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Planning Consultants

# Environmental Impact Assessment Report Addendum– Tesco Cavan Town

Prepared by RMLA Limited

On behalf of Tesco Ireland Limited

July 2023

Cavan Co. Council  
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Planning Section

Cavan Planning Authority - Inspection Purposes Only!

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## 1.0 Introduction

### 1.1 Overview

This purpose of this EIA Addendum (hereafter 'Addendum') is to assess any potential effects of the proposed development resulting from a Request for Further Information regarding planning application Reg. Ref. 23/8.

### 1.2 Request for Further Information

A Request for Further Information (RFI) dated 10<sup>th</sup> March 2023 was received from the Planning Authority in relation to planning application Reg. Ref. 23/8 for a mixed retail development situated on the townlands of Townparks and Tullymongan Lower to the east of the Main Street at Cock Hill, Cavan town. Details of the points raised within the RFI specifically relating to the submitted Environmental Impact Assessment Report (EIA) are outlined as follows:

*"11. In considering the Environmental Impact Assessment Report (EIA), the Planning Authority as the competent authority considers that the report is a comprehensive and detailed assessment of the potential impacts on the environment of the proposed project. Notwithstanding the above, the applicant is required to address the potential impact on the environment of the proposed project having regard to the proximity to the school site (St. Clare's National School) which is currently under construction. The applicant is required to address potential impacts in terms of the relevant Chapters in the EIA."*

### 1.3 Response to Request for Further Information

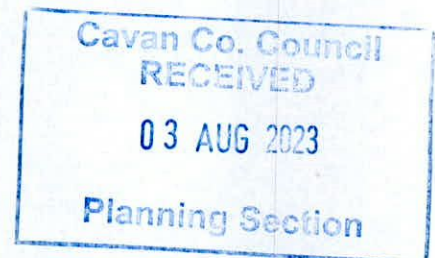
This Addendum has been formulated by the EIA Team and is comprised of updated chapters that have been prepared in response to Point 11 of the RFI as mentioned. It is considered the updated chapters, as contained within this Report, have appropriately addressed the requirement to assess the potential impact on the environment of the proposed project having regard to the proximity to St. Clare's National School which is currently under construction. The content of this Addendum is split into the following Chapters:

- Chapter 2 - Description of Proposed Development
- Chapter 3 – Planning and Development Context
- Chapter 4 - Examination of Alternatives
- Chapter 5 - Population and Human Health
- Chapter 6 -Traffic and Transport
- Chapter 7 - Land and Soils –Geology & Hydrogeology
- Chapter 8 - Hydrology
- Chapter 9 - Biodiversity
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- Chapter 11 – Noise and Vibration
- Chapter 12 – Air Quality and Climate
- Chapter 13 – Micro Climate
- Chapter 14 – Landscape Visual Impact Assessment
- Chapter 15 – Archaeological and Architectural Heritage
- Chapter 16 – Material Assets – Site Services
- Chapter 17 – Risk Management
- Chapter 18 – Interactions and Potential Cumulative Impacts

This Report has been compiled by RMLA Limited with input from an experienced team of consultants. Details of each consultant are outlined in Table 1.5 of Chapter 1 of the submitted EIAR Report, Volume II.



## 2.0 Description of Proposed Development

### 2.1 Overview

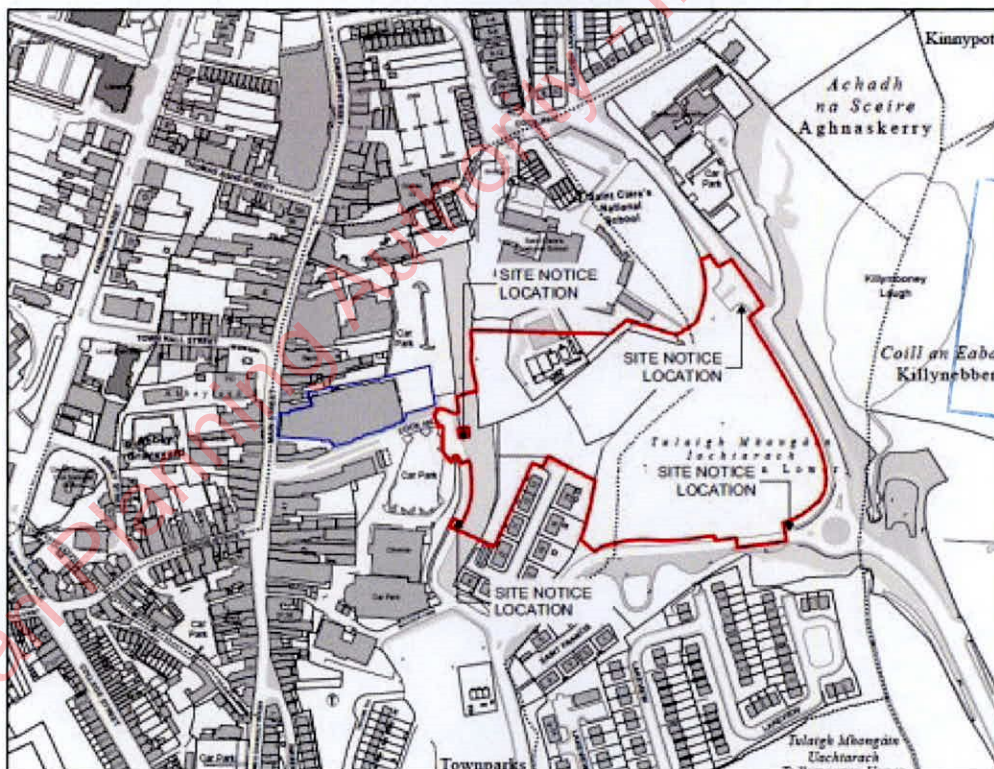
This purpose of this updated chapter is to assess effects of the proposed development resulting from a Request for Further Information regarding planning application Reg. Ref. 23/8.

### 2.2 Description of Site and Surroundings

The subject site is located on townlands of Townparks and Tullymongan Lower to the east of the Main Street at Cock Hill, Cavan town (see Figure 2.1). The subject site is approximately c. 4.126 hectares in area. The subject site has the potential to accommodate a sustainable expansion of the town centre area through the provision of a mixed retail development. It is considered that the appropriate development of this area could significantly enhance the profile of Cavan town, generate employment and attract people to the town.

The proposed scheme will provide a single storey Tesco supermarket (c. 5,197 sq.m.), a drive thru café unit (c. 174 sqm) and a petrol filling station to the eastern boundary of the site. Additionally, the proposed development will provide pedestrian linkages with the Town Centre by way of the provision of a sloped pedestrian walkway and steps on the western boundary of the site.

Figure 2.1 Extract of Site Location Map (JDA Drawing No. 002)



### 2.2.1 Cavan Town

Cavan Town is located in the centre of the County and is situated on the N3/A509 between Dublin and Enniskillen and the N55 Athlone to Cavan Town Road. Areas to the north and west of the Town are characterised by a series of connected lakes.

Cavan Town is the largest town in the County and administrative and primary location for shopping in the County. The Town offers a range of national and international convenience and comparison retailers both within the town centre and retail parks located on the outskirts of the town. The Town is also an employment and recreational centre with office parks, cinema complex, bars and restaurants.

### 2.2.2 Site Context

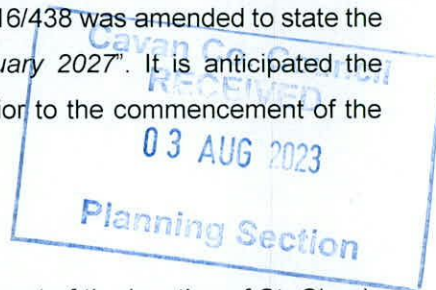
The subject site is located within the designated Town Core as identified in the Cavan Local Area Plan, incorporated in the Cavan County Development Plan 2022-2018. The site located to the east of Main Street and is approximately c. 4.126 hectares in size. The subject site is currently undeveloped and is brownfield in nature. The subject site is under the control of Cavan County Council.

The site is currently bounded to the north by the St. Clare's National School, to the west by the Local Authority public car park adjacent to the existing Tesco supermarket, to east by Killymooney Lough and open countryside and to the south by single storey residential units. The topography of the site differs as much as c. 20 metres between the highest and lowest points of the site. The site also falls from its highest point in the western direction towards the town centre with a similar vertical interval.

The extension of St. Clare's National School, approved under Reg. Ref. 16/483, commenced in October 2021 and when completed will provide 10 no. new classrooms to replace existing temporary and older classroom accommodation along with associated ancillary accommodation, new access and parking and playing facilities. An Extension of Duration regarding Reg. Ref. 16/483 was granted by the Planning Authority in September 2021. Subsequently, Condition 2 of Reg. Ref. 16/438 was amended to state the "Development shall be carried out and completed by the 11<sup>th</sup> January 2027". It is anticipated the extension project at St. Clare's National School will be completed prior to the commencement of the proposed development.

### 2.3 Summary of Assessment

The main EIA Report (Volume II) and this Addendum are fully cognisant of the location of St. Clare's National School to the north of the subject site which is presently subject to construction works as described above, and the surrounding environmental context. The potential effects of the proposed development, at both construction and operational stages, on the local environment, including St. Clare's National School, is described and assessed in the remaining chapters of this Report.



## 3.0 Planning and Development Context

### 3.1 Overview

This purpose of this updated chapter is to assess effects of the proposed development resulting from a Request for Further Information regarding planning application Reg. Ref. 23/8.

### 3.2 Local Level

The proposed development is located within the administrative area of Cavan County Council, therefore, the Cavan County Development Plan incorporating a Local Area Plan for Cavan Town 2022-2028 is the relevant statutory plan and provides the local statutory policy for the County and Town.

#### 3.2.1 Statutory Planning Policy Framework – Cavan County Development Plan, incorporating a Local Area Plan for Cavan Town 2022-2028.

The Cavan County Development Plan (hereafter 'CDP') was adopted at a Special Council Meeting by the Elected members of Cavan County Council on Monday, 30th May 2022. The Plan came into effect on Monday, 11th July 2022 and sets out the overall planning and sustainable strategy for the County and town. A Cavan County Retail Strategy 2021-2028 also accompanies the Development Plan documentation. The County Retail Strategy considers current retailing trends, including the growth of online shopping and its impact on retail floorspace, consumer behaviours and the impact from the COVID-19 pandemic and the Brexit Withdrawal Agreement, in addition to the geographic location of Cavan close to the border with Northern Ireland and the good transport links to the Dublin Region.

The Development Plan identifies Cavan Town as the only Key Town in its settlement hierarchy and describes the town as follows:

*“County Town with large economically active services that provide employment for their surrounding areas and with high-quality transport links and the capacity to act as growth drivers”.*

To achieve the targeted 30% population uplift as set out in the RSES, the Development Plan notes that the Council is committed to the delivery of sustainable, compact, sequential growth in Cavan Town by consolidating the built-up footprint with a focus on the development of town centre infill and brownfield sites and the regeneration of underutilised, vacant, and derelict land.

In terms of the retail hierarchy, Cavan Town is identified as the sole Tier 1 Primary Retail Centre within the County. Retail Development Objectives include the following:

**ER 02** Permit retail development of a size and scale that is appropriate to the level of the town/settlement area, including its population, as defined within the County Retail Hierarchy. This policy will aim to consolidate and reinforce all existing retail enterprises within the County and permit the development of additional retail floorspace where such development is deemed to be appropriate by Cavan County Council.

**ER 04** Guide retail development where practical and viable in accordance with the framework provided by the “Sequential Approach”, in order to enable the vitality and viability of existing town and village centres to be sustained and strengthened.

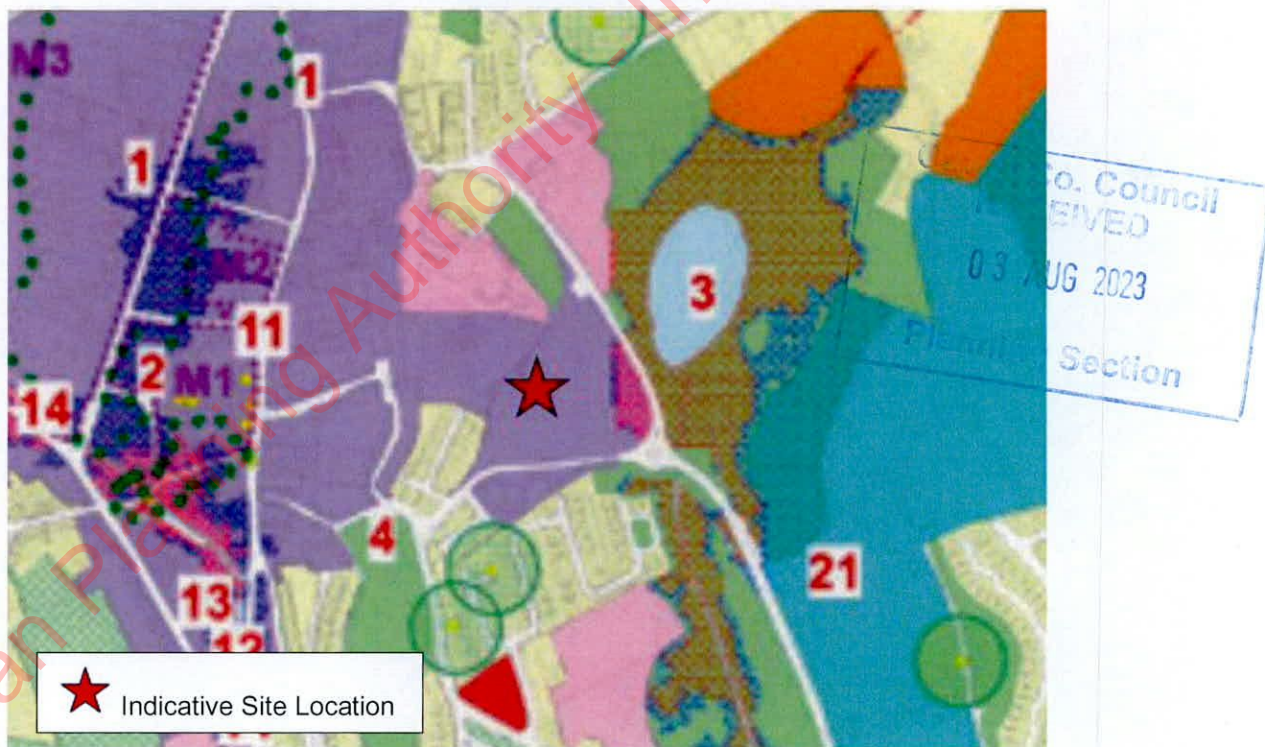
The Development Plan states it is a development objective of Cavan County Council to:

*“Support commercial opportunities within Cavan town centre which harnesses the potential of the town for economic growth and sustainability.”<sup>1</sup>*

The aim of the Economic Development Strategy for the County is to promote Cavan’s existing economic profile, maximise its strategic border location, its green environment and availability of a skilled and educated workforce within the County and surrounding region. In relation to Cavan Town, it is the policy of the Council to make the town a more attractive place to live, work, shop and do business in.

Under the CDP the subject site is zoned Town Core which aims to “*protect and enhance the special physical and social character of the town and village core while providing and/or improving town/village centre facilities.*”<sup>2</sup> (see Figure 3.1) A range of uses are permitted in principle under this zoning objective including retail comparison, retail shops-major, restaurant/café and commercial car park. In addition to the majority Town Core zoning of the site, there is a small portion of the site zoned ‘Existing Residential’ immediately west of the St. Francis residential estate.

**Figure 3.1 CDP Zoning Map – Cavan Town**



<sup>1</sup> Cavan County Development Plan, incorporating a Local Area Plan for Cavan Town 2022-2028, pg. 90

<sup>2</sup> Cavan County Development Plan, incorporating a Local Area Plan for Cavan Town 2022-2028, pg. 603



Figure 3.2 CDP Zoning Map Key – Cavan Town



There are a wide range of Development Plan policies and development management standards that apply to the proposed development. These are outlined in the Planning Report prepared by RMLA and which forms part of the planning application submission.

### 3.2.2 Zoning Objectives of Adjacent Lands to Subject Site

A summary of the CDP zonings pertaining to lands situated adjacent to the subject site is provided in Table 3.1.

| Location to Site | CDP Zoning  | CDP Objective  |
|------------------|---|--|
| North            | Public and Community<br>(St. Clare's National School) | <b>PC:</b> Provide for and protect civic, religious, community, education, health care and social infrastructure.  |
| South            | Town Core / Existing Residential                      | <b>TC:</b> Protect and enhance the special physical and social character of the town and village core while providing and/or improving town/village centre facilities.<br><b>ER:</b> Protect and enhance the amenity of developed residential communities.   |
| East             | Amenity & Open Space / Flood Zone A                   | <b>AOS:</b> Protect and provide for amenity and open space areas.<br><b>FZA:</b> Flood Zones A and B have been identified by the Strategic Flood Risk Assessment. These zones generally limit new development, but facilitate existing development uses that may require small scale development such as small extensions. |

|             |                                  |   |
|-------------|----------------------------------|---|
|             |                                  | Development proposals within these zones shall be accompanied by a detailed Flood Risk Assessment |
| <b>West</b> | Town Core / Existing Residential | As above.   |

### 3.3 Summary of Assessment

This chapter of the Report provides additional County Development Plan information in respect of the associated Zoning Objectives pertaining to lands immediately adjacent to the subject site, including St. Clare's National School to the north of the subject site.



## 4.0 Examination of Alternatives

### 4.1 Overview

This purpose of this updated chapter is to assess any potential effects regarding the design and layout of the proposed development resulting from a Request for Further Information regarding planning application Reg. Ref. 23/8.

### 4.2 Alternative Design and Layouts

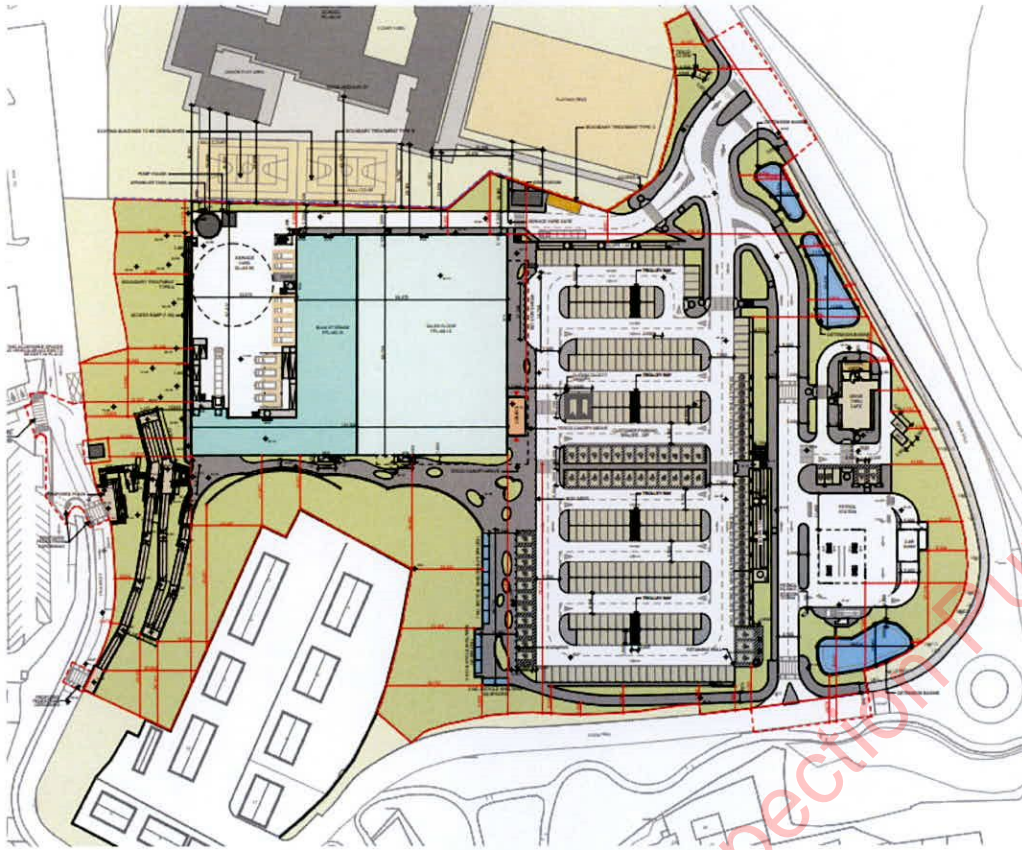
Chapter 4 of the submitted EIAR provides an assessment of 6 no. alternative options that were considered for the proposed development and the reasons as to why these options were not taken forward, alongside the selected layout and design as submitted.

The proposed layout and design that was ultimately chosen for the proposed development is one that has been assessed as representing the optimal solution for the subject site, representing an improvement in terms of environmental effects when compared to the other considered options.

#### 4.2.1 Site Layout

As a result of the RFI, a number of amendments have been undertaken to the proposed site layout (refer to Figure 4.1), which constitutes an alternative layout to that originally submitted with the planning application. In summary, the amendments to the proposed site layout include, inter alia:

1. The main access junction is redesigned:
  - Reduction of two exit lanes to one exit lane.
  - Reduction of two entry lanes to one entry lane.
  - Wider refuge island (4m+) and staggered crossings for active users.
2. Internal Roads Layout is amended to enable the on-site movement of vehicles from the retail parking area to the café and filling station without use of the public road network.
3. The design of the walkways and public realm between Cavan Town Centre and the proposed development are revised to provide greater levels of amenity for users.
4. The potential for a bus route to serve the proposed development is established.
5. Alterations to boundary treatments to the west and northern boundaries to include a mix of vertical louvre screening, paladin fencing, and timber fencing.
6. Relocation of the pump house and sprinkler system from the area adjacent to the ESB sub station, to the northwestern corner of the service yard.



**Figure 4.1 Amended Proposed Site Layout Plan**

#### 4.2.2 Design

As a result of the RFI, a number of amendments have been undertaken to the proposed design, which constitutes an alternative design to that originally submitted with the planning application. In summary, the amendments to the proposed design include, inter alia:

1. Amendments to the western elevation facing Town Core.
2. Amendments to the eastern elevation (main entrance) and southern elevation.

#### 4.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

##### 4.3.1 Construction Phase

It is assessed that no additional predicted effects are anticipated during the construction stage to deliver the site layout and building elevations as a result of the Request for Further Information.

##### 4.3.2 Operational Phase

###### 4.3.2.1 Site Layout

The amendments to the proposed site layout plan as a result of the RFI will bring forward a number of positive and long term effects for the environment at Operational Stage, including the adjoining St. Clare's National School. These effects include, inter alia:



- Reallocating road space in favour of active travel modes.
- On-site movement of vehicles from the retail parking area to the café and filling station without use of the public road network.
- Greater levels of amenity for users through the design of walkways and public realm.
- Greater sustainable movement through potential bus route.
- Revised boundary treatments.
- Relocation of pump house and sprinkler system.

#### 4.3.2.2 Design

As assessed in Chapter 14 of this Addendum by Macro Works, it is assessed that the proposed design changes to façade and boundary treatments will not result in any material changes to the original operational phase, however they are considered to be cumulative improvements to the scheme design.

#### 4.4 Summary of Assessment

The predicted effects of the amendments to the site layout plan and building elevations of the proposed development on foot of the RFI are assessed above. It is assessed the amendments, as stated, will not give rise to any additional predicted effects for the environment which includes St. Clare's National School.



## 5.0 Population & Human Health

### 5.1 Overview

This purpose of this updated chapter is to assess effects of the proposed development on Population and Human Health resulting from a Request for Further Information regarding planning application Reg. Ref. 23/8.

### 5.2 Methodology

The methodology for the 'Population and Human Health' Chapter of the EIAR involves the compilation, examination and analysis of relevant baseline population and socio-economic data with reference to the most appropriate guidance documents.

Since the lodgement of the planning application in January 2023, the Central Statistics Office (CSO) has published 'Population Distribution and Movement' statistics recorded by the 2022 Census. The latest Census reveals that 51.4% of the population in Cavan Town is female and the average age (both sexes) is 35.8 years. Updated population information is summarised in Tables 5.1 and 5.2 below.

**Table 5.1 – Summary of Census 2022 Population Statistics**

| Settlement / ED / County | Population 2022 | Population 2016 |
|--------------------------|-----------------|-----------------|
| Cavan Town               | 11,741          | 10,914          |
| Cavan Urban ED           | 3,868           | 3,770           |
| Cavan Rural ED           | 8,747           | 8,273           |
| County Cavan             | 81,704          | 76,176          |

**Table 5.2 – Summary of Census 2022 Age Group Statistics for Cavan Town**

| Descriptor         | Percentage of Population |
|--------------------|--------------------------|
| Aged Under 15      | 24.3%                    |
| Aged 15-64         | 63.8%                    |
| Aged 65+           | 11.9%                    |
| 0-4 years          | 7.15%                    |
| 5-12 years         | 13.78%                   |
| 13-17 years        | 7.34%                    |
| 18-24 years        | 6.56%                    |
| 25-34 years        | 13.10%                   |
| 35-44 years        | 18.95%                   |
| 45-54 years        | 13.09%                   |
| 55-64 years        | 8.12%                    |
| 65-74 years        | 6.56%                    |
| 75 years and older | 5.35%                    |



The study area is characterised by the younger age cohorts with c. 35% of the population under the age of 24 years old. Table 5.1 indicates the age group with the highest population percentage in Cavan town is 35-44 years age cohort, accounting for c.19% of the total population. Those aged 65 years and older accounted for c.12% of the Cavan town population. Those aged 0-12 years old accounted for c.21%. As referred to, the Cavan town population is considered to be 'young' with an average age of 35.8 years old.

### **5.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

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#### **5.3.1 Construction Phase**

There are no additional predicted Population and Human Health effects on the environment, including St. Clare's National School, regarding the construction stage of the proposed development as a result of the Request for Further Information. The construction phase is likely to be temporary and imperceptible and projected to last c.12-18 months. A detailed assessment of the predicted effects of the proposal during construction stage (i.e. land use, demographics, socio-economic, employment, social infrastructure, air quality and noise) is provided in Chapter 5 of the submitted EIAR Report (Volume II).

#### **5.3.2 Operational Phase**

The information provided in Chapter 6, authored by Systra, confirms a number of design amendments have been undertaken regarding the traffic and transport design layout of the proposed development. Chapter 14, LVIA, authored by Macro Works, determines the proposed design changes to façade and boundary treatments will not result in any material changes to the original operational even though they are considered to be improvements to the scheme design. Taking account of the traffic/transport and landscape amendments, it is assessed there are no additional predicted Population and Human Health effects at operational stage. A detailed assessment of the predicted effects of the proposal during operational stage (i.e. land use, demographics, socio-economic, employment, social infrastructure, air quality and noise) is provided in Chapter 5 of the submitted EIAR Report (Volume II).

### **5.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

#### **5.4.1 Construction Phase**

There are no additional mitigation measures or monitoring, outwith those proposed within the CEMP, as a result of the Request for Further Information regarding the construction phase.

#### **5.4.2 Operational Phase**

The information provided in Chapter 6, authored by Systra, confirms that additional mitigation has been incorporated into the proposed design of the development (as mentioned above) to reduce any potential

negative effects on the local environment. Mitigation includes additional priority and enhancements in relation to active travel and this will bring forward positive and long term effects for the sustainable movement of the local population including those attending and working at St. Clare's National School.

## 5.5 Residual Effects on foot of Request for Further Information

### 5.5.1 Construction Phase

There are no additional residual effects as a result of the Request for Further Information regarding the construction phase.

### 5.5.2 Operational Phase

There are no additional residual effects as a result of the Request for Further Information regarding the operational phase.

## 5.6 Interactions and Cumulative Effects on foot of Request for Further Information

There are no additional interactions, outwith those already assessed in Chapter 5 of the submitted EIAR, for Population and Human as result of the Request for Further Information. The cumulative effects of the proposed development and existing, proposed and planned projects within the vicinity of the subject site, such as St. Clare's National School (and including those summarised at Table 5.3 of this chapter and Table 18.2 of chapter 18 as originally submitted in the main EIAR Report (Volume II)) on Population and Human Health have been assessed. It is determined there are no significant negative effects envisaged in relation to Population and Human Health as a result of the proposed development in combination with other existing or planned projects in the local or wider area.

**Table 5.3 – Summary of Planning Applications at St. Clare's National School**

| Reg. Ref. | Proposed Development – Summary  | Decision   |
|-----------|---|--|
| 16/483    | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 |
| 21/441    | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                |

## 5.7 Summary of Assessment

It is assessed that no additional predicted effects will arise regarding Population and Human Health as a result of the Request for Further Information and that the effects as originally assessed in the main EIAR Report (Volume II) remain, whereby the proposed development will have a positive and long term effect on Population and Human Health. Similarly, there are also no additional interactions or cumulative effects as assessed.



## 6.0 Traffic and Transportation

### 6.1 Overview

This purpose of this chapter is to assess effects of the proposed development on traffic and transport resulting from Request for Further Information, planning application Reg. Ref. 23/8.

It assesses impact on the local road network both during the short-term construction phase and long-term operational phase, including the cumulative effect of the proposed development and other development. It outlines mitigation and monitoring measures to ensure any significant effects are minimised or avoided.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8.

This Chapter has been prepared by Mr. Alan Connolly, Associate of SYSTRA. Alan is a Chartered Engineer with 15 years of industry experience. He specialises in the field of Traffic & Transportation and Roads Design - assessing the infrastructure needs of development. Alan has been involved in numerous traffic and transport assessments and reviews for retail developments including Tesco Fermoy, Liffey Valley Shopping Centre, Swords Pavilions, Jervis Street Shopping Centre, Wilton Shopping Centre, LIDL Douglas, Williams Landing Shopping Centre and Tesco Swords amongst others.

### 6.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022)
- Transport Infrastructure Ireland's (TII's) Traffic & Transport Assessment Guidelines (2014)
- Guidelines for the Environmental Assessment of Road Traffic, 2003, Institute of Environmental Management & Assessment (UK Based)
- Guidelines for Planning Authorities and An Bord Pleanala on Carrying Out EIA – (DoHPLG 2018).

There are also a number of relevant national and regional policies which have guided the assessment and the identification and, where necessary, the design of mitigation measures. These include the following documents:

- Cavan County Development Plan 2022-2028 (CCC,2022)
- Design Manual for Urban Roads and Streets (DTTAS & DHPLG, 2013)
- National Cycle Policy Framework 2009 – 2020

- Smarter Travel – A Sustainable Transport Future 2009

The methodology adopted for the relating to assessment is outlined below and in line with the guidance set out in TII's Assessment Guidelines:

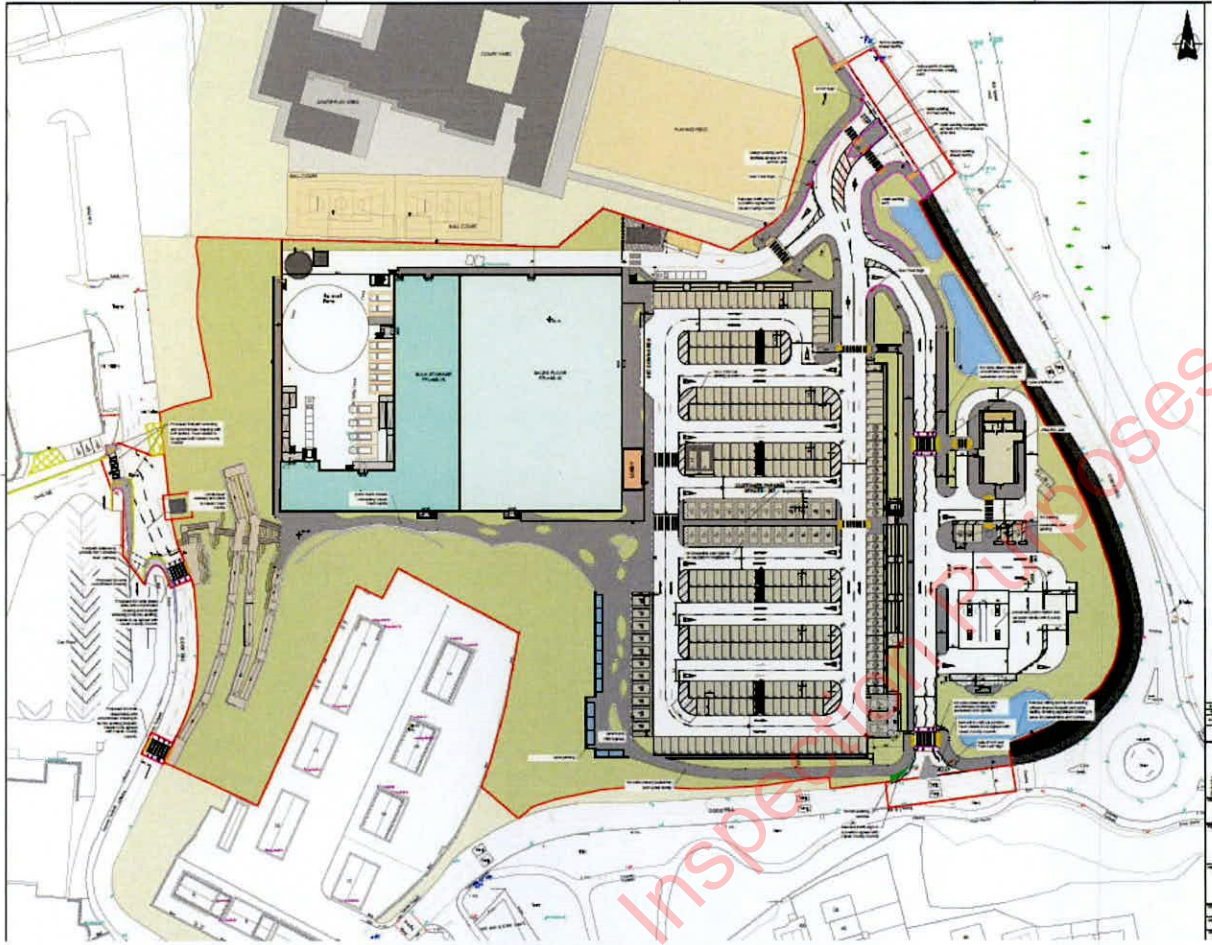
- Baseline Assessment: Site Visits, Data Collection (incl. Surveys), Existing Accessibility, Identification of Opportunities & Constraints, Local Travel Patterns & Policy Review
- Trip Generation: Forecast trips to/from development using Trip Rate Information Computer System (TRICS) database. This is the transport industry standard software package used for calculating the trip generation potential of proposed developments. Trip Generation during construction period is based on preliminary construction programme and estimated movements
- Traffic Growth: Growth in traffic volumes to be forecast based on TII forecasts
- Trip Assignment & Distribution: Vehicular Trip to be assigned based on predicted final destination & distributed across the wider network based on strategic modelling and/or baseline travel patterns
- Impact Analysis: Assessment of the resultant impact of development on the traffic network with detailed modelling undertaken
- Conclusion and Recommendations: Identification of potential effects and necessary mitigation and supporting measures.

### **6.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

In response to the Request for Further Information, amendments have been made to the traffic and transport design layout of the proposed development. The indicative traffic and transport layout of the proposed development is presented in Figure 6.1.

Figure 6.1 Indicate Traffic Layout of proposed development





The main access junction is redesigned, reallocating road space in favour of active travel modes:

- Reduction of two exit lanes to one exit lane
- Reduction of two entry lanes to one entry lane
- Wider refuge island (4m+) and staggered crossings for active users

The internal roads layout is amended to enable the on-site movement of vehicles from the retail parking area to the café and filling station without use of the public road network.

The design of the walkways and public realm between Cavan Town Centre and the proposed development are revised to provide greater levels of amenity for users.

The potential for a bus route to serve the proposed development is established.

### 6.3.1 Construction Phase

There are no changes/amendments to predicted effects of the proposed development on foot of Request for Information.

The combined additional light and heavy construction traffic continues to be below the Transport Infrastructure Ireland assessment threshold of 5% in traffic sensitive or congested areas and as a result is assessed to have an imperceptible effect on the immediate local road network. The effects outlined represent the 'worst case' effects.

### 6.3.2 Operational Phase

There are no changes/amendments to predicted effects of the proposed development on foot of Request for Information.

Following the redesign of the main junction a further 'Junctions 9' traffic modelling analysis was carried out for 2025, 2030 and 2040 with development scenarios to assess junction performance following the layout changes to Junction 4.

The analysis reports on the Ratio of Flow Capacity (RFC) and the maximum forecast queue for each movement within the junction. The RFC of an arm of a junction is one of the principal factors in influencing queues and delays. General engineering design principles, as set out in DMRB, suggest that when assessing a priority junction or roundabout, RFC levels should not exceed 0.85 in order for the arm of a junction to operate within 'practical' capacity. Should the RFC level exceed 1.0 then the junction is operating above 'theoretical' capacity. Queue lengths are being used to support interrogation of the RFC Key Performance Indicator. In this section, Passenger Car Units (PCUs) are described as 'vehicles' to aid easier understanding of results.

Table 6.1 and 6.2 below describes Ratio of Flow to Capacity for Friday and Saturday Peaks respectively. Traffic analysis figures are shown for the initial junction design and the revised junction design.

Table 6.1 Development Effect on Friday Peak Network RFC/ DoS

| Junction / Arm                   | Initial Junction Design |      |      | Revised Junction Design |      |      |
|----------------------------------|-------------------------|------|------|-------------------------|------|------|
|                                  | 2025                    | 2030 | 2040 | 2025                    | 2030 | 2040 |
| 4<br>Cock Hill<br>(Southern Arm) | 0.01                    | 0.01 | 0.02 | 0.01                    | 0.01 | 0.02 |
|                                  | 0.2                     | 0.21 | 0.21 | 0.28                    | 0.29 | 0.29 |
|                                  | 0.21                    | 0.21 | 0.21 | 0.21                    | 0.21 | 0.21 |
|                                  | 0.02                    | 0.03 | 0.03 | 0.02                    | 0.02 | 0.03 |

Table 6.2 Development Effect on Saturday Peak Network RFC/ DoS

| Junction / Arm                   | Initial Junction Design |      |      | Revised Junction Design |      |      |
|----------------------------------|-------------------------|------|------|-------------------------|------|------|
|                                  | 2025                    | 2030 | 2040 | 2025                    | 2030 | 2040 |
| 4<br>Cock Hill<br>(Southern Arm) | 0                       | 0    | 0    | 0                       | 0    | 0    |
|                                  | 0.32                    | 0.32 | 0.32 | 0.45                    | 0.46 | 0.46 |
|                                  | 0.31                    | 0.31 | 0.31 | 0.31                    | 0.31 | 0.31 |

|  |             |   |   |   |   |   |   |
|--|-------------|---|---|---|---|---|---|
|  | School Road | 0 | 0 | 0 | 0 | 0 | 0 |
|--|-------------|---|---|---|---|---|---|

Table 6.3 and 6.4 below describes Queue Lengths for Friday and Saturday Peaks respectively. Traffic analysis figures are shown for the initial junction design and the revised junction design.

Table 6.3 Development Effect on Friday Queue Lengths (PCU)

| Junction / Arm |                          | EIAR Assessment |      |      | EIAR Revised Assessment |      |      |
|----------------|--------------------------|-----------------|------|------|-------------------------|------|------|
|                |                          | 2025            | 2030 | 2040 | 2025                    | 2030 | 2040 |
| 4              | Cock Hill (Southern Arm) | 0               | 0    | 0    | 0                       | 0    | 0    |
|                | Site Entrance            | 0.3             | 0.3  | 0.3  | 0.4                     | 0.4  | 0.4  |
|                | Cock Hill (Northern Arm) | 0.3             | 0.3  | 0.3  | 0.3                     | 0.3  | 0.3  |
|                | School Road              | 0               | 0    | 0    | 0                       | 0    | 0    |

Table 6.4 Development Effect on Saturday Peak Queue Lengths (PCU)

| Junction / Arm |                          | EIAR Assessment |      |      | EIAR Revised Assessment |      |      |
|----------------|--------------------------|-----------------|------|------|-------------------------|------|------|
|                |                          | 2025            | 2030 | 2040 | 2025                    | 2030 | 2040 |
| 4              | Cock Hill (Southern Arm) | 0               | 0    | 0    | 0                       | 0    | 0    |
|                | Site Entrance            | 0.5             | 0.5  | 0.5  | 0.8                     | 0.8  | 0.8  |
|                | Cock Hill (Northern Arm) | 0.4             | 0.4  | 0.4  | 0.4                     | 0.4  | 0.4  |
|                | School Road              | 0               | 0    | 0    | 0                       | 0    | 0    |

The results demonstrate the revised junction continues to operate in the same manner with sufficient capacity to accommodate expected traffic volumes with the proposed amendments have an imperceptible effect.

The results are pre-mitigation and represent the 'worst case' effects.

## 6.4 Mitigation Measures and Monitoring on foot of Request for Further Information

### 6.4.1 Construction Phase

There are no changes/amendments to Mitigation Measures and Monitoring of the proposed development on foot of Request for Information. The implementation and monitoring of the Construction

Environmental Management Plan including Traffic Management Plan limits the potential effects of the construction phase.

#### **6.4.2 Operational Phase**

Further mitigation is incorporated into the design of the development to reduce any potential negative effects on the local transport network arising from additional traffic generated by the development. This includes additional priority for active travel users at the main junction and enhancements to the active travel route connecting Cavan Town Centre.

There are no changes/amendments to the Travel Plan as a mitigation or monitoring measure.

### **6.5 Residual Effects on foot of Request for Further Information**

#### **6.5.1 Construction Phase**

The effect of the construction phase in terms of traffic and transport will be imperceptible and short-term in nature. The measures outlined in the CEMP will help alleviate the effect of the additional traffic and limit the effect to outside the busier peak hours. The measures, including wheel washing and dust mitigation, will also ensure the standard of the public road network is maintained in terms of dust and dirt from construction traffic

#### **6.5.1 Operational Phase**

With the mitigation measures in place, the effect of the proposed development on traffic and transport is envisaged to be slight, likely in probability and long-term. The proposed development is centrally located within Cavan Town with well-integrated walking and cycling infrastructure to encourage sustainable travel choices to and through the proposed development. The inclusion of 'grocery home deliveries' and Travel Plan initiatives are likely to result in lower volumes of car traffic than that assumed in the modelling assessment.

### **6.6 Interactions and Cumulative Effects on foot of Request for Further Information**

#### **6.6.1 Interactions**

The proposed levels of traffic affect both Noise and Vibration (Chapter 11) and Air Quality and Climate (Chapter 12).

The significance of impact upon local noise & vibration conditions have been assessed to be slight to moderate, but short term for the construction phase and not significant for the operational phase.

There will be no significant contribution from the proposed development to climate change or greenhouse gas emissions during construction and operational phases. Possible effects from the operation of the development will be long-term in nature and will comprise of emissions from vehicular sources.

The magnitudes of all predicted alterations to air quality are not significant during the construction phase and negligible for the operational phase. It is therefore concluded that the effects on air quality from traffic arising from the operation of the proposed development are not significant.

### 6.6.2 Potential Cumulative Effects

The requirement under the EIA Directive is to assess cumulative effects with other “existing and/or approved projects”.

Traffic surveys were undertaken on Friday 07th October 2022 between the hours of 14:00 and 20:00. Existing traffic associated with St. Clare’s School is included in the traffic survey results and peak periods associated with the school are related to its opening hours from 8.40 to 2.30. The traffic survey figures include permanent and temporary on-site school accommodation pending completion of the school refurbishment and extension under planning application: Reg. Ref. 16483.

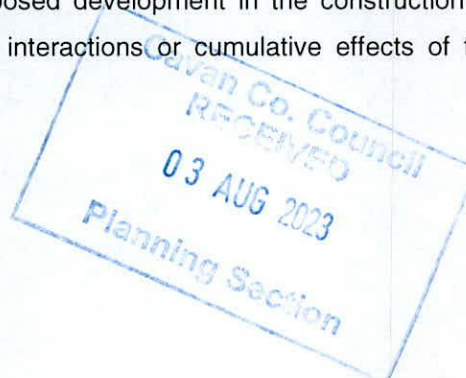
The traffic assessment was carried out for a peak period of 17:00-18:00pm as it was identified as the busiest traffic period, or worst-case scenario, with respect to background traffic survey figures and traffic volumes associated with similar retail development

The cumulative effects associated with St. Clare’s School have been considered as part of the assessment and is imperceptible, and long-term.

### 6.7 Summary of Assessment

The traffic and transport effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

There are no changes to the residual effects of the proposed development in the construction or operational phase. In addition, there are no changes to interactions or cumulative effects of the proposed development.



## 7.0 Land, Soils, Geology

### 7.1 Overview

This purpose of this chapter is to assess effects of the proposed development on local soils and geology resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Lands, Soils and Geology are referenced throughout this chapter and should be examined accordingly.

### 7.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- EPA, (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.
- EPA, (2004). Land spreading of Organic Waste – Guidance on Groundwater Vulnerability Assessment of Land.
- European Commission, (2017). Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report.
- Institute of Geologists Ireland, (2013). Guidelines for Preparation of Soils, Geology & Hydrogeology Chapters in Environmental Impact Statements.
- NRA, (2008). Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.
- CIRIA, (2001). C532 - Control of Water Pollution from Construction Sites – Guidance for consultants and contractors.
- IGI, (2002). Geology in Environmental Impact Statements – a Guide (Institute of Geologists of Ireland).
- Groundwater Directives (80/68/EEC) and (2006/118/EC).

#### 7.2.1 Impact Assessment Methodology

A Conceptual Site Model (CSM) identifies potential contaminants, receptors and exposure pathways that may be present based on the construction and operational phase of the proposed development. The identification of potential “contaminant linkages” is a key aspect of the evaluation of potentially contaminated land. An approach based on this methodology has been adopted within this report. For each of the contaminant linkages, an estimate is made of;

- The potential severity of the risk;
- The likelihood of the risk occurring.

As such this assessment has been undertaken in line with the Source - Pathway - Receptor Model as per the “Guidelines on the information to be contained in Environmental Impact Assessment Reports” 2022 and IGI 2013 guidance notes. At the impact assessment stage, any potential beneficial or adverse



effects associated with the development are identified and assessed with reference to the baseline environment. This requires consideration of:

- Sensitivity/ value of the receptor;
- Severity/ magnitude of the impact;
- Impact duration;
- Whether impact occurs in isolation, is cumulative or is interactive; and
- Performance against environmental quality standards or other relevant thresholds.

### **7.2.2 Effects Appraisal**

The significance of potential effects was estimated using the NRA, (2008). Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes, details of which are included in Chapter 7 of the project EIAR (Volume II).

## **7.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

### **7.3.1 Construction Phase**

#### **7.3.1.1 Site Layout**

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating to land, soils and geology on the foot of the changes to the site layout arising from the Request for Further Information.

#### **7.3.1.2 Import of Waste Materials**

Further information was sought by the Local Authority relating to the volumes and types of waste/materials that may need to be imported to the site to facilitate the development. A response has been prepared by Pinnacle Consulting Engineers within their response letter dated 25<sup>th</sup> July 2023 which is included as part of the Further Information response.

An analysis of the 3D Terrain Model Cut/Fill drawing confirmed no material would need to be imported to site within the category of general fill material hence no material change has occurred on the foot of the RFI. There are no additional predicted effects of the proposed development relating to land, soils and geology on the foot of the clarifications provided relating to the import of waste materials.

#### **7.3.1.3 Disposal of Excess Soils/Materials**

Further information was sought by The Local Authority relating to the management of waste arising from the site and the destination facilities which will be used to dispose of excess soils/materials. Detailed information and procedures pertaining to the management of construction waste arising from the proposed development, can be found in the Construction Waste Management Plan (CWMP) which

accompanies the Request for Further Information response, (document titled “**221171-ORS-XX-XX-RP-EN-13D-006**”). Included within the CWMP is Table 4.2, which is to act as a template for a waste arisings register and which will detail the name and National Waste Collection Permit details of all waste hauliers and the Waste Facility Permit / Waste Licence no. of all destinations for the disposal of waste arising from the proposed development. There are no additional predicted effects of the proposed development relating to land, soils and geology on the foot of the clarifications provided relating to the disposal of excess soils/materials.

### **7.3.2 Operational Phase**

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

## **7.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

### **7.4.1 Construction Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

### **7.4.2 Operational Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

## **7.5 Residual Effects on foot of Request for Further Information**

### **7.5.1 Construction Phase**

The effect of the construction phase in terms of land, soils and geology will remain neutral to negative, imperceptible to slight, and temporary.

### **7.5.1 Operational Phase**

With the mitigation measures in place, the effect of the proposed development in terms of land, soils and geology will remain neutral to positive, slight to moderate and long-term.

## **7.6 Interactions and Cumulative Effects on foot of Request for Further Information**

### **7.6.1 Interactions**

There are no additional interactions subsequent to those assessed in Chapter 7 of the main project EIAR (Volume II) on foot of Request for Further Information.

### **7.6.2 Potential Cumulative Effects**

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving

environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 7.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

**Table 7.1: Ongoing Developments within the site vicinity**

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

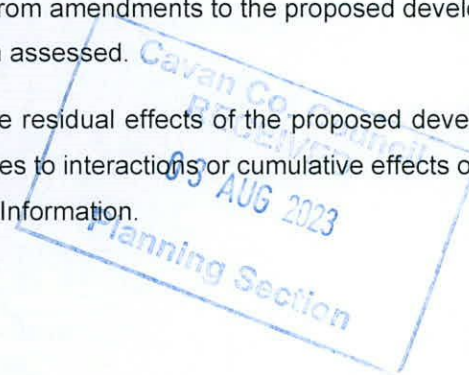
Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to lands, soils and geology, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 7 of the main project EIAR (Volume II), on foot of Request for Further Information.

## 7.7 Summary of Assessment

The land, soils and geological effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.



## 8.0 Hydrology & Hydrogeology

### 8.1 Overview

This purpose of this chapter is to assess effects of the proposed development on hydrology and hydrogeological environment (collectively known as the water environment) resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to hydrology and hydrogeology are referenced throughout this chapter and should be examined accordingly.

### 8.2 Methodology

This chapter has been prepared having regard to the following guidelines:

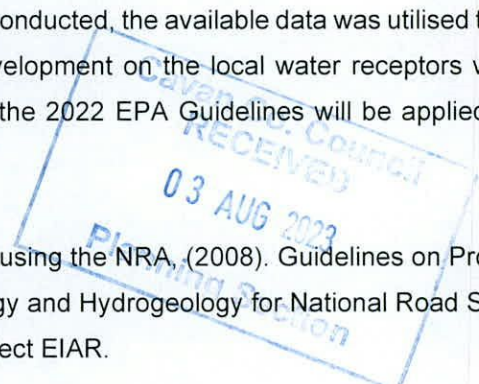
- EPA, (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.
- EPA, (2004). Land spreading of Organic Waste – Guidance on Groundwater Vulnerability Assessment of Land.
- European Commission, (2017). Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report.
- Institute of Geologists Ireland, (2013). Guidelines for Preparation of Soils, Geology & Hydrogeology Chapters in Environmental Impact Statements.
- NRA, (2008). Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.
- CIRIA, (2001). C532 - Control of Water Pollution from Construction Sites – Guidance for consultants and contractors.

#### 8.2.1 Impact Assessment Methodology

Once the identification of the baseline environs was conducted, the available data was utilised to identify and assess the potential impacts posed by the development on the local water receptors within the area. The impact assessment rationale outlined in the 2022 EPA Guidelines will be applied to each chapter of the study.

#### 8.2.2 Effects Appraisal

The significance of potential impacts was estimated using the NRA, (2008). Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes, details of which are included in Chapter 8 of the project EIAR.



## **8.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

### **8.3.1 Construction Phase**

#### **8.3.1.1 Site Layout**

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating to hydrology or hydrogeology on the foot of the changes to the site layout arising from the Request for Further Information.

#### **8.3.1.2 Surface Water Drainage System**

Further information was sought by the Local Authority relating to the proposed surface water drainage system for the development. A response has been prepared by Pinnacle Consulting Engineers within their response letter dated 25th July 2023 which is included as part of the Request for Further Information response.

This response confirmed that existing surface water drainage receiving network system in the area was designed to drain and cater for the entire 4.126 ha. (10.19 acre) subject site. The response reiterated the measures proposed aimed at improving the general surface water management of the site, consisting of interceptors, attenuation measures and by restricting the ultimate discharge accordingly to protect and preserve the receiving water environment with the vicinity of the site.

There are no additional predicted effects of the proposed development relating to hydrology and hydrogeology on the foot of the clarifications provided relating to the surface water drainage system.

### **8.3.2 Operational Phase**

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

## **8.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

### **8.4.1 Construction Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

### **8.4.2 Operational Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

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## 8.5 Residual Effects on foot of Request for Further Information

### 8.5.1 Construction Phase

The effect of the construction phase in terms of hydrology and hydrogeology will remain negative, imperceptible to slight, and temporary.

### 8.5.1 Operational Phase

With the mitigation measures in place, the effect of the proposed development in terms of hydrology and hydrogeology is envisaged to be negative, slight, and short term to long term.

## 8.6 Interactions and Cumulative Effects on foot of Request for Further Information

### 8.6.1 Interactions

There are no additional interactions subsequent to those assessed in Chapter 8 of the main project EIAR (Volume II) on foot of Request for Further Information.

### 8.6.2 Potential Cumulative Effects

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 8.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

Table 8.1: Ongoing Developments within the site vicinity

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to hydrology and hydrogeology, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 8 of the main project EIAR (Volume II), on foot of Request for Further Information.

**8.7 Summary of Assessment**

The hydrological and hydrogeological effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.

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## 9.0 Biodiversity

### 9.1 Overview

This purpose of this chapter is to assess effects of the proposed development on local biodiversity receptors resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Biodiversity are referenced throughout this chapter and should be examined accordingly.

### 9.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- EPA, (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.
- Bailey, M. & Rochford, J. (2006) Otter survey of Ireland 2004 / 2005. Irish Wildlife Manuals No. 23. National Parks & Wildlife Service. DoEHLG.
- Bowers Marriott, B. (1997) Practical Guide to Environmental Impact Assessment: A Practical Guide. Published by McGraw-Hill Professional, 1997, 320 pp.
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. CIEEM, 2018
- Cummins, S; Fisher, J; Gaj McKeever, R; McNaghten, L & Crowe, O. (2010) Assessment of the Distribution and abundance of Kingfisher Alcedo atthis and other riparian birds on six SAC river systems in Ireland. NPWS & Birdwatch Ireland.
- Department of the Environment, Heritage and Local Government (2009) Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities.
- Dwyer, (2000) Protecting Nature in Ireland, The NGO Special Areas of Conservation Shadow List. Published by the Irish Peatland Conservation Council, Dublin.
- EPA (2001) Parameters of Water Quality - Interpretation and Standards. Environmental Protection Agency, Ireland.
- EPA (2002) Guidelines on the Information to be contained in Environmental Impact Statements. Environmental Protection Agency, Ireland.
- EPA (2003) Advice Notes on Current Practice in the Preparation of Environmental Impact Statements. EPA, Wexford, Ireland.
- EPA (2012) Guidance on the setting of trigger values for storm water discharges to off site surface waters at EPA licensed IPPC and waste facilities. EPA, Wexford.
- Fossit, J.A. (2000) A Guide to Habitats in Ireland. The Heritage Council, Kilkenny.
- Hayden, T. & Harrington, R. (2000) Exploring Irish Mammals. Dúchas the Heritage Service, Town House Dublin.
- Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment. Institute of Environmental Assessment, Great Britain.



- IUCN (2003) Red List of Threatened Species. International Council for Conservation of Nature and Natural Resources.
- Kurz, I. and Costello, M.J. (1999) An Outline Of The Biology, Distribution And Conservation Of Lampreys In Ireland. F. Marnell (ed.), Irish Wildlife Manuals, No. 5.
- Ó Néill L. (2008) Population dynamics of the Eurasian otter in Ireland. Integrating density and demography into conservation planning. PhD thesis. Trinity College, Dublin.
- Natura Environmental Consultants (2005) Draft Habitat Survey Guidelines: A Standard Methodology for Habitat Survey and Mapping in Ireland. The Heritage Council, Kilkenny.
- NPWS (2008) Conservation Status in Ireland of Habitats and Species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC.
- NRA (2004) Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority, Dublin.
- Smith G. F., O'Donoghue P., O'Hora K. and Delaney E. (2010.) Best Practice Guidance for Habitat Survey and Mapping. Heritage Council.
- Whilde, A. (1993) Threatened Mammals, Birds, Amphibians and Fish in Ireland. Irish Red Data Book 2: Vertebrates. HMSO, Belfast.

### 9.2.1 Impact Assessment Methodology

The methodologies used to determine the value of ecological resources, to characterise the impacts of the proposed scheme, and to assess the significance of impacts and any residual effects are described below. This approach is in accordance with the following guidelines and methodologies:

- Guidelines for Ecological Impact Assessment in the UK and Ireland by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- Guidelines On The Information To Be Contained In Environmental Impact (EPA, 2002).
- Draft Guidelines on Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2017).
- Guidelines for Assessment of Ecological Impacts of National Road Schemes. (NRA, 2009).

### 9.2.2 Effects Appraisal

The identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. This section will establish whether ecological impacts of the proposed development in Tullymongan Lower are likely to occur and whether or not they are significant. These potential impacts will be examined with respect to the ecological receptors identified in the previous section.

The emphasis in EclA is on “significant” effects, rather than all ecological effects (CIEEM, 2018). For the purpose of EclA, a “significant effect” is an effect that either supports or undermines biodiversity conservation objectives for important ecological features for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national / local nature conservation

policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.

A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker (i.e. Local Authority) is adequately informed of the environmental consequences of permitting the project. In broad terms, significant effects encompass impacts on structures and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution). (CIEEM, 2018).

### **9.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

#### **9.3.1 Construction Phase**

##### **9.3.1.1 Site Layout**

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating to biodiversity on the foot of the changes to the site layout arising from the Request for Further Information.

##### **9.3.1.2 Surface Water Drainage System**

Further information was sought by the Local Authority relating to the proposed surface water drainage system for the development. A response has been prepared by Pinnacle Consulting Engineers within their response letter dated 25th July 2023 which is included as part of the Further Information response.

This response confirmed that existing surface water drainage receiving network system in the area was designed to drain and cater for the entire 4.126 ha. (10.19 acre) subject site. The response reiterated the measures proposed aimed at improving the general surface water management of the site, consisting of interceptors, attenuation measures and by restricting the ultimate discharge accordingly to protect and preserve the receiving water environment with the vicinity of the site.

There are no additional predicted effects of the proposed development relating to biodiversity on the foot of the clarifications provided relating to the surface water drainage system.

#### **9.3.2 Operational Phase**

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

## 9.4 Mitigation Measures and Monitoring on foot of Request for Further Information

### 9.4.1 Construction Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

### 9.4.2 Operational Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

## 9.5 Residual Effects on foot of Request for Further Information

### 9.5.1 Construction Phase

The effect of the construction phase in terms of biodiversity will remain negligible and temporary.

### 9.5.1 Operational Phase

With the mitigation measures in place, the effect of the proposed development in terms of biodiversity is envisaged to remain to be a positive benefit to local ecology and with proper management of the site and its green areas, then local areas of biodiversity will be allowed to develop.

## 9.6 Interactions and Cumulative Effects on foot of Request for Further Information

### 9.6.1 Interactions

There are no additional interactions subsequent to those assessed in Chapter 9 of the main project EIAR (Volume II) on foot of Request for Further Information.

### 9.6.2 Potential Cumulative Effects

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 9.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

Table 9.1: Ongoing Developments within the site vicinity

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                             | Anticipated Cumulative Effect               |
|----------------------|---|---|--|--------------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br>Development commenced 20/09/2021 | <i>Adjacent to the site boundary</i> | <b>Negative, Not Significant, Temporary</b> |

|                               |   |  |  |  |   |
|-------------------------------|---|--|--|--|---|
| CCC<br>Reg.<br>Ref.<br>21/444 | St. Clare's<br>National School,<br>Ard Mhuire,<br>Cock Hill, Co.<br>Cavan | Application for Extension<br>of Duration re: Reg. Ref.<br>16/483 | Extension of<br>Duration<br>granted to<br>January 2027 | <i>Adjacent to the<br/>site boundary</i> | <b>Negative,<br/>Not Significant,<br/>Temporary</b> |
|-------------------------------|---|--|--|--|---|

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to biodiversity, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 9 of the main project EIAR (Volume II), on foot of Request for Further Information.

### 9.7 Summary of Assessment

The biodiversity effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.



## 10.0 Waste Management

### 10.1 Overview

This purpose of this chapter is to assess effects of the proposed development on waste management resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Waste Management are referenced throughout this chapter and should be examined accordingly.

### 10.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects, 2006.
- Construction and Demolition Waste Management: A handbook for Contractors and Site Managers, published by FAS and the Construction Industry Federation in 2002
- Waste Management Act 1996 as amended and the associated Sub-ordinate legislation.
- Protection of the Environment Act 2003 as amended.
- Litter Pollution Act 1997 as amended.
- The Connacht/Ulster Region Waste Management Plan.
- The Cavan County Development Plan 2022-2028.
- The Cavan County Council Waste Management Segregation, Storage and Presentation of Household and Commercial Waste Bye-Laws 2019.
- Department of Environment and Local Government (DoELG) Waste Management – Changing Our Ways, A Policy Statement (1998).
- Department of Environment and Local Government (DoELG) Preventing and Recycling Waste – Delivering Change (2002)
- Making Irelands Development Sustainable – Review, Assessment and Future Actions (2002)
- Taking Stock and Moving Forward, Department of the Environment and Local Government, April 2004.
- Department of Environment, Heritage and Local Government, A Resource Opportunity, Waste Management Policy in Ireland (2012)
- Environmental Protection Agency (EPA) National Waste Database Reports
- European Waste Catalogue and Hazardous Waste List.
- EPA Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous
- British Standards BS 5906:2005 Waste Management in Buildings – Code of Practice.

### 10.2.1 Impact Assessment Methodology

Once the identification of the baseline environs was conducted, the available data was then utilised to identify and assess the potential impacts posed by the development on the waste infrastructure within the area. The impact assessment rationale outlined in the 2022 EPA Guidelines will be applied to each chapter of the study.

### 10.2.2 Effects Appraisal

- **Direct Effect:** where the existing baseline in the immediate vicinity of the proposed development is altered by activities associated with the construction or operational phases of said development.
- **Indirect Effect:** where the baseline beyond the proposed development is altered by activities associated with the construction or operational phases of said development.
- **No Significant Effect:** The proposed development has neither a positive nor negative impact upon the waste infrastructure.

## 10.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

### 10.3.1 Construction Phase

#### 10.3.1.1 Site Layout

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating to waste management on the foot of the changes to the site layout arising from the Request for Further Information.

#### 10.3.1.2 Import of Waste Materials

Further information was sought by the Local Authority relating to the volumes and types of waste/materials that may need to be imported to the site to facilitate the development. A response has been prepared by Pinnacle Consulting Engineers within their response letter dated 25<sup>th</sup> July 2023 which is included as part of the Further Information response.

An analysis of the 3D Terrain Model Cut/Fill drawing confirmed no material would need to be imported to site within the category of general fill material hence no material change has occurred on the foot of the RFI. There are no additional predicted effects of the proposed development relating to waste management on the foot of the clarifications provided relating to the import of waste materials.

#### 10.3.1.3 Disposal of Excess Soils/Materials

Further information was sought by The Local Authority relating to the management of waste arising from the site and the destination facilities which will be used to dispose of excess soils/materials.

Detailed information and procedures pertaining to the management of construction waste arising from the proposed development, can be found in the Construction Waste Management Plan (CWMP) which accompanies the Further Information response, (document titled "221171-ORS-XX-XX-RP-EN-13D-006"). Included within the CWMP is Table 4.2, which is to act as a template for a waste arisings register and which will detail the name and National Waste Collection Permit details of all waste hauliers and the Waste Facility Permit / Waste Licence no. of all destinations for the disposal of waste arising from the proposed development. There are no additional predicted effects of the proposed development relating to waste management on the foot of the clarifications provided relating to the disposal of excess soils/materials.

### 10.3.2 Operational Phase

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

## 10.4 Mitigation Measures and Monitoring on foot of Request for Further Information

### 10.4.1 Construction Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

### 10.4.2 Operational Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

## 10.5 Residual Effects on foot of Request for Further Information

### 10.5.1 Construction Phase

The effect of the construction phase in terms of waste management will remain slight and short-term in nature.

### 10.5.1 Operational Phase

With the mitigation measures in place, the effect of the proposed development in terms of waste management is envisaged to be negligible to slight, likely in probability and long-term.

## 10.6 Interactions and Cumulative Effects on foot of Request for Further Information

### 10.6.1 Interactions

There are no additional interactions subsequent to those assessed in Chapter 10 of the main project EIAR (Volume II) on foot of Request for Further Information.

### 10.6.2 Potential Cumulative Effects

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 10.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

**Table 10.1: Ongoing Developments within the site vicinity**

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to waste management, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 10 of the main project EIAR (Volume II), on foot of Request for Further Information.

### 10.7 Summary of Assessment

The waste management effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

There are no changes to the residual effects of the proposed development in the construction or operational phase. In addition, there are no changes to interactions or cumulative effects of the proposed development.



## 11.0 Noise & Vibration

### 11.1 Overview

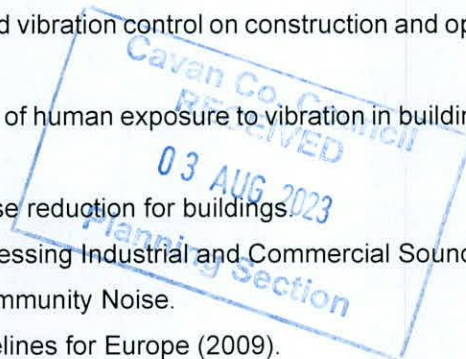
This purpose of this chapter is to assess effects of the proposed development on noise and vibration resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Noise and Vibration are referenced throughout this chapter and should be examined accordingly.

### 11.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022).
- Guidelines for Planning Authorities and An Bord Pleanála on Carrying Out EIA – (Department of Housing, Planning and Local Government - August 2018).
- Cavan County Council's (CCC) Noise Action Plan 2019 to 2024 (NAP).
- ISO 1996-2:2017 Acoustics -- Description, measurement and assessment of environmental noise -- Part 2: Determination of sound pressure levels.
- ISO 9613 (1996): Acoustics – Attenuation of sound outdoors – Part 2: General method of calculation.
- BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.
- BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.
- British Standard BS 6472 (1992): Guide to Evaluation of human exposure to vibration in buildings (1Hz to 80Hz).
- BS8233:2014 Guidance on sound insulation and noise reduction for buildings
- BS4142:2014+A1: 2019 Methods for Rating and Assessing Industrial and Commercial Sound'.
- World Health Organisation (WHO) Guidelines for Community Noise.
- World Health Organisation (WHO) Night Noise Guidelines for Europe (2009).
- Design Manual for Roads and Bridges (DMRB), Highways England Company Limited, Transport Scotland, The Welsh Government and The Department for Regional Development (Northern Ireland).
- Calculation of Road Traffic Noise (CRTN), 1998, Department of Transport, Welsh Office (UK).
- ISBN 3-936385-26-2 / ISSN 0723-0028 "Parking Area Noise - Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus Stations as well as of Multi-Storey Car Parks and Underground Car Parks", 6. Revised Edition.



- Guidelines for the Treatment of Noise and Vibration in National Road Schemes”, Transport Infrastructure Ireland (TII), October 2004.
- Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes, Transport Infrastructure Ireland (TII), March 2014).
- Safety, Health and Welfare at Work (General Application) Regulations 2007 (Statutory Instrument No. 299 of 2007).

### 11.2.1 Impact Assessment Methodology

#### Noise

The TII overall acceptable levels of construction noise, which should not be exceeded at noise sensitive locations during the construction phase of a development, are set out in **Table 11.1**.

**Table 11.1: TII Maximum Permissible Noise Levels at the Facade of Dwellings during Construction**

| Days and Times                            | Noise Levels (dB re. $2 \times 10^{-5}$ Pa) |            |
|---|---|------------|
|   | $L_{Aeq}(1hr)$                              | $L_{Amax}$ |
| Monday to Friday 07:00 to 19:00hrs        | 70  | 80         |
| Monday to Friday 19:00 to 22:00hrs        | 60*   | 65*        |
| Saturdays 08:00 to 16:30hrs               | 65  | 75         |
| Sundays & Bank Holidays 08:00 to 16:30hrs | 60*   | 65*        |

Note \* Construction activity at these times, other than that required for emergency works, will normally require the explicit permission of the relevant local authority.

BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites is considered to represent the industry standard methodology for the assessment of construction noise and describes two methods for deriving noise significance thresholds for construction sites.

BS 5228:2009+A1:2014 (Appendix E.1) describes a method for identifying 'Potential significance based upon noise change'. Following this methodology, BS 5228:2009+A1:2014 designates a noise sensitive location (NSL) into a specific category based on pre-existing ambient noise levels and then sets a threshold noise value that, if exceeded, indicates a significant construction noise impact.

**Table 11.2** presents the threshold values for significant noise impacts for weekday daytime and Saturday morning activity.

**Table 11.2: BS 5228 Construction Noise Thresholds for Significant Effects**

| Assessment category and threshold value period ( $L_{Aeq}$ ) | Threshold value, in decibels (dB) |                         |                         |
|--|-----------------------------------|-------------------------|-------------------------|
|  | Category A <sup>A</sup>           | Category B <sup>B</sup> | Category C <sup>C</sup> |
| Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)        | 65                                | 70                      | 75                      |

- **Category A:** threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than these values.
- **Category B:** threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as category A values.
- **Category C:** threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than category A values.
- 19:00 – 23:00 weekdays, 13:00 – 23:00 Saturdays and 07:00 – 23:00 Sundays.

### Vibration

Following the same approach, BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Vibration recommends that, for soundly constructed residential property and similar structures that are generally in good repair, a threshold for minor or cosmetic (i.e. non-structural) damage should be taken as a peak component particle velocity (in frequency range of predominant pulse) of 15mm/s at 4Hz increasing to 20mm/s at 15Hz and 50mm/s at 40Hz and above.

The standard also notes that below 12.5 mm/s PPV the risk of damage tends to zero. The recommended construction vibration criteria are presented in **Table 11.3**.

**Table 11.3: Vibration Criteria During Construction Phase**

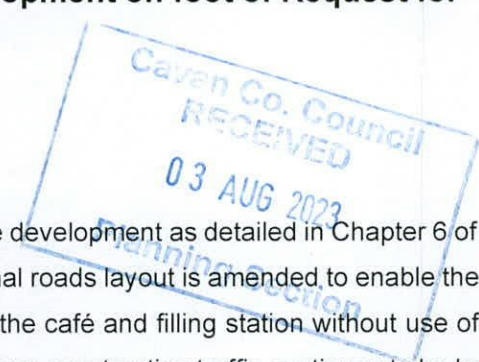
| Allowable vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of:- |            |                |
|--|------------|----------------|
| Less than 15Hz   | 15 to 40Hz | 40Hz and above |
| 15 mm/s  | 20 mm/s    | 50 mm/s        |

## 11.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

### 11.3.1 Construction Phase

#### 11.3.1.1 Traffic Layout

There were minor changes made to the traffic layout of the development as detailed in Chapter 6 of this addendum completed by SYSTRA. In summary the internal roads layout is amended to enable the on-site movement of vehicles from the retail parking area to the café and filling station without use of the public road network. The combined additional light and heavy construction traffic continues to be below the Transport Infrastructure Ireland assessment threshold of 5% in traffic sensitive or congested areas and as a result is assessed to have an imperceptible effect on the immediate local road network. As such there are no additional predicted effects of the proposed development relating to noise and vibration on the foot of the clarifications provided relating to the changes to the traffic layout.



### **11.3.2 Operational Phase**

#### **11.3.2.1 Traffic Layout of Proposed Development**

There are no changes/amendments to predicted effects of the proposed development on the foot of the Request for Further Information.

Operational phase impacts on noise are closely linked to traffic. The key traffic metric used within noise modelling is Annual Average Daily Traffic (AADT). The resultant alterations to the project design are not anticipated to have a significant effect on AADT hence no significant impact is anticipated in relation to noise or vibration as a result of the design change. As such there are no additional predicted effects of the proposed development relating to noise and vibration on the foot of the clarifications provided relating to the changes to the traffic layout.

### **11.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

#### **11.4.1 Construction Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

#### **11.4.2 Operational Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

### **11.5 Residual Effects on foot of Request for Further Information**

#### **11.5.1 Construction Phase**

The effect of the construction phase in terms of noise and vibration will remain negative, moderate and short-term.

#### **11.5.1 Operational Phase**

With the mitigation measures in place, the effect of the proposed development in terms of noise and vibration is envisaged to be negative, not significant and long-term.

### **11.6 Interactions and Cumulative Effects on foot of Request for Further Information**

#### **11.6.1 Interactions**

There are no additional interactions subsequent to those assessed in Chapter 11 of the main project EIAR (Volume II) on foot of Request for Further Information.

### 11.6.2 Potential Cumulative Effects

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 11.4** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

**Table 11.4: Ongoing Developments within the site vicinity**

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. Due consideration was given to St. Clare's National School in the analysis of cumulative impacts and potential receptors. Noise Monitoring Location (NML1) was located adjacent to the northern site boundary, adjacent to the school. This monitoring point is located closer to the proposed construction site than the school development itself hence potential impacts would be worse than the actual impacts measured at the school. Following noise modelling, significant effects are not anticipated at this point. With respect to Noise and Vibration, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 11 of the main project EIAR (Volume II), on foot of Request for Further Information.

### 11.7 Summary of Assessment

The noise and vibration effects resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.

## 12.0 Air Quality and Climate

### 12.1 Overview

This purpose of this chapter is to assess effects of the proposed development on air quality and climate resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Lands, Soils and Geology are referenced throughout this chapter and should be examined accordingly.

### 12.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- EPA, (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.
- Institute of Air Quality Management (IAQM) (2014) Guidance on the Assessment of Dust from Demolition and Construction Version 1.1.
- EPA (2019) Air Dispersion Modelling from Industrial Installations Guidance Note (AG4).
- DEFRA, (2016a) Air emissions risk assessment for your environmental permit.
- DEFRA, (2016b) Assess the effect of air emissions on global warming.
- Transport Infrastructure Ireland (2011) Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes.
- UK DEFRA (2018) Part IV of the Environment Act 1995: Local Air Quality Management (LAQM) Technical Guidance (TG16).
- UK DEFRA (2016c) Part IV of the Environment Act 1995: Local Air Quality Management (LAQM). Policy Guidance (PG16).
- UK Highways Agency (2007) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 1 - HA207/07 (Document & Calculation Spreadsheet).
- Highways England, LA 105 of the Design Manual for Roads and Bridges (2019).
- World Health Organisation (2006) Air Quality Guidelines - Global Update 2005 (and previous Air Quality Guideline Reports 1999 & 2000).
- An BRE (2003) Controlling Particles, Vapours & Noise Pollution from Construction Sites.

#### 12.2.1 Impact Assessment Methodology

##### Air Quality

Regarding the construction stage of the planned development the most likely effect on air quality will be from construction dust emissions (nuisance dust & PM10/PM2.5 emissions) associated with activities such as excavations, infilling materials, stock piling and movement of vehicles, for the purposes of this assessment the Institute of Air Quality Management (IAQM) construction dust guidance (IAQM, 2014) was utilized.

To assess the potential effects accordingly, construction activities are divided into 4 categories:

- Demolition (not required in this assessment)
- Earthworks
- Construction; and
- Trackout (described as the transport of dust and dirt from the construction / demolition sites onto public road network, where it may be deposited and then re-suspended by vehicles using the network).

A qualitative assessment of construction dust has been undertaken in line with the IAQM 2014 guidance. The study area for this assessment was 350m from the proposed development boundary and or within 50m of the roads used by construction vehicles on the public road up to 500 m from the site entrance.

Possible effects from the operation of the development will be long-term in nature and will comprise of emissions from vehicular sources and minor emissions from new building facilities. As emissions from new building facilities are deemed not significant (due to the sites primary reliance on heat and power from the national grid instead of onsite generation), the primary source of air emission contaminants during the operational phase will be from traffic to and from the site.

### **Climate Change**

The methodology to assess the effect posed by the proposed development to climate change was derived in accordance with the established assessment methodology published by the UK Environment Agency (DEFRA, 2016b). According to this guidance assessment of climate change comprises two distinct areas:

- **Climate Change Mitigation** – an assessment of likely significant effects upon climate change resulting from the project and their mitigation, including an estimate of greenhouse gas (GHG) emissions; and
- **Climate Change Adaptation** – an assessment of likely significant effects of climate change upon the project, including its vulnerability and the need for any adaptation measures to ensure project resilience to projected climate change scenarios.

## **12.3 Predicted Effects of the Proposed Development on foot of Request for Further Information**

### **12.3.1 Construction Phase**

#### **12.3.1.1 Site Layout**

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating

to air quality and climate on the foot of the changes to the site layout arising from the Request for Further Information.

### **12.3.2 Operational Phase**

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

## **12.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

### **12.4.1 Construction Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

### **12.4.2 Operational Phase**

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.

## **12.5 Residual Effects on foot of Request for Further Information**

### **12.5.1 Construction Phase**

The effect of the construction phase in terms of air quality and climate will remain negative, imperceptible to slight, and temporary.

### **12.5.1 Operational Phase**

With the mitigation measures in place, the effect of the proposed development in terms of air quality and climate is envisaged to be neutral to negative, imperceptible to slight, and temporary to short term.

## **12.6 Interactions and Cumulative Effects on foot of Request for Further Information**

### **12.6.1 Interactions**

There are no additional interactions subsequent to those assessed in Chapter 12 of the main project EIA (Volume II) on foot of Request for Further Information.

### **12.6.2 Potential Cumulative Effects**

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future.



**Table 12.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

**Table 12.1: Ongoing Developments within the site vicinity**

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to air quality and climate, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 12 of the main project EIAR (Volume II), on foot of Request for Further Information.

## 12.7 Summary of Assessment

The effects relating to air quality and climate resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.

## 13.0 Micro Climate

### 13.1 Overview

This purpose of this chapter is to assess effects of the proposed development on micro climate resulting from Request for Further Information, planning application Reg. Ref. 23/8.

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8. Several documents have been prepared in response to the Request for Further Information. Those of relevance to Micro Climate are referenced throughout this chapter and should be examined accordingly.

### 13.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- EPA (2022) Guidelines on the Information to be contained in Environmental Impact Assessment Reports.
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018).
- The BRE Guide, Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice, 2022.
- Mayor of London's Office (2014) Sustainable Design and Construction, Supplementary Planning Guidance, The London Plan 2011.
- Wind Microclimate Guidelines: For Developments in the City of London, City of London Corporation, 2019.
- Department of Housing, Planning and Local Government (2018), 'Urban Development and Building Heights – Guidelines for Planning Authorities'.
- Lawson, T.V., (2001), 'Building Aerodynamics', Imperial College Press, London.
- Asfour, O.S., (2010), 'Prediction of wind environment in different grouping patterns of housing blocks', Energy and Buildings, Elsevier.
- Ma, T., & Chen, T., (2010), 'Classification and pedestrian-level wind environment assessment among Tianjin's residential area based on numerical simulation', Urban Climate, Elsevier. Ma,
- Nagib, H.M., & Corke, T.C., (1983), 'Wind Microclimate around buildings: Characteristics and Control, Journal of Wind Engineering and Industrial Aerodynamics', Elsevier.
- Carpentieri, M., et al. (2009), 'Three-Dimensional Mapping of Air Flow at an Urban Canyon Intersection', Boundary-Layer Meteorology, Springer.
- Environmental Protection Agency (EPA) National Waste Database Reports.
- European Waste Catalogue and Hazardous Waste List.
- EPA Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous.
- British Standards BS 5906:2005 Waste Management in Buildings – Code of Practice.

### 13.2.1 Impact Assessment Methodology

#### **Daylight to existing dwellings and relevant building uses**

The preliminary assessment entails analysing the environment in plan, section and building use. Windows and amenity areas are selected to be tested for potential impact from the proposed development. Only windows that serve habitable rooms are considered relevant when assessing daylight.

A proposed development could potentially have a negative effect on the level of daylight that a neighbouring property receives, if the obstructing building is large in relation to their distance from the existing dwelling. The BRE guidelines (2022) recommend that: *“Loss of light to existing windows need not be assessed if the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window.”*

The diffuse light of the existing building may be adversely affected if part of a new building measured in a vertical section perpendicular to the main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal. If a window falls within a 45° angle both in plan and elevation with a new development in place, then the window may be affected and should be assessed.

#### **Sunlight to gardens and open spaces**

An assessment of Sun on the Ground is used of sunlight analysis on external spaces. This is undertaken for the March 21st. The BRE guidelines (2022) recommends that for an area to appear adequately sunlit throughout the year, at least half of the amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

#### **Overshadowing**

Shadow diagrams are a visual aid to understand where possible shading may occur. The use of shadow diagrams as an assessment method should be taken over the course of the day and not a specific time due to the transient nature of the sun and the shade caused by obstructions.

If a space is used all year round, the equinox on the 21 March is the best date for which to prepare shadow plots as it gives an average level of shadowing. Lengths of shadows at the autumn equinox (21 September) will be the same as those for 21 March, so a separate set of plots for September is not required.”

The guidelines recommends that “Sunlight at an altitude of 10° or less does not count”. In Winter even low buildings will cast long shadows and it is common for large areas of the ground to be in shadow throughout the day especially in a built up area as the sun barely rises above an altitude of 10° during the course of the day. Below are the times for the Equinox and Solstice that the sun is above 10° altitude rounded to the nearest half hour.

- Equinox: Between 8:30 and 17:30
- Summer Solstice: Between 6:30 and 20:00
- Winter Solstice: Between 10:30 and 14:00

### **Description of Effects**

The BRE guidelines (2022) sets out criteria for classification for assessment of impact where a new development affects a number of existing buildings or open spaces in relation to an Environmental Impact Assessment. The guide does not give a specific range or percentages but sets out parameters set out below.

Where the loss of skylight or sunlight does not meet the guidelines, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- only a small number of windows or limited area of open space are affected.
- the loss of light is only marginally outside the guidelines.
- an affected room has other sources of skylight or sunlight.
- the affected building or open space only has a low level requirement for skylight or sunlight.
- there are particular reasons why an alternative, less stringent, guideline should be applied.

Factors tending towards a major adverse impact include:

- a large number of windows or large area of open space are affected.
- the loss of light is substantially outside the guidelines.
- all the windows in a particular property are affected.
- the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, eg a living room in a dwelling or a children's playground.

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space. Beneficial impacts should be worked out using the same principles as adverse impacts. Thus a tiny increase in light would be classified as a negligible impact, not a minor beneficial impact.

### **Wind Analysis**

Wind currents around buildings affect people and the environment inside or nearby in many ways. Effects include:

- Pedestrian Discomfort.
- Smoke and Fume Dispersion.
- Wind Created Noise.
- Heat Loss.
- Infiltration / internal flow within buildings and hazards to nearby aircraft.

The wind patterns induced by large buildings are felt predominantly in the surrounding streets and plazas. The types of wind currents experienced at a microclimate level can be described in fluid dynamic terms as follows:

- **Vortical Flows:** flows in which the fluid revolves around an axis line. Examples of vortices include stirred fluids, whirlpools, tropical cyclones or tornadoes. On a microclimate level, these flows are experienced as gentle eddies or swirls in the air.
- **Separated Flows:** detachment of a boundary layer of flow from a surface into a 'wake'. A wake can be described as a moving or stationary blunt body, i.e., a building. Flow separation can occur when wind moves externally around a body, or internally within an enclosed passageway. Flow separation results in reduced lift and increased pressure drag, caused by the pressure differential between the front and rear surfaces of the object.
- **Three-Dimensional Flows:** Fluid motion is chaotic, moving in all directions.

The impact of these flow types on the microclimate of buildings, on wind loads to surfaces, and on pedestrian comfort can be very strong. Depending on the size and scale of a project, assessment of the baseline wind conditions can be of great importance to the design of the project in order to avoid and adverse effects on the local conditions.

The significance of on-site and off-site measurement locations are defined by comparing the wind comfort/safety levels with the intended pedestrian activity at each location, using the criteria outlined in **Table 13.1** below.

**Table 13.1: Criteria for rating significance for on-site & off-site receptors (City of London)**

| Importance              | Receptors  |  |
|-------------------------|--|--|
|                         | On-Site  | Off-Site   |
| <b>Major Adverse</b>    | Conditions are 'unsafe'.   | Conditions that were 'safe' in the baseline scenario become 'unsafe' as a result of the Proposed Development.<br><br><u>OR</u><br>Conditions that were 'suitable' in terms of comfort in the baseline scenario become 'unsuitable' as a result of the Proposed Development.<br><br><u>OR</u><br>Conditions that were 'unsafe' in the baseline scenario are made worse as a result of the Proposed Development. |
| <b>Moderate Adverse</b> | Conditions are 'unsuitable' (in terms of comfort) for the intended pedestrian use. | Conditions that were 'suitable' in terms of comfort in the baseline scenario are made windier (by at least one comfort category) as a result of the Proposed Development, but remain 'suitable' for the intended pedestrian activity.  |
| <b>Negligible</b>       | Conditions are 'suitable' for the intended pedestrian use.                         | Conditions remain the same as in the baseline scenario.  |

|                              |   |   |
|------------------------------|---|---|
| <b>Moderately Beneficial</b> | Conditions are calmer than required for the intended pedestrian use (by at least one comfort category). | Conditions that were 'unsuitable' in terms of comfort in the baseline scenario become 'suitable' as a result of the Proposed Development.<br><br><u>OR</u><br>Conditions that were 'unsafe' in the baseline scenario are made better as a result of the Proposed Development (but not so as to make them 'safe'). |
| <b>Majorly Beneficial</b>    | N/A   | Conditions that were 'unsafe' in the baseline scenario become 'safe' as a result of the Proposed Development.   |

### 13.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

#### 13.3.1 Construction Phase

##### 13.3.1.1 Site Layout

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings: FI204, FI600 and FI601, CGIs (FI501-FI509), FI101 site plan, and FI102. It is assessed that there are no additional predicted effects of the proposed development relating to micro climate on the foot of the changes to the site layout arising from the Request for Further Information.

##### 13.3.2 Operational Phase

There are no additional predicted effects of the proposed development on the foot of the Request for Further Information at operational phase.

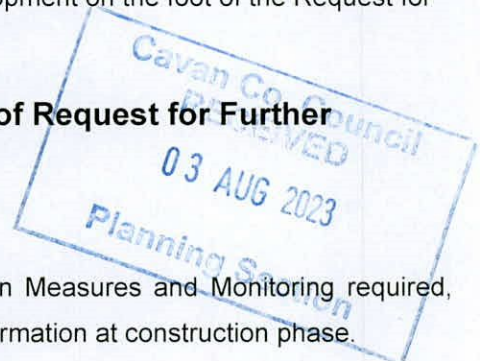
### 13.4 Mitigation Measures and Monitoring on foot of Request for Further Information

#### 13.4.1 Construction Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at construction phase.

#### 13.4.2 Operational Phase

There are no changes/amendments to, or additional Mitigation Measures and Monitoring required, regarding the proposed development on foot of Request for Information at operational phase.



## 13.5 Residual Effects on foot of Request for Further Information

### 13.5.1 Construction Phase

The effect of the construction phase in terms of daylight, sunlight and overshadowing will remain neutral, imperceptible due to their size and temporary nature.

The effect of the construction phase in terms of wind will remain neutral, insignificant, and temporary.

### 13.5.1 Operational Phase

With the mitigation measures in place, the effect of the proposed development in terms of daylight, sunlight and overshadowing is envisaged to be negligible.

With the mitigation measures in place, the effect of the proposed development in terms of wind is envisaged to be neutral, insignificant and long-term.

## 13.6 Interactions and Cumulative Effects on foot of Request for Further Information

### 13.6.1 Interactions

There are no additional interactions subsequent to those assessed in Chapter 13 of the main project EIAR (Volume II) on foot of Request for Further Information.

### 13.6.2 Potential Cumulative Effects

The cumulative assessment is concerned with the potential effects of the proposed development, in combination with any other projects or plans that are likely to be associated with the receiving environment to the proposed development, or that are likely to occur in the foreseeable future. **Table 13.1** makes reference to the planning history of the construction project of St. Clare's National School adjacent to the northern boundary of the site.

Table 13.1: Ongoing Developments within the site vicinity

| Reg. Ref.            | Location  | Description of Development  | Decision   | Distance                      | Anticipated Cumulative Effect               |
|----------------------|---|---|--|-------------------------------|---|
| CCC Reg. Ref. 16/483 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Refurbishment of the existing school building, construction of new single storey and two storey extensions to the existing school building and associated site development works. | Permission Granted by CCC 28/11/2016<br><br>Development commenced 20/09/2021 | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |
| CCC Reg. Ref. 21/444 | St. Clare's National School, Ard Mhuire, Cock Hill, Co. Cavan | Application for Extension of Duration re: Reg. Ref. 16/483  | Extension of Duration granted to January 2027                                | Adjacent to the site boundary | <b>Negative, Not Significant, Temporary</b> |

Given the close proximity of St. Clare's National School, the cumulative effects associated with the construction and operational phases of this development were considered in detail during all baseline studies within the main EIAR report as a sensitive receptor. With respect to micro climate, effects have been considered as part of the assessment and are Negative, Not Significant, Temporary in line with the anticipated cumulative effects of all other proposed developments.

As such, it is assessed there are no additional cumulative effects, subsequent to those noted in Chapter 13 of the main project EIAR (Volume II), on foot of Request for Further Information.

### **13.7 Summary of Assessment**

The effects relating to micro climate resulting from amendments to the proposed development arising from Request for Further Information have been assessed.

It is concluded that there are no changes to the residual effects of the proposed development in the construction or operational phase and no changes to interactions or cumulative effects of the proposed development on foot of the Request for Further Information.



## 14.0 Landscape and Visual

### 14.1 Overview

The purpose of this chapter is to assess effects of the proposed development on Landscape and Visual resulting from a Request for Further Information (RFI) regarding planning application Reg. Ref. 23/8.

### 14.2 Methodology

The methodology employed in this addendum chapter is the same as was employed in the original chapter submitted with the planning application as outlined in section 14.3. Updated Architectural plans, elevations and Computer Generated Images (CGIs) were used to inform the design changes that have occurred on foot of the RFI request and to determine whether any material changes to the original assessment have arisen.

### 14.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

The main RFI design changes that have occurred from a Landscape and Visual perspective are in response to RFI items 1(a – d). These relate to façade and boundary treatments to the west (town) elevation, east (main entrance) elevation, the north elevation to St Clare's National School, accounting for its current extension and requested enhancement of the stepped walkway from the town centre to the site.

#### 14.3.1 Construction Phase

Construction Phase Landscape and Visual Impacts were addressed in section 14.6.1.2 of the original LVIA chapter and focussed on the scale, nature and duration of construction related activities and how these would impact on landscape character and visual amenity. The proposed RFI changes are essentially alterations to the appearance of buildings, boundary treatments and access ways, as opposed to a noticeable increase / decrease in the volume or site arrangement of the proposed development. Consequently, there will not be any material differences to the construction scale, duration or methodology that would alter the previous construction phase impact judgments.

#### 14.3.2 Operational Phase

The original Operational Phase landscape / townscape impact assessment focussed on the scale, nature and function of the proposed development within its immediate and wider townscape setting and how it addresses adjacent land uses. This included St Clare's National School, which was identified as an adjacent receptor in baseline section 14.4.1.1 'Immediate Site Context' and identified as having an extension that is currently under construction in section 14.6.2.2. It is not considered that the proposed design changes to façade and boundary treatments will result in any material changes to the original operational phase landscape assessment, though they are considered to be improvements to the scheme design.

It is considered that the newly proposed ramped access from the town centre is also an improvement and has a stronger placemaking and amenity function than the original design. However, the original townscape assessment highlighted that there would be *“new, high quality pedestrian links between the proposed development and the existing urban core of Cavan Town”* and this contributed to a Medium / Positive Townscape impact assessment. Although a further improvement to the design of this access is acknowledged for the updated RFI design, it is not considered to improve the overall Townscape impact judgement by a full assessment category.

Visual Impacts were assessed at 11 representative viewpoint locations within the surrounding public realm in the original LVIA chapter. Viewpoint VP4 from ‘Cockhill Road at the entrance to Gaelscoil Bhreifne’ is the location that best illustrates the relationship between the proposed development and St Clare’s National School even though this was not considered to be the critical aspect of the assessment from this broad views towards the front of the proposed development. Nonetheless, it is considered that the original northern façade / boundary treatment did not result in undue negative impacts on the school and allowed for a discreet separation / privacy between the adjacent uses. However, it is acknowledged that the amended RFI design which sees the proposed wooden fence in the northeast corner of the site replaced by the permitted paladin fence of the school site allows better visual permeability into the front of the school. A close-board wooden fence is still maintained along the western end of the northern boundary to maintain privacy and separation to the new ball courts within the school and play area and buildings beyond. The proposed RFI changes are therefore deemed to be an improvement to the original application design but not one that alters the original visual impact assessment in a material way.

The only other viewpoints where noticeable change from the updated RFI design might occur are VP6 and VP7 from ‘Main Street’ and ‘The Main Street Car Park’ respectively, which look towards the wooded embankment that will host the ramped pedestrian access. Neither viewpoint has a clear view of the western façade of the proposed Tesco building due to screening by the intervening landform and vegetation of the embankment – only the uppermost roof / faced profile. Thus, the improved western façade treatment, which consists of coloured louvre screen of the service yard and additional stone work, will not be readily noticeable from these locations. However, it is considered that the updated pedestrian access is more welcoming and accessible and will function more as an amenity feature than just a means of access compared to the original design. This will be most apparent from VP7, where the previous Imperceptible / Neutral quality of effect could be altered to Slight / Positive. Furthermore, it is from the top of this ramped walkway that the most benefit will be had from the improved western façade treatment to the development (described above and presented in drawings FI101 – FI103 and accompanying CGIs).

For the reasons outlined above, the design changes proposed at RFI stage are all considered to represent positive improvements to the development from an LVIA perspective, even if this does not materially alter the original LVIA findings to a material degree. Ultimately, there was not considered to be any significant and adverse landscape and visual effects arising from the proposed development

and that remains the case. The proposed RFI design changes only represent Neutral or Positive change to the original LVIA.

#### **14.4 Mitigation Measures and Monitoring on foot of Request for Further Information**

There are no material changes to mitigation measures that have a bearing on the landscape and visual context and monitoring requirements remain the same as those outlined in section 14.8 of the original assessment.

#### **14.5 Residual Effects on foot of Request for Further Information**

As the embedded landscape and visual mitigation measures from the original application have not materially changed there will be no changes to residual effects

#### **14.6 Interactions and Cumulative Effects on foot of Request for Further Information**

There are no material changes to Interactions and Cumulative effects as a result of the proposed RFI design changes.

#### **14.7 Summary of Assessment**

The design changes proposed at RFI stage are all considered to represent positive improvements to the development from an LVIA perspective, even if this does not materially alter the original LVIA findings to a material degree. Ultimately, there was not considered to be any significant and adverse landscape and visual effects arising from the proposed development and that remains the case. The proposed RFI design changes only represent Neutral or Positive change to the original LVIA.

## 15.0 Archaeology, Architectural and Cultural Heritage

### 15.1 Overview

This purpose of this chapter is to assess effects of the proposed development on the archaeology, architectural and cultural heritage resource resulting from a Request for Further Information, as issued by Cavan County Council (Planning Ref. 23/8).

This chapter should be read in conjunction with the Environmental Impact Assessment Report provided as part of planning application Reg. Ref. 23/8.

### 15.2 Methodology

This chapter has been prepared having regard to the following guidelines:

- National Monuments Act, 1930–2014;
- Planning and Development Act, 2000 (as amended);
- Heritage Act, 1995;
- Environmental Protection Agency (EPA) 2015 Draft Advice Notes on Current Practice (in the preparation of Environmental Impact Statements). Dublin, Government Publications Office;
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EIAR) (EPA 2022). Dublin, Government Publications Office;
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999 (formerly Department of Arts, Heritage, Gaeltacht and Islands);
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act; and
- Architectural Heritage Protection Guidelines for Planning Authorities (2011).

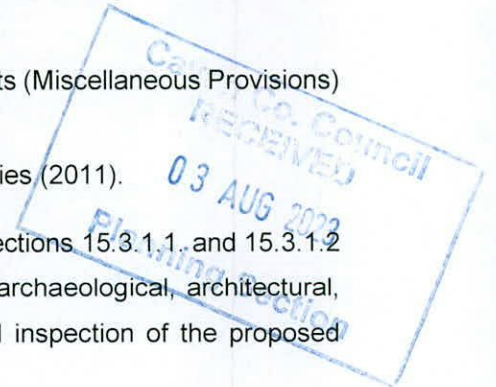
Research for the chapter been undertaken in two phases as detailed in sections 15.3.1.1, and 15.3.1.2 of the EIAR. The first phase comprised a paper survey of all available archaeological, architectural, historical and cartographic sources. The second phase involved a field inspection of the proposed development area.

### 15.3 Predicted Effects of the Proposed Development on foot of Request for Further Information

#### 15.3.1 Construction Phase

Several amendments have been undertaken to the layout of the proposed development relating to landscaping, relocation of certain features and internal/external road features. These changes are detailed in the updated site drawings.

Archaeological testing and excavation have already taken place within the footprint of the proposed development and the site has been stripped and built up with layers of hardcore. As a result of these works, no direct or indirect negative effects are predicted upon the archaeological resource as a result of the construction of the proposed development, regardless of the changes in the development layout.



### 15.3.2 Operational Phase

No potential negative effects upon the archaeological, architectural or cultural heritage resource are predicted as a result of the operation of the proposed development. This remains unchanged on foot of the Request for Further Information at operational phase.

## 15.4 Mitigation Measures and Monitoring on foot of Request for Further Information

### 15.4.1 Construction Phase

No mitigation measures are required during the construction phase, which remains unchanged on foot on the Request for Further Information.

### 15.4.2 Operational Phase

No mitigation measures are required during the operation phase, which remains unchanged on foot on the Request for Further Information.

## 15.5 Residual Effects on foot of Request for Further Information

There are no effects predicted upon the archaeological, architectural or cultural heritage resource at either construction or operation and as such there will be no residual effects. This remains unchanged on foot of the Request for Further Information.

## 15.6 Interactions and Cumulative Effects on foot of Request for Further Information

### 15.6.1 Interactions

No interactions between the archaeological, architectural or cultural heritage resource and other disciplines within the EIAR have been identified.

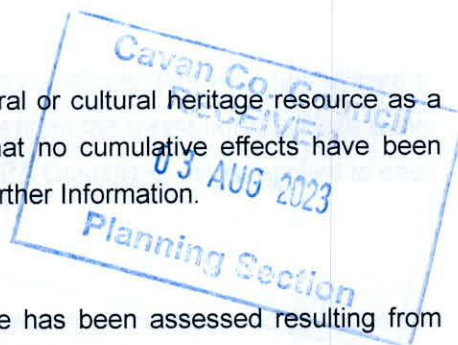
### 15.6.2 Potential Cumulative Effects

As no effects are predicted upon the archaeological, architectural or cultural heritage resource as a result of the proposed development going ahead, it follows that no cumulative effects have been identified. This remains unchanged on foot of the Request for Further Information.

## 15.7 Summary of Assessment

The archaeological, architectural and cultural heritage resource has been assessed resulting from amendments to the proposed development arising from Request for Further Information.

No effects upon the archaeological, architectural and cultural heritage resource were predicted as a result of the development going ahead and this remains unchanged on foot of the Request for Further Information, issued by Cavan County Council.



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