $\psi(x) = \sqrt{\frac{2}{L}} \sin\left(\frac{n\pi x}{L}\right)$ for $0 < x < L$ and $\psi(x) = 0$ for $x < 0$ and $x > L$. Find the expectation value of the energy squared operator \hat{H}^2 .

- **Exterior Improvements:**

- Installation of A2 rated windows and composite exterior doors.
- Replaster with a nap finish.

at Church Road, Clara, Co. Offaly is or is not development and is or is not exempted development.

AND WHEREAS, Noelle Egan, Church Road, Clara, Co. Offaly requested a declaration on the said question from Offaly County Council;

AND WHEREAS Offaly County Council, in considering this declaration request, had regard particularly to:

- (a) Section 2, 3(1) and 4(1)(h), of the Planning & Development Act 2000, as amended.

AND WHEREAS Offaly County Council has concluded that the work is development and is exempted development particularly having regard to article 4(1)(h).

NOW THEREFORE Offaly County Council, in exercise of the powers conferred on it by Section 5(2)(a) of the Planning and Development Act 2000 (as amended), hereby decides that:

The renovation of existing dwelling which consists of

- **Demolition and Removal of:**

- Old roof and a full replacement installed with concrete ring beam to underside of roof.
- Removal of two chimney stacks to make the home energy efficient.

- **Flooring**

- Replacement of floors and radon barrier and DPC added.

- **Interior**

- Full replacement of plaster throughout
- Fire doors installed throughout
- New skirting and architrave

- **Electrical and Plumbing Upgrades:**

- Complete full replacement plumbing first and second fix to replace old plumbing fixtures.
- Kitchen renovation:
 - Removal of existing cabinetry, countertops, and appliances.
 - Installation of new custom cabinetry, including base cabinets, wall cabinets, and pantry storage.
 - Installation of new countertops.
 - Upgrade of kitchen appliances to energy-efficient models.
 - Installation of under-cabinet lighting.

- **Bathroom Renovation:**

- Removal of existing fixtures, including bathtub, toilet, and vanity.
- Installation of a new walk-in shower with glass enclosure and rainfall showerhead.
- Installation of a new dual-flush toilet.
- Installation of a modern vanity with storage cabinets and integrated sink.
- Installation of new ceramic tile flooring.
- Upgrade of bathroom ventilation system.

- **Insulation Enhancement:**

- Addition of insulation in the attic to improve energy efficiency.

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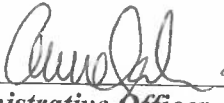
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- Insulation of exterior walls to enhance thermal performance.
- Insulation of all flooring

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is development and is exempted development at Church Road, Clara, Co. Offaly

MATTERS CONSIDERED In making its decision, the Planning Authority had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.



Administrative Officer

31/5/24

Date

Note: Any person issued with a Declaration may on payment to An Bord Pleanála, 64 Marlborough Street Dublin 2 of such fees as may be described refer a declaration for review by the board within four weeks of the issuing of the Declaration.

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Department of Mathematics

Mathematics Preceptor Group

Math 554: Algebraic Number Theory

Section 1: Introduction

1.1. The Ring of Integers

1.2. The Norm

1.3. The Minkowski Bound

1.4. The Class Number

1.5. The Discriminant

1.6. The Class Group

1.7. The Class Field Theory

1.8. The Class Number Formula

1.9. The Class Number

1.10. The Class Number

1.11. The Class Number

1.12. The Class Number

Planning Report

Section 5 Declaration

File Reference:	Dec. 24/38
Question:	WHETHER OR NOT THE RENOVATION OF EXISTING DWELLING IS OR IS NOT DEVELOPMENT AND IS OR IS NOT EXEMPTED DEVELOPMENT
Applicant:	NOELLE EGAN
Correspondence Address:	SPRINGPARK, BALLYCUMBER, TULLAMORE, CO. OFFALY
Location:	CHURCH ROAD, CLARA, CO. OFFALY

SECOND REPORT ON FILE

1. Review of Further Information

Further information was sought by the Planning Authority on 3rd May 2024 and subsequently received by the Planning Authority on 15th May 2024. This report should be read in conjunction with the previous planner's report dated 3rd May 2024. The following Further Information was sought and the response is as follows:

1. The Applicant has stated the development consists of renovation of dwelling. The Applicant is required to submit a detailed list which clearly indicates exactly what works are proposed to be carried out in order to determine if the restoration of the dwelling complies with Section 4 (1)(h) of the Planning and Development Act 2000 (as amended)

Applicants Response: The Applicants have indicated that the following works will be carried out

- **Demolition and Removal of:**
 - Old Roof and a full replacement installed with concrete ring beam to underside of roof.
 - Removal of two Chimney Stack to make the home energy efficient.
- **Flooring**
 - Replacement of floors and radon barrier and DPC added.
- **Interior**
 - Full replacement of plaster throughout
 - Fire Doors installed throughout
 - New Skirting and Architrave
- **Electrical and Plumbing Upgrades:**
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 - Removal of existing cabinetry, countertops, and appliances.

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 - Replaster with a Nap finish.

Planners Appraisal: The further information received in relation to item 1 was assessed by the Planning Authority who note following a site inspection, that all external modifications subject of this declaration have already been carried out to the dwelling in question. It is considered the modifications either already carried out or proposed is development and is exempted development.

CONCLUSION:

Having assessed the further information received and the previous planning report on file, it is considered the renovation of existing dwelling is development and is exempted development.

Declaration on Development and Exempted Development

Section 5 of the Planning and Development Act 2000 (as amended)

WHEREAS a question has arisen as to whether the renovation of existing dwelling which consists of:

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Please note that any person issued with a declaration under subsection 2(a) of the Planning and Development Act 2000 (as amended) may on payment to the Board of the prescribed fee, refer a declaration to An Bord Pleanála within 4 weeks of the issuing of the decision.

Michael Duffy

Michael Duffy

Executive Planner

29th May 2024

Ed Kelly

Ed Kelly

Acting Senior Executive Planner

30th May 2024

**APPROPRIATE ASSESSMENT SCREENING
REPORT FOR PLANNING APPLICATIONS**



Screening is used to determine if an AA is necessary by examining:

- If the plan / project is directly connected with / necessary to the management of the European site
- If the effects will be significant on a European site in view of its conservation objectives, either alone / in combination with other plans / projects.

Planning Application Ref. No.: DEC24/38

(A) DESCRIPTION OF PROJECT AND LOCAL SITE:			
Proposed development:	WHETHER OR NOT THE RENOVATION OF EXISTING DWELLING IS OR IS NOT DEVELOPMENT AND IS OR IS NOT EXEMPTED DEVELOPMENT		
Site location:	CHURCH ROAD, CLARA, CO. OFFALY		
Area:	N/A	Floor Area of Proposed Development:	N/A
Identification of nearby European Site(s):	2000 site(s): SAC 000571– Clara Bog		
Distance to European Site(s):	1.53km		
The characteristics of existing, proposed or other approved plans / projects which may cause interactive / cumulative impacts with the project being assessed and which may affect the European site:	None		
Is the application accompanied by an EIS?			No: v
(B) IDENTIFICATION OF THE RELEVANT European SITE(S):			
The reasons for the designation of the European site:	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]		
The conservation objectives / qualifying interests of the site and the factors that contributes to the conservation value of the site: (which are taken from the Natura 2000 site synopses and, if applicable, a Conservation Management Plan; all available on www.npws.ie) (ATTACH INFO.)	https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000572.pdf		
To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) in Clara Bog SAC To restore the favourable conservation condition of Active raised bogs in Clara Bog SAC; The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this			

habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Clara Bog SAC;
 Depressions on peat substrates of the Rhynchosporion is an integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set for the habitat in Clara Bog SAC;
 To maintain the favourable conservation condition of Bog woodland in Clara Bog SAC.

(C) NPWS ADVICE:

Advice received from NPWS over phone:	None received

(D) ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS:

(The purpose of this is to identify if the effect(s) identified could be significant – if uncertain assume the effect(s) are significant).

If the answer is 'yes' to any of the questions below, then the effect is significant.
 (Please justify your answer. 'Yes' / 'No' alone is insufficient)

<p>Would there be... ... any impact on an Annex 1 habitat? (Annex 1 habitats are listed in Appendix 1 of AA Guidance).</p>	Not likely due to the location and type of development.
	The site is sufficient distance from the European site.
<p>... a reduction in habitat area on a European site?</p>	There will be no reduction in the habitat area.
	The site is sufficient distance from the European site.
<p>... direct / indirect damage to the physical quality of the environment (e.g. water quality and supply, soil compaction) in the European site?</p>	Not likely due to the location and type of development
	The site is sufficient distance from the European site.
<p>... serious / ongoing disturbance to species / habitats for which the European site is selected (e.g. because of increased noise, illumination and human activity)?</p>	Not likely due to the location and type of development
	The site is sufficient distance from the European site.

<p>... direct / indirect damage to the size, characteristics or reproductive ability of populations on the European site?</p>	<p>Not likely due to the location and type of development</p>
<p>Would the project interfere with mitigation measures put in place for other plans / projects. [Look at <i>in-combination effects</i> with completed, approved but not completed, and proposed plans / projects. Look at projects / plans within and adjacent to European sites and identify them]. Simply stating that there are no cumulative impacts' is insufficient.</p>	<p>The site is sufficient distance from the European site</p> <hr/> <p>No other plans known of in the vicinity of the site.</p> <hr/> <p>The site is sufficient distance from the European site.</p> <hr/> <hr/> <hr/> <hr/>
<p>(E) SCREENING CONCLUSION:</p>	
<p>Screening can result in:</p>	
<p>1.</p>	<p><i>AA is not required</i> because the project is directly connected with / necessary to the nature conservation management of the site.</p>
<p>2.</p>	<p><i>No potential for significant effects / AA is not required.</i></p>
<p>3.</p>	<p><i>Significant effects are certain, likely or uncertain.</i> (In this situation seek a NIS from the applicant or reject the project. Reject if too potentially damaging / inappropriate.</p>
<p>Therefore, does the project fall into category 1, 2 or 3 above?</p>	
<p>Justify why it falls into relevant category above:</p>	<p>Category 2</p> <p>There would be no likely significant impact on European sites from the proposed development.</p>
<p>Name:</p>	<p>Michael Duffy</p>
<p>Position:</p>	<p>Executive Planner</p>
<p>Date:</p>	<p>29th May 2024</p>