1.0 NON-TECHNICAL SUMMARY

1.1 Introduction

The requirement for an Environmental Impact Assessment Report to contain a non-technical summary under Article 5 (1) (e) and Annex IV of the 2014 EIA Directive has been transposed into Irish Law by way of Article 94 (c) of the Planning and Development Regulations 2001 (as amended). The non-technical summary fulfils one of the fundamental objectives of the EIAR process, which is to ensure that the public are made aware of the environmental implications of any decisions about whether to allow new projects to take place¹.

According to Guidelines, the non-technical summary should be concise and comprehensive and should be written in language easily understood by a lay member of the public not having a background in environmental matters or an in-depth knowledge of the proposed project².

1.2 Description of Location



Figure 1.1 Site Location

¹ Para. 4.6, EPA, 2017

² Guidelines for Planning Authorities and An Bord Pleanála, August 2018

The application site is located to the south east of Tullamore Town Centre to the east of the Clonminch Road (R443). The wider area within which the application site is located is characterised and largely defined by infrastructure routes with the Dublin-Galway train line to the north and N52 orbital route forming a physical barrier surrounding the settlement of Tullamore and marking a transition to more rural landscape beyond. To the west are existing residential areas of Limefield and Clonminch Woods and single dwellings fronting Clonminch Road. To the south west is the Grant & Sons Distillery, a lower tier COMAH facility while the central business park is located to the North West, where the Department of Education, Department of Finance and other major employers are located.

For a detailed description of the site and its context please refer to chapter 3.

1.3 Description of the project

The proposed development has a combined gross floor area (GFA) of 40,015.70m². The project has been designed as a new urban neighbourhood within a parkland setting and adheres to the principles of Urban Design. The DMURS compliant road hierarchy and generous public open space areas will create a calm and pleasant environment. High quality materials and finishes are proposed through the scheme as detailed in the Architects Design Statement under separate cover.

The proposed development is of a residential nature with supporting neighbourhood services comprising:

- 196 houses
- 153 apartments
- Two neighbourhood centre buildings
- A local shop
- A crèche

Proposed buildings on the site will range between 1 - 4 storeys in height. All buildings have provision for photovoltaic/solar panels. The final position of these panels will depend on orientation. Parking to serve the proposed development is provided at basement level, in-curtilage and at surface level with landscaping to reduce its visual impact. Dedicated car parking is provided for the neighbourhood centre and crèche and is located so it is not visually intrusive. Public open spaces will be provided throughout the development including two large public parks named Clonminch Square and St.Columba's Green in addition to communal open space provided for apartment residents and a tree lined cycle path.

1.4 Description of the Receiving Environment - Baseline

In order to gain an informed understanding of the receiving environment, the applicant commissioned the following studies prior to considering the layout and built form-

- Topographical survey
- Appropriate Assessment Screening and Ecological Survey
- Archaeological desktop assessment
- Tree & Hedgerow survey
- COMAH Land Use Planning Report

Following Stage 1 Screening exercise, it was considered necessary to move to Stage 2 Appropriate Assessment and a Natural Impact Statement accompanies this SHD application.

The baseline scenario for each environmental factor assessed as part of the environmental impact assessment of the proposed project is contained within each chapter of this EIAR. The baseline scenario refers to the current environmental factors in the absence of the project. The environment will change over time, even without the introduction of the proposed project.

1.5 The 'Do-nothing' Scenario

The 'do nothing' scenario or 'no Project' Alternative describes what would happen should the Project not be implemented at all. The 'Do-nothing' scenario is examined in relation to each environmental factor. It is submitted that there is identified need for the proposed project and as such the 'do-nothing' scenario would not be desirable. The application site is zoned and serviceable. The project will have positive benefits to the community and is in keeping with National, Regional and Local Planning Policy.

1.6 Description of Reasonable Alternatives

The proposed project has been considered in terms of –

- Alternative Layout and Design
- Alternative Uses

The main reasons for the chosen option are as follows-

- The proposed layout is considered the most practical and feasible having regard to site constraints, and limited alternative layout(s) options due to the permitted route of the access road, location of the school site and neighbourhood centre together with the desire to connect to exiting residential developments to the north and east in the future.
- The mix of uses proposed is fully compliant with the zoning objectives for the application site and will assist in the creation of a new neighbourhood with supporting services and provide employment opportunities.

- The location of the neighbourhood buildings will be well located relative to future development of the Nodal Masterplan Lands and reflects the position dictated by the TTEDP.
- Careful consideration has been given to ensure the areas of public open space provided are of appropriate size, are usable and functional and located in areas which benefit from passive surveillance.
- The proposal will result in the improvement of Clonminch Road (R443) to provide cycle tracks. The site boundary includes lands required to delivery this proposal.
- The layout proposed will achieve an average density of 35 dwellings per hectare across the site.
 Lower density housing is proposed adjacent to existing housing with higher density to the centre and north of the site where the school site and commercial core will be located in relation to the Eastern Node.
- The proposal provides a range of designs with different house types ranging from one bed apartments to four bed detached houses. The broad range of dwelling sizes and types will ensure the development is able to cater for a variety of family types from different socio-economic groups.
- The landscape rationale takes full account of existing hedgerows and trees and will introduce pollinator friendly planting.
- The phasing plan ensures delivery of a mix of uses across the site and the timely completion of the improvements to Clonminch Road and infrastructure services required to support the development.

1.7 A Non-Technical Summary of the factors likely to be significantly affected by the project

1.7.1 Population and Human Health (Chapter 4)

Chapter 4 of this EIAR contains the assessment of the proposed development under following topics and the potential of significant impacts that are likely to affect the environmental factor of population and human health-

- Land use and settlement patterns
- Population and housing supply
- Employment
- Community infrastructure capacity
- Human health and wellbeing

1.7.1.1 Baseline

The following is a summary of the baseline in relation to each of the above topics which is discussed in detail within chapter 4.

Land Use and Settlement Patterns: The area in which the application site is located is semi-urban in character with residential development to the West. The area features large scale infrastructure with train line to the north east and the N52 to the east and south and overhead ESB lines. The application is zoned under the Tullamore Town and Environs Development Plan as 'Residential' and 'Neighbourhood Centre'.

Population and Housing Supply: Tullamore has not shown strong population growth during the inter-census periods 2011-2016 despite is designation as a regional growth centre and being the largest urban centre in County Offaly. It is predicted that given its designation under the Regional Spatial and Economic Strategy, Tullamore will be allocated a significant population target on review of the County Plan which has now commenced. The current supply of housing within the County has not achieved the level of provision required by the Tullamore Town and Environs Development Plan 2010-2016 or Offaly County Development Plan. There have been no residential developments on Masterplan lands in Tullamore.

Employment: Tullamore has a diverse working population with the highest number of persons recorded as professional occupations followed by skilled trades. 25% of persons at work were categories as 'Professional Services' with a further 21% in 'Commerce and trade' industries. Tullamore has a healthy jobs to resident ratio of 1.488 and strong employment base attractive a positive commuter flow pattern which recorded 5,329 commuters who travelled to Tullamore to work each day in 2016.

Community Infrastructure Capacity: Tullamore is well by public transport, retail services and community facilities. However, Census data shows that a low percentage currently use the train as their mode of transport to school or work. An audit of community services and amenities details a host of existing facilities available within 2.5km of the application site. These are identified, specified and mapped at Chapter 4 of the EIAR.

Human Health and Wellbeing: The population of Tullamore are generally of 'very good' health and have access to a high level of health services including the Midlands Regional Hospital. There are contrasting areas of deprivation and affluence.

1.7.1.2 A description of the likely significant effects of the project on the environment

Land Use and Settlement Patterns: The proposed development will change agricultural lands into a new neighbourhood with 349no. residential dwellings and supporting neighbourhood uses. These lands are zoned for the uses proposed and are considered to be in keeping with the evolution of the area. The lands are contiguous to the urban area and planning permission has been granted for a Part 8 housing development to the north of the new entrance to the application site. It is concluded that the proposed development will have a positive impact on the settlement pattern as it represents a planned and sustainable extension to Tullamore as guided by a Nodal Masterplan and self-sustaining neighbourhood uses.

Population and Housing Supply: The proposed development will supply residential accommodation in Key Town with supporting neighbourhood uses. The additional potential residential population of 942 will assist in the delivery of additional services and support public transport improvements. It will also assist with vision of the RSES to continue employment and population growth for the settlement of Tullamore (p.82). As such it will have a positive impact on the population and housing supply of Tullamore.

Employment: The proposed development will not only offer employment during construction stage but the neighbourhood centre provides job opportunities in close proximity to people's homes. This is a positive impact.

Community Infrastructure Capacity: There are many services and facilities in Tullamore for future residents to avail of including schools both primary and secondary. The neighbourhood centre with medical centre will ensure the new community can be self-sustaining. The proposed development includes the provision of a childcare facility and contains a high level of public open space including playgrounds. In addition, improvements works to Clonminch Road will improve cycle facilities for both existing and new residents in the area. The overall impact on community infrastructure is positive.

Human Health and Wellbeing: The proposed development has undergone EIA and a COMAH land use assessment has been completed. It is submitted that the proposed development, including improvements to Clonminch Road will improve safety and cause no harm to human health.

1.7.1.3 A description of the forecasting methods or evidence used

The assessment of the potential significant impacts of the proposed development on population and human health was informed by published reference documents including the Central Statistics Office Census data, Pobal online services, the National Planning Framework, the Regional Spatial and Economic Strategy for the Eastern and Midland Region as well as the Offaly County Development Plan 2014-2020 and the Tullamore Town and Environs Development Plan 2010-2016 (as varied and extended).

1.7.1.4 Mitigation measures & residual effects

None predicted or required.

1.7.1.5 Difficulties Encountered

None

1.7.2 Biodiversity (Chapter 5)

A review of the biodiversity of the site was carried out which included a study of existing information from online databases and online mapping sources as well as site surveys. A site survey was carried out in May 2019, June 2020 and July 2021. The author of this chapter undertook a Stage 2 Appropriate Assessment and a Natura Impact Statement accompanies this planning application under separate cover. Please refer to the NIS for mitigation relating to the protection of the Natura network and possible hydrological links to Charleville Wood SAC.

The site is not within or adjacent to any area that is designated for nature conservation. There are no plants recorded from the site that are listed as rare or of conservation value. No invasive species were found on site. The site can be described as arable land and fields are divided by hedgerows often with a seasonal drain ditches beneath them. Rabbit was the only large mammal evident on site and there was no evidence of Badgers or foxes using the site. Manual bat surveys were completed on site during the 2020 and 2021 bat activity seasons. The surveys indicate that the site is used by a low number of Leisler's bat and Common pipstrelle. In terms of the TII (NRA) criteria the site is assessed as being of local importance (lower value).

Approximately 570m of hedgerow are to be removed with most of the peripheral hedges maintained. The looss of hedgerow habitats represents a minor negative residual impact. The loss of the drainage ditches is considered negligible to minor as they are artificial in nature and ephemeral and have no fisheries value. No breeding sites or resting places of protected terrestrial non-volant mammals such as badgers were noted within or immediately adjacent to the project site. As such the construction phase of the project will not have the potential to result in significant disturbance to non-volant terrestrial mammals. There will be loss of potential nest habitat for bird species however given the widespread extend of this habitat in the surrounding area this loss is seen as of minor significance to birds. Noise during construction works will represent, at most, a minor negative impact to birds and is short term.

With the suggested mitigation in place, the ecological impacts by this proposed development will not be significant. The project site will not result in any significant negative residual impacts to designated conservation areas.

1.7.3 Land, Soils and Geology (Chapter 6)

This Chapter of the EIAR comprised of an assessment of the likely impact of the proposed development on the soils and the geological environment as well as identifying proposed mitigation measures to minimise any impacts. A detailed description of the proposed development can be found in Chapter 3 of this EIAR.

An assessment of the likely impact of the proposed development on soils and the geological environment included a preliminary ground investigation study and review of information available on the Geological Survey of Ireland online mapping service.

Ground conditions at the site, as observed during ground investigations, are summarised as follows:

0.2m to 0.25m thick topsoil layer overlying; cohesive deposits (comprising of sandy clayey SILT or silty CLAY with occasional cobbles and boulders); overlying clayey gravelly fine to coarse SAND with occasional cobbles and rare boulders.

Ground water was observed in four of the twenty trial pits. These trial pits were located in the northern part of the site with ground water observed at depths of 1.7m to 3.0m below existing ground level.

Review of GSI's online mapping service ("Bedrock Geology") describes geology in the vicinity of the site as "Dark limestone and shale (Calp)". GSI have classified the site's groundwater vulnerability as "moderate" with a small section south west of the site classified as "high" and have classified underlying aquifers as a "Locally Important.

Site development works will include stripping of topsoil, excavation of subsoil layers (to allow road construction, foundation excavation, basement excavation, drainage and utility installation and provision of underground attenuation of surface water) and importation of fill (structural fill beneath houses, driveways and to roadways).

Potential impacts during the construction phase include exposure of the underlying subsoil layers to the effects of weather and construction traffic resulting in erosion and generation of sediment laden runoff. Accidental spills and leaks during construction activities may result in contamination of the soils underlying the site.

In order to mitigate impacts noted above stripping of topsoil will be carried out in a controlled and carefully managed way and coordinated with the proposed staging for the development. Disturbed subsoil layers will be stabilised as soon as practicable (i.e. minimise the duration that subsoil layers are exposed to weather effects). Measures will also be implemented to capture and treat sediment laden surface water runoff (e.g. sediment retention ponds and surface water inlet protection).

Regarding construction traffic, earthworks plant and vehicles delivering construction materials to site will be confined to predetermined haul routes around the site.

Vehicle wheel wash facilities will be installed in the vicinity of any site entrances and road sweeping along Clonminch Road and dust suppression implemented as necessary.

In order to mitigate against spillages contaminating underlying soils, all oils, fuels, paints and other chemicals will be stored in a secure bunded hardstand area. Refuelling and servicing of construction machinery will take place in a designated hardstand area (when not possible to carry out such activities off site).

All temporary construction compounds are to be removed upon completion of the construction phase. Such areas are to be reinstated in accordance with the landscape architects plan and engineer's drawings.

All construction waste and / or scrapped building materials are to be removed from site on completion of the construction phase.

Implementation of the measures outlined in Chapter 6 of this EIAR and the Preliminary Construction Management Plan will ensure that the potential impacts of the proposed development on soils and the geological environment do not occur during the construction phase

1.7.4 Hydrology (Chapter 7)

This chapter of the EIAR comprises of an assessment of the likely impact of the proposed development on the surrounding surface water and hydrogeological environments (including flood risk, surface water drainage, foul drainage and water supply) as well as identifying proposed mitigation measures to minimise any impacts. A detailed description of the proposed development can be found in Chapter 3 of this EIAR.

Assessment of the likely impact of the proposed development on the surrounding surface water and hydrogeological environments included site inspection / walkover, review of existing topographic survey information, review of Irish Water utility plans, ground investigations including trial pits and infiltration testing, review of information available on the Environmental Protection Agency (EPA) online mapping service, review of information available on the Geological Survey of Ireland (GSI) online mapping service, review of Office of Public Works (OPW) National Flood Hazard Mapping and CFRAM Studies (Catchment Flood Risk Assessment and Management Studies), consultation with Offaly County Council's Water Services Section and consultation with Irish Water.

As part of assessing the likely impact of the proposed development, surface water runoff, foul drainage discharge and water usage calculations were carried out in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) and methods outlined in Irish Water's Pre-Connection Enquiry Application (water demand and foul drainage discharge).

The site currently drains via a network of open drains which ultimately discharge to an open drain located adjacent to the northern portion of the site (along the Dublin to Galway railway line). There are a number of culverts beneath the railway line which direct flow from network of open drains within the site to an existing open drain on the northern side of the railway. This open drain then directs flows towards an existing 375mm diameter surface water drain at Chancery Lane. As the site generally falls from south-west to north-east, the drainage network described above will provide a suitable discharge point for attenuated surface water flows from the proposed development.

GSI's Groundwater Data Viewer classifies the underlying bedrock aquifer as "Locally Important Aquifer – Bedrock which is Moderately Productive only in Local Zones". GSI classify the site's groundwater vulnerability as "Moderate" with a small portion in the south-west part of the site classified as "High".

A Site Specific Flood Risk Assessment has been undertaken for the proposed development and accompanies the planning application under separate cover and has been undertaken by reviewing information from the Office of Public Works (OPW) National Flood Hazard Mapping / Summary Local Area Report (<u>www.floods.ie</u>), the Tullamore CFRAM Study and Tullamore Town & Environs Development Plan. This assessment has been carried out in accordance with the procedures for a "Flood Risk Assessment" as outlined in the OPW's Guidelines for Planning Authorities – The Planning System and Flood Management (November 2009). Following the Flood Risk Assessment, it was determined that the site is located in Flood Zone C as defined by the Guidelines i.e. the proposed development is appropriate for the site's flood zone category.

An existing 225mm diameter public foul sewer is located west of the site along the Clonminch Road (see Figure 7.5) which discharges to Tullamore WWTP. As the site generally falls from south-west to north-east, a foul pumping station will be required to service the development via the existing foul sewer noted above.

Pre-connection enquiry feedback has been received from Irish Water advising that.

- There is sufficient capacity available at the Tullamore Wastewater Treatment Plant to facilitate your proposed development.
- The proposed connection to the existing wastewater network is feasible subject to upgrades. The Southern Interceptor Sewer (SIS) project is currently being progressed by Irish Water and will be delivered by Irish Water in conjunction with Offaly County Council along with specific road projects in this area of Tullamore. The SIS will provide the long-term wastewater solution for the proposed development. The SIS project is not likely to be completed prior to the proposed development and as such interim upgrade works are required.
- Options for delivery of interim upgrade works include surface water separation works within St. Columbas Place and / or along Clonminch Road (R443), which would remove sufficient volumes of surface water from the combined sewer system to free up capacity for the expected wastewater loading from the proposed development. Irish Water also note that "It is envisaged the extent of the surface water separation works would be within the public road". Surface Water Separation Works are described in detail in Section 4.4 of DBFL's Infrastructure Design Report as submitted with this application.
- The applicant is advised to agree the exact scope of surface water separation works and storage requirements in conjunction with any future Connection Application for the proposed development

Pre-connection enquiry feedback has been received from Irish Water in September 2021 advising that provision of a water connection is "feasible without infrastructure upgrade".

Potential impacts that may arise during the construction phase include, surface water runoff becoming polluted by construction activities, accidental spills and leaks associated with storage of oils and fuels, leaks from construction machinery and spillage during refuelling and maintenance, concrete runoff (particularly discharge of wash water from concrete trucks), improper discharge of foul drainage from contractor's compound and cross contamination of potable water supply to construction compound.

In order to mitigate construction phase impacts a site-specific Construction and Environment Management Plan will be developed and implemented during the construction phase. Site inductions will include reference to the procedures and best practice as outlined in the Construction and Environment Management Plan.

Oil, fuel etc. storage areas are to be decommissioned on completion of the construction phase. Any remaining liquids are to be removed from site and disposed of at an appropriate licenced facility. Offaly County Council's Environmental Control Section is to be notified of the proposed destination for disposal of any liquid fuels.

Potential operational phase impacts include increased impermeable surface area potentially increasing surface water runoff and accidental hydrocarbon leaks with subsequent discharge into piped surface water drainage network.

In order to mitigate operational phase impacts surface water runoff from the site will be attenuated to the greenfield runoff rate as outlined in the Greater Dublin Strategic Drainage Study (GDSDS). Methodologies such as permeable paving, green roofs and discharge of surface water via a fuel / oil separator are being implemented as part of a SuDS surface water treatment train approach.

Proposed mitigation measures to address residual flood risks include maintenance of the drainage system on a regular basis to reduce the risk of a blockage and in the event of storms exceeding the 1% AEP design capacity of the attenuation system, possible overland flow routing towards open space areas should not to be blocked.

Implementation of the measures outlined in Chapter 7 of this EIAR and the Preliminary Construction Management Plan will ensure that the potential impacts of the proposed development on the surrounding surface water and hydrogeological environments do not occur during the construction phase.

1.7.5 Climate and Air (Chapter 8)

AWN Consulting Limited has been commissioned to conduct an assessment of the likely impact on air quality and climate associated with the proposed strategic housing development at Clonminch, Tullamore, Co. Offaly.

In terms of the existing air quality environment, baseline data and data available from similar environments indicates that levels of nitrogen dioxide, particulate matter less than 10 microns and less than 2.5 microns and are generally well below the National and European Union (EU) ambient air quality standards.

The existing climate baseline can be determined by reference to data from the EPA on Ireland's total greenhouse gas (GHG) emissions and compliance with European Union's Effort Sharing Decision "EU 2020 Strategy" (Decision 406/2009/EC). The EPA state that Ireland had total GHG emissions of 59.9 Mt CO2eq in 2019. This 6.98 Mt CO2eq higher than Ireland's annual target for emissions in 2019. Emissions are predicted to continue to exceed the targets in future years.

Impacts to air quality and climate can occur during both the construction and operational phases of the proposed development. With regard to the construction stage the greatest potential for air quality impacts is from fugitive dust emissions impacting nearby sensitive receptors. Impacts to climate can occur as a result of vehicle and machinery emissions. In terms of the operational stage air quality and climate impacts will predominantly occur as a result of the change in traffic flows on the local road links near the proposed development.

Any potential dust impacts can be mitigated through the use of best practice and minimisation measures which are outlined in this report. Therefore, dust impacts will be short-term, negative and imperceptible at all nearby sensitive receptors. It is not predicted that significant impacts to climate will occur during the construction stage impacts are predicted to be short-term, neutral and imperceptible.

The local air quality modelling assessment concluded that levels of traffic-derived air pollutants resulting from the development will not exceed the ambient air quality standards either with or without the proposed development in place. Using the assessment criteria outlined in Transport Infrastructure Ireland's guidance document 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes' the impact of the development in terms of NO2 emissions is long-term, negative and imperceptible. The proposed development is not predicted to significantly impact climate during the operational stage. Increases in traffic derived levels of CO2 have been assessed against Ireland's obligations under the EU 2030 Target. Impacts to climate are deemed imperceptible and long-term with regard to CO2 emissions.

The best practice dust mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be short-term, localised, negative and imperceptible with respect to human health. Operational phase predicted concentrations of pollutants are predicted to be significantly below the EU standards, the impact to human health is predicted to be imperceptible, negative and long term.

No significant impacts to either air quality or climate are predicted during the construction or operational phases of the proposed development.

1.7.6 Noise & Vibration (Chapter 9)

Chapter 9 of the EIAR provides information on the assessment of noise and vibration impacts on the surrounding environment during the construction and operational phases of the proposed Strategic Housing development on lands at Clonminch Road, Tullamore, Co. Offaly.

When considering the potential impacts, the key sources will relate to the short-term two phases of construction and the long-term impacts associated with the development as a whole once operational.

The existing noise and vibration environments across the development site and in the vicinity of the nearest existing NSLs are dictated by transportation sources in the study area including the existing N52, R443 Clonminch Road, Dublin – Galway railway line to the north and local road movements in the adjoining estates to the north of Phase 1 and west of Phase 2 of the proposed development.

In Phase 1 the nearest existing residential NSLs to the proposed development are those located in the Clonminch Wood estate 5m beyond the northern site boundary, residential properties aligning the R443 15m beyond the north-western boundary and the cluster of residential properties offset from the R433 road some 45m from the southern boundary. The nearest permitted NSLs are located approximately 5m to the western boundary and 10m to the north-western boundary in the Oaklee Housing development. In Phase 2, the nearest existing residential NSLs are those located in Clonminch Wood some 10m beyond the western site boundary, and the residential and farmyard area some 300m to the north east. The existing noise climate in the vicinity of the proposed development has been surveyed. Prevailing noise levels are primarily due to the surrounding road network and occasional intermittent activities accessing local residential areas. During the two sequential construction phases, which involve site clearance, piling, foundation construction, substructure, main building construction works, road construction and landscaping, the assessment has determined that there is the potential for some short-term moderate noise impacts and significant vibration impacts when works are undertaken within close proximity (<30m for noise and <50m for vibration impacts) of the receptor locations. However, these occurrences will only be short-term and the vast majority of the construction works will take place at distances from the receptors where no significant impacts are predicted and the construction noise and vibration criteria will be complied with.

The use of best practice noise control measures, hours of operation, scheduling of works within appropriate time periods, strict construction noise limits and noise monitoring during this phase will ensure impacts are controlled to within the adopted criteria. Similarly, vibration impacts during the construction phase will be well controlled through the use of low impact equipment and adherence to strict limit values which will be subject to monitoring at the nearest sensitive buildings.

During the operational phase, the predicted change in noise levels associated with additional traffic in the surrounding area required to facilitate the development is predicted to be of no significant impact along the existing road network. In the context of the existing noise environment, the overall contribution of induced traffic is considered to be of neutral, not significant and permanent impact to nearby residential locations.

Cumulative noise levels associated with operational noise from the development will be designed to ensure the prevailing background noise environment is not increased by a significant level such that potential adverse noise impacts are avoided. Once noise emissions from operational plant and activities are designed in accordance with BS 4142 *Methods for Rating and Assessing Industrial and Commercial Sound,* resultant residual noise impact from this source will be of neutral, not significant and permanent impact.

1.7.7 Material Assets – Traffic (Chapter 10)

This Chapter of the EIAR comprises of an assessment of the likely impact of the proposed development on the local transport environment as well as identifying proposed mitigation measures to minimise any potential impacts. The purpose of this Chapter is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of any transport impact generated as a result of the proposed residential development.

The subject site is located approximately 2.2km south east of Tullamore Town Centre and is situated on the Clonminch Road in the Gayfield area of Tullamore. In the immediate vicinity of the subject site pedestrians benefit from existing footways on both sides of the R443 Clonminch Road corridor commencing approximately 120m south of the proposed site access location and continue to Tullamore Town Centre to the north. Currently on the Clonminch Road corridor, cyclists currently share the road with vehicular traffic. Nevertheless, the Clonminch Road corridor between the subject site and Tullamore Town Centre benefits from sufficient width to accommodate cycle lanes through the revision of road markings.

Currently the nearest bus interchange to the subject development site is located at the entrance of Clonminch Wood which is approximately 300m north of the proposed site access. This interchange is served by Buggy Coaches which provides a local service within Tullamore. Bus Eireann services currently connect Tullamore to and from Dublin and are accessible at interchanges at O'Carroll Street (2.6km) and at Tullamore Retail Park (2.5km). Slieve Bloom Coach Tours also provides services between Tullamore Town and destinations including Mullingar, Mountmellick and Portlaoise via Portarlington. These services are accessible at a number of locations, the nearest of which to the subject site is Tullamore Post Office located approximately 2.1km away. Bus operator Kearns Transport also operates services between Tullamore and Dublin / Birr. These services are accessible at Tullamore Hospital and the Eye Cinema for services to Birr, William St and Tullamore Hospital for services to Dublin City Centre. The subject development site is located approximately 2.2km south of Tullamore train station. Tullamore has an established rail infrastructure that provides linkages to Dublin City in the east, and Galway City / Mayo to the west including other intermediate destinations.

There are a number of future road network improvement schemes in the Tullamore area. The TII expenditure programme provides a list of TII's road scheme projects and network improvements. The proposed upgrade to the link road between Tullamore and Kilbeggan is included and the project status is currently specified as being at pre-appraisal stage. The scheme is described on the TII road scheme activity tracker as follows;

"The project appraisal Plan process has been completed. The scheme which comprises 4.6km of standard single carriageway will provide a link from the recently constructed N52 Tullamore Bypass to the recently constructed N6 Kinnegad to Kilbeggan scheme. A route has been selected and preliminary design, EIS and CPO have been completed".

A total of 17 no. enhancements to the local road network are proposed within the development plan which will;

- a) "Ensure the local area strategies can move forward.
- b) Allow alternative local routes around and through the urban fabric.

c) Enable public transport to penetrate the built up area and therefore bring 'bus routes nearer to the people".

The subject development site is well placed in terms of the availability of and access to local amenities. There are 7 number primary schools and 3 no. post primary schools within 3km of the subject site. The subject site benefits from good access to local retail and leisure facilities including Tullamore Retail Park and Aura Tullamore Leisure Centre both located approximately 2.7km to the east along the N52. Furthermore, the subject development site is well placed to benefit from local employment opportunities at Central Business Park located just 450m north of the proposed site access, Spollonstown Industrial estate to the north and Riverview Business Park / Cloncollig Industrial Estate located to the east via the N52.

With the objective of ascertaining the road safety record of the immediate routes leading to and from the subject site, the collision statistics as detailed on the Road Safety Authority's (RSA) website have been examined. The review of the RSA data available reveals that there are no apparent trends in collisions which have occurred in the vicinity of the subject site. The analysis demonstrates that there are currently no road safety issues across in the immediate vicinity of the proposed subject site access.

In order to establish the existing up to date local road networks traffic characteristics junction turning count surveys were undertaken over a twelve-hour period and automatic traffic counts were undertaken over a 7-day period. The analysis of the survey results established that the local weekday AM and PM peak hours occur between 08:45 to 09:45 and 17:00 – 18:00 respectively.

This Traffic and Transport Assessment adopts an Opening Design Year of 2023 and accordingly the Future Design Years of 2028 (Opening Year +5 years) and 2038 (Opening Year + 15 years). To ensure a robust analysis of the impact of traffic upon the local road network we have adopted growth rates using the Transport Infrastructure Ireland (TII) traffic projections. Table 6.2 (Unit 5.3 – Travel Demand Projections) within the TII Project Appraisal Guidelines provides Annual Growth Factors for each county within the Republic of Ireland.

A third party committed development has been identified and is located in close proximity to the subject Clonminch residential development site. Offaly County Council, in partnership with approved housing body Oaklee, proposes an approved Part 8 planning application to construct a residential development.

In order to assess the local transport network in the Do Nothing scenario, the existing N52 / N80 / R443 Clonminch Roundabout has been analysed in all adopted design years. The Do-Nothing assessment considers the existing traffic on the network (with growth rates applied) and the traffic generated by committed development. The results of the Do-Nothing assessment reveals that this key off-site junction will operate within capacity in all design year scenarios.

The subject proposals seek permission for the provision of 349 no. residential units comprising 196 no. detached / semi-detached / terrace houses and 153 no. apartments. The development also proposes crèche facility (GFA of 1,299 sqm.), two neighbourhood centres (GFA of 3,007 sqm.) and a shop (56 sqm). The subject development site is proposed to be accessed via a new signal controlled junction on the R443 Clonminch Road corridor to be implemented as part of the subject development. Initially, the junction will operate as a three arm signal controlled junction but will reserve the capacity for a fourth arm to be implemented at a future date to facilitate the local authority's road objective for a future new road link should the preferred future route be positioned at this location. Pedestrians and cyclists will access the subject site via the aforementioned vehicle access junction. Shared cycle / pedestrian facilities are proposed on all approaches to this new junction thereby ensuring segregation between vehicles and pedestrians / cyclists. Toucan crossings are proposed on all arms of the signal controlled junction. In addition, future potential cycle / pedestrian connections have been facilitated with the adjoining Clonminch Wood residential development with links constructed up to the subject site boundary allowing for future onward connections to both Clonminch Wood and future development within the Eastern Node.

The proposed main site access road has been designed to perform the function of a 'Link Street'. Accordingly, should the local authority's road objective for a future new road link between the R443 Clonminch Road corridor to the west and Chancery Close to the east be implemented at a future date, the proposed access road is expected to have adequate capacity to perform the function of an inner relief road should the need arise. Nevertheless, it is predicted that this infrastructure will not be required in the short / medium term due to the N52 relief road currently performing a similar function.

The proposals include for the provision of 2 no. new bus stops in the vicinity of the proposed new site access junction in addition to 2 no. new bus stops along the proposed 'Link' Street. The provision of bus interchanges adjacent to and within the subject site maximises accessibility to bus services which will help encourage future residents to travel to work / school / college by bus as opposed to private car. In addition, the subject Link Street has been designed to accommodate potential future bus services should the existing bus routes be extended to serve the future demand at the subject development and potential future development on zoned lands within the Eastern Node outside of the subject site boundary.

The proposals include for the provision new dedicated cycle infrastructure along Clonminch Road. The proposed Clonminch Road enhancements commence approximately 100m south of the proposed site access junction and continue along Clonminch Road to tie into the existing road carriageway at a location approximately 80m northwest of the Bachelor's Walk junction.

The proposed development layout design provides a total of 695 no. car parking spaces comprising 392 no. car parking spaces for the house units (278 in-curtilage spaces, 75 on-street and 19 off-street / courtyard parking), 194 no. car parking spaces for the apartment units (36 on-street, 19 off-street/courtyards and 139 at basement level, 21 no. crèche car parking spaces (inclusive of 8 no. set down spaces), 5 no. spaces assigned to the shop located within Block F, 68 no. spaces at the proposed neighbourhood centres, 6 no visitor spaces and 9 no. spaces at Clonminch Square. The proposals include EV charger facilities at a rate of 10% of these residential car parking spaces and non-residential car parking spaces equating to a total 41 no. electric vehicle spaces comprising 31 for the apartments and houses without in curtilage parking facilities and 10 no. for the non-residential units. A total of 315 no. bicycle parking spaces are proposed as part of the development scheme comprising 236 no. apartment cycle parking spaces and 79 no. non-residential cycle parking spaces.

The subject development is proposed to be rolled out over a number of years with the initial 100 no. residential houses assumed, for the purposes of this assessment, to be complete by the end of the adopted 2023 Opening Year. The remaining residential and non-residential units are predicted to be complete and occupied sometime before the adopted 2028 Future Design Year.

At construction stage, during the general excavation of the foundations there will be additional HGV movements from the site. All suitable material will be used for construction and fill activities where possible and appropriate. All spoil material will be removed to a registered landfill site which will be agreed in full with the Local Authority. In addition to the traffic generated by the disposal of surplus subsoil from the site, there will be traffic generated from deliveries of construction materials and equipment. It should be pointed out that construction traffic

generated during the development works tends to be outside of peak hours. Such trips would generally be spread out over the full working day and will not be higher than the peak hour predicted volumes for the operational stage.

On-site employees will generally arrive before 08:00, thus avoiding the morning peak hour traffic. These employees will generally depart after 18:00. It should be noted that a large proportion of construction workers would arrive in shared transport. Deliveries would arrive at a dispersed rate during the course of the day. It is estimated that peak delivery rates are not expected to exceed 5 vehicles per hour during the busiest period of construction works.

To estimate the potential level of vehicle trips that could be generated by the subject residential development reference has been made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development. In order to determine the potential trip distribution of future development vehicle trips, a local gravity model was developed to evaluate peak hour vehicle origins and destinations reflecting the sites proximity to the Town Centre and both education and employment amenities (i.e. within walking/cycling distances the gravity model focused on longer journeys where the private motor car is more likely to be the mode of choice).

The Traffic and Transport Assessment Guidelines (2014) states that the impact of a proposed development upon the local road network is considered material when the level of traffic it generates surpasses 10% and 5% on normal and congested networks respectively. The network impact has been calculated as sub threshold at the local N52 / R443 / N80 Roundabout with maximum impacts predicted to be below the 10% on normal networks for all design year scenarios.

In order to analyse and assess the impact of the proposed development on the surrounding road network, an assessment of both the existing key off-site N52 / N80 / R443 Clonminch Roundabout and the proposed new site access signal controlled junction was undertaken using specialist traffic modelling computer software programs. The results of the operational assessment of this existing roundabout off-site junction and proposed new site access signal controlled junction during the weekday morning and evening peaks reveal that both junctions will operate within capacity when the predicted trips associated with the subject development are included.

The 'worst case' scenario involves the assumption that the entire Eastern Node masterplan lands are developed. For the purposes of this 'worst case' assessment, it has been assumed that there will be an additional 1000 residential units comprising 600 houses and 400 apartments in addition to a 400 pupil primary school. In this worst case scenario, it has been assumed that the entire masterplan lands will be developed by the 2036 Future Design Year. Accordingly, an assessment of the existing N80 / N52 / R443 Clonminch Roundabout and proposed site access signal controlled junction has been undertaken incorporating the potential additional traffic flow associated with the overall masterplan lands. The 'worst case' analysis results of the operational assessment of the existing N52 / N80 / R443 roundabout junction reveal that this junction is predicted to be approaching capacity for a 30 minute period only within the PM peak hour and outside of this 30 minute period, all approaches to this existing roundabout junction are predicted to operate with significant reserve capacity. The assessment of the proposed site access signal-controlled junction reveals that, with the addition of the estimated future development on the overall masterplan lands, this proposed junction will be approaching capacity in the PM peak hour but will operate with significant reserve capacity during the AM peak hour.

The projected increase in heavy vehicle traffic during the construction stage may lead to a slight increase in noise and vibration levels along the adopted construction haul route. However, such effects will be temporary and slight in nature. The projected increase in vehicle traffic during the operational stage may lead to a slight increase in noise levels during peak trip generation periods however, implementation of the mitigation measures described will prevent and minimize the potential impacts of this interaction. Dust generation can also occur during extended dry weather periods as a result of construction traffic. However, such effects will be temporary and slight in nature.

A package of integrated mitigation measures has been identified to off-set the additional local demand that the proposed residential development on the subject zoned lands could potentially generate as a result of the forecast increase in vehicle movements by residents of the scheme. At construction stage, the Construction Management Plan and the associated Construction Traffic Management Plan (CTMP) in addition to the applications accompanying Construction and Waste Management Plan will incorporate a range of integrated control measures and associated management initiatives with the objective of mitigating the impact of the proposed developments on-site construction activities including:-

- Provision of sufficient on-site parking and compounding to ensure no potential overflow onto the local network.
- It is likely that some numbers of the construction team will be brought to/from the site in vans/minibuses, which will serve to reduce the trip generation potential.
- Site offices and compound will be located within the site boundary. The site will be able to accommodate employee and visitor parking throughout the construction period through the construction of temporary hardstanding areas.
- Finally, truck wheel washes will be installed at construction entrances and any specific recommendations
 with regard to construction traffic management made by the Local Authority will be adhered to.

At operational stage, the following initiatives have been identified and subsequently form an integral part of the subject development proposals.

- Management A Mobility Management (MMP) is to be compiled with the aim of guiding the delivery and management of coordinated initiatives by the scheme promotor. The MMP ultimately seeks to encourage sustainable travel practices for all journeys to and from the proposed development.
- Infrastructure The proposed scheme design incorporates the cycle facilities along the 'Link Street' and on all approaches to the proposed new signal controlled junction. In addition, permeable links with adjacent residential areas are proposed thereby maximising connectivity for walking and cycle trips.

- Infrastructure 2 no. new bus stops are proposed in the vicinity of the subject site access which will not
 only benefit future residents of the subject development but also existing residents in the surrounding area.
- Infrastructure New cycle infrastructure is proposed along Clonminch Road, as part of the subject scheme, which will provide dedicated cycle lanes between the subject site and Tullamore Town Centre. Accordingly, following the implementation of the proposed cycle infrastructure, the subject development will be more accessible by bicycle with the potential for future residents to choose cycling as a mode of travel increased significantly.

Provided the above mitigation measures and management procedures are incorporated during the construction stage, the residual impact on the local receiving environment will be 'short-term' in nature and 'negative' in terms of quality of effects. The potential residual impact of construction stage activities is predicted to be 'Slight' as there will be a small increase in HGV's on the surrounding road network due to excavation plant and dumper trucks involved in site development works and material delivery vehicles. The implementation of the mitigation measures outlined above during the operational stage, will ensure that the residual effect on the local receiving environment is both managed and minimised. Accordingly, the potential residual impact can be described as 'Negative' but 'Not Significant' and will be 'permanent'.

1.7.8 Material Assets – Built Services (Chapter 11)

This Chapter of the EIAR comprised of an assessment of the likely impact of the proposed development on existing utility services in the vicinity of the site as well as identifying proposed mitigation measures to minimise any impacts. The material assets considered in this chapter of the EIAR include Power, Gas and Telecommunications. A detailed description of the proposed development can be found in Chapter 3 of this EIAR.

Assessment of the likely impact of the proposed development on existing utility services in the vicinity of the site included a desktop review of ESB Networks Utility Plans, Gas Networks Ireland Service Plans and Eir E-Maps.

Existing MV (10kV/20kV) overhead lines cross the western portion of the site (adjacent to Clonminch Road). An existing MV (10kV/20kV) overhead line and underground cable route is located along the site's southern boundary. Existing 38kV & Higher Voltage overhead line traverses the site from its southern boundary to its northern boundary.

An existing medium pressure distribution pipeline (125mm / 4bar) is shown running along the Clonminch Road (west of the site / adjacent to the proposed site access point).

Telecommunication infrastructure is located to the west of the site along Clonminch Road and within Clonminch Wood. The National Broadband Plan indicates that commercial operators are delivering, or have indicated plans to deliver, high speed broadband services to the areas noted above. There is potential interruption to ESB's network, Gas Networks Ireland's infrastructure and Eir's infrastructure while carrying out road works along Clonminch Road (e.g. during formation of site access junction) and while carrying out works to provide service connections to the proposed development.

Relocation of existing overhead ESB lines will be fully coordinated with ESB Networks to ensure interruption to the existing power network is minimized (e.g. agreeing power outage to facilitate relocation of cables). Ducting and / or poles along the proposed relocated route will be constructed and ready for rerouting of cables in advance of decommissioning of existing overhead power lines.

Similarly, connections to the existing gas and telecommunications networks will be coordinated with the relevant utility provider and carried out by approved contractors.

A GPR utility survey and slit trench investigations are to be carried out as required by the contractor in advance of commencing works along Clonminch Road to confirm the location of existing power, gas and telecommunication infrastructure.

Reinstatement of any excavations, trenches etc. relating to the provision of electrical, gas and telecommunications connections is to be carried out in accordance with the relevant utility provider's requirements.

Implementation of mitigation measures outlined in Chapter 11 of this EIAR and the Preliminary Construction Management Plan will ensure that the potential impacts of the proposed development on site services do not occur during the construction phase.

1.7.9 Material Assets – Waste Management (Chapter 12)

AWN Consulting Ltd. carried out an assessment of the potential impacts associated with waste management during the construction and operational phases of the proposed development. The receiving environment is largely defined by Offaly County Council as the local authority responsible for setting and administering waste management activities in the area through regional and development zone specific policies and regulations.

During the demolition and construction phases, typical C&D waste materials will be generated which will be source segregated on-site into appropriate skips/containers, where practical and removed from site by suitably permitted waste contractors to authorised waste facilities. Where possible, materials will be reused on-site to minimise raw material consumption. Source segregation of waste materials will improve the re-use opportunities of recyclable materials off-site. Construction of foundations, facilitation of site preparation works and the installation of underground services will require the excavation of c. 51,000m³ topsoil and soil. It is anticipated that all of the excavated material will be reused onsite for use as non-structural fill and landscaping. Should any excavated material need to be removed offsite, this material will be taken for offsite reuse, recovery, recycling and/or disposal.

A carefully planned approach to waste management and adherence to the site-specific Construction and Demolition Waste Management Plan (Appendix 12.1) during the construction phase will ensure that the effect on the environment will be **short-term**, **neutral** and **imperceptible**.

During the operation phase, waste will be generated from the residential and commercial tenants. Dedicated communal waste storage areas have been allocated throughout the development for residents in the apartment blocks and commercial units with housing units having their own individual waste storage areas in their units. The residential and commercial waste storage areas have been appropriately sized to accommodate the estimated waste arisings in the apartments and the commercial units respectively. The waste storage areas have been allocated to ensure a convenient and efficient management strategy with source segregation a priority. Waste will be collected from the designated waste collection areas by permitted waste contractors and removed off-site for re-use, recycling, recovery and/or disposal.

An Operational Waste Management Plan has been prepared which provides a strategy for segregation (at source), storage and collection of wastes generated within the development during the operational phase including dry mixed recyclables, organic waste, mixed non-recyclable waste and glass as well as providing a strategy for management of waste batteries, WEEE, printer/toner cartridges, chemicals, textiles, waste cooking oil and furniture (Appendix 12.2). The Plan complies with all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of the development.

Provided the mitigation measures outlined in Chapter 12 are implemented and a high rate of reuse, recycling and recovery is achieved, the predicted effect of the operational phase on the environment will be **long-term**, **neutral** and **imperceptible**.

1.7.10 Cultural Heritage including Archaeology (Chapter 13)

An archaeological, architectural and cultural heritage study was undertaken at the subject site in order to identify and record the location, nature and dimensions of any archaeological or cultural heritage features, fabric or artefacts that may be impacted by the proposed works. This assessment included a desk-based study and site walkover survey. The desktop study collated data from the Record of Monuments and Places (RMP), the Topographical files of the National Museum of Ireland (NMI), cartographic sources, aerial photography, documentary research and relevant on-line databases. In addition to the desktop assessment and site inspection, geophysical survey and 2 separate phases of test excavation assisted in providing an understanding of the receiving archaeological and cultural heritage environment and potential. The following factors were identified in the course of assessment:

- The site is large in scale occupying an area of roughly 14.3ha gross site area, 10.07ha nett development area.
- There are no recorded monuments situated within the site boundaries.

- No new potential archaeological sites were noted on examination of aerial photo and cartographic sources within the subject site.
- A potential enclosure was identified c. 250m to the east of the subject site.
- There are no Protected Structures within or adjacent to the site.
- No archaeological excavations have been undertaken previously within the subject site.
- Previous excavations in the wider landscape have uncovered small-scale isolated archaeological sites at Clonminch 1 & Cloncollog 2.
- Numerous anomalies of archaeological potential were recorded in the course of geophysical survey, including a probable *fulacht fia* at the northwest of the subject site.
- The remains of a ploughed out *fulacht fia* were recorded in the course of Phase I Test Excavation at the northwest of the subject site.
- The remains of a second ploughed out *fulacht fia* were recorded in the course of Phase II Test
 Excavation at the northeast of the subject site.

Potential Impacts

One archaeological site (*Fulacht Fia 1*) has been recorded in the northwest portion of the site. A second archaeological site (*Fulacht Fia 2*) has been recorded in the northeast portion of the site. The potential impact on archaeological remains from future development works would be direct, negative and permanent. This potential impact should be mitigated by full archaeological excavation of both *fulachtaí fia* under license to the Department of Culture Heritage and the Gaeltacht (DCHG) in consultation with the NMI.

Mitigation

Mitigation measures shall be undertaken as directed by the DCHG in compliance with national policy guidelines and statutory provisions for the protection of archaeology and cultural heritage.

RECOMMENDED MITIGATION MEASURE 1:

Should development proceed at this location, it is recommended that the 2 *fulachtaí fia* identified in the course of advance archaeological assessment be fully recorded and excavated under licence to the Department of Culture Heritage and the Gaeltacht.

RECOMMENDED MITIGATION MEASURE 2:

Should development proceed at this location, it is recommended that groundworks across the remainder of the site be monitored by a suitably qualified archaeologist.

Should archaeological sites or features be recorded during monitoring of groundworks as per Recommended Mitigation Measure 2, further discussion/consultation with the DCHG will be sought to ascertain the appropriate treatment (i.e. preservation by record/preservation in situ) of any additional archaeological remains.

1.7.11 Landscape (Chapter 14)

Baseline Landscape and Visual Setting

The Application Site extends to 14.3 hectares (35.33 acres) and is located in south-east of Tullamore on lands to the east of the Clonminch Road and north of the N52 Tullamore Bypass.

It comprises intensely managed arable lands and, in broad terms, the landscape value and quality has an average or "everyday" character based on its undesignated status in landscape or amenity terms. The rolling landscape, while attractive in its own right does not possess many notable features other than hedgerows and trees which would not be considered unique or rare in this part of Ireland. A Tree Survey (October 2019) noted the majority of trees are self-seeded and categorised as low quality in conservation, amenity and arboriculture terms.

Between the site and the town centre, the area is characterised by extensive housing estates with retail and commercial development aligning the main roads leading from the town centre. Where the urban edge meets the rural landscape, there are often formal and abrupt edges with the adjacent fields being subject to differing management regimes.

Both the *Tullamore Town and Environs Development Plan* and the *Offaly County Development Plan* identify the Application Site and the majority of lands in this part of Tullamore as being "low" landscape sensitivity.

There are no promoted tourism amenities, sites, routes or attractions in close proximity to the Application Site. The nearest sites or more sensitive landscapes are at the Charleville demesne or within the town centre and associated with the Grand Canal and are too distant or there to be a landscape or visual effects. The site is privately owned and there is no public access or rights or way.

The site has a limited visual envelope due to a combination built-up townscape towards Tullamore and the low rolling topography and accumulation of mature hedgerows in this area. Longer views are afforded from elevated or exposed areas on the N52 but these are of a distant or partial nature and, in overall terms the Application Site is well concealed from public vantage points. From the majority of areas in south Tullamore, it would be considered that the site has a good ability to absorb changes without significant detriment to landscape or townscape character or visual amenity of this area.

Proposed Development

The proposed development comprises Phase One of the Eastern Node Southern Environs Masterplan which includes for 349 no. residential units, 2no. Neighbourhood Centre buildings, infrastructure – including a new link to Clonminch Road – and landscape works across c.1.6 hectares related to public amenity spaces.

Landscape Design and Strategy

The landscape design considerations focused on provision of public realm areas, open spaces, playgrounds, and major pedestrian routes that would be accessible to all members of the community. The objectives include creation of different landscape treatments including tree lined avenues and building types to create identifiable character zones. This included designs for green infrastructure, parklands, open space and – towards the

Neighbourhood Centre, public realm areas. Playgrounds will be provided to cater for the recreational and educational requirements of children of residents.

The proposal includes for planting 600 no. 'semi-mature' or 'extra-heavy standard' size trees within parkland areas and the central boulevard core to provide an instant impression.

The planning application is accompanied by Landscape Management and Maintenance Plans setting out the objectives for management of external spaces or public realm areas for a 20 year period.

Potential Construction Effects

The nature of groundworks, construction activity, house building and associated infrastructure will mean that the Application Site will be subject to a **Major** alteration rated as **Significant** on account of re-grading and profiling works for a temporary period. While effects will be lessened due to distance, intervening vegetation, built form and topography across neighbouring housing estates, those areas and properties abutting the Application Site lands will experience **Slight to Moderate Adverse** effects during this temporary period.

Due to the short term nature of the construction period and limited visual envelope, these impacts will be acceptable with mitigation measures set in place. This will include hoarding and fences will assist in limiting views from public amenity / open space areas while retained vegetation, peripheral built form and topography ensure any effects during this time to the broader Tullamore area will not be of a significant nature.

Completed Development and Long Term Impacts

The proposed development is regarded as being permanent or long term in landscape and visual terms. While the changes will be rated as **Major** the baseline setting of this housing zoned area is not one of a pristine or sensitive landscape and has a limited visual envelope.

The effects, while noticeable at a local level, will be acceptable on account of the housing layout design and the proposed mitigation measures that include planting to site boundaries and extensive internal open space development that will assist in absorbing it into the south Tullamore landscape setting by the medium term. The magnitude of effects will reduce appreciably over time as the landscape and planting matures and merges the development into the surrounding landscape.

Away from the Application Site, intervening vegetation, built form and topography ensure any effects to the wider Tullamore townscape / landscape will be of a **Minor / Negligible Neutral** nature and are considered not significant.

<u>1.8 Description of the expected significant adverse effects of the project on the environment deriving from</u> <u>the vulnerability of the project to risks of major accidents and/or disasters</u>

A COMAH Land Use Planning Assessment of the proposed development has been undertaken and is included as Appendix 4.1 of this EIAR. Below is summary of the assessment.

AWN Consulting Ltd. was instructed by Steinfort Investments Fund to complete a COMAH Land Use Planning assessment for a proposed residential development in Tullamore, Co. Offaly.

The proposed development falls within the consultation distance of a whiskey distillery and warehouse maturation facility, William Grant & Sons. The distillery is a Lower Tier COMAH establishment and is subject to the provisions of the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, S.I. No. 209 of 2015. The 2015 COMAH Regulations place restrictions on land use planning on the types of development that can take place in the vicinity of COMAH establishments.

The Land Use Planning assessment was completed in accordance with guidance published by the HSA (HSA, 2010). The consequences of the major accident scenarios; warehouse fire, pool fire (bunded and unbunded) and vapour cloud explosions were modelled using PHAST version 8.22 and TNO Effects Version 10.1 modelling software.

Scenario	Consequences	Distance to proposed development (m)	Impacts at proposed development	Frequency
Warehouse Fire	Worst case 78 m to thermal radiation corresponding to the threshold of fatality (4.1 kW/m ²)	490	No expected impact	1E-04 per year
Warehouse Fire	Worst case CO ₂ SLOD not reached	490	No expected impact	1E-04 per year
Bunded Pool Fire	Worst case 79.1 m to thermal radiation corresponding to the threshold of fatality (4.1 kW/m ²)	1,140	No expected impact	1E-03 per year
Unbunded Pool Fire	Worst case 103.1 m to thermal radiation corresponding to the threshold of fatality (4.1 kW/m ²)	1,090	No expected impact	1E-04 per year
VCE	Worst case 29 m to overpressure corresponding to 1 % fatality outdoors	1,140	No expected impact	1E-04 per year

TNO Riskcurves Version 10.1 modelling software was used to model the risk-based land use planning contours for William Grant & Sons distillery. It is concluded that the site individual risk contours do not extend to the proposed residential development.



In conclusion, the major accident scenarios discussed in this report have no expected impact on the proposed residential development.

APPENDIX 1.1

Site Location Map

APPENDIX 1.2

Site Layout Plan