Crown Square Phase II Development at Monivea Road and Joyces Road, Mervue, Galway City (ABP-303961-19)

Environmental Impact Assessment Report Volume I: Non-Technical Summary, Main Body, Environmental Impact Assessment Report

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NON-TECHNICAL SUMMARY

1. Introduction

The Environmental Impact Assessment Report (EIAR) has been prepared by McCarthy Keville O'Sullivan Ltd. (MKO) on behalf of Crown Square Developments Ltd., which intends to apply to Galway City Council for a mixed use development located at the former Crown Equipment site in Mervue, Galway City.

The proposed development site extends to 5.1 ha and is located in the north-east of Galway City in Mervue, at the junction of the Monivea Road and Joyce's Road (also known as Connolly's Avenue).

The applicant, Crown Square Developments Limited (a member of The Rhatigan Group) are the developers of the site. The building contractor JJ Rhatigan & Co. was established in 1952 with the development arm of the group being established in 1994. The development arm has become a key component in the overall success of the group, having successfully delivered a number of similar developments in recent years including, Teleflex (Athlone), Heuston South Quarter (Dublin), the Latin Hall Office Development (Dublin), Radisson Blu Golden Lane (Dublin) and the IDA Business & Technology Park (Athlone). They have also recently made a successful application for the development of a site in Dublin's Ship St. Crown Square Developments Limited have employed an experienced Design Team to ensure that this development will be delivered to meet all the relevant planning, environmental and sustainability requirements.

Need for the Development
There is currently a shortage of residential units available for sale and occupancy in the Galway City area, and in particular the eastern side of the city. The rapidly increasing price of such space is a result of the shortage in supply, and many people and families will soon find themselves unable to afford accommodation in the city. The proposed development will contribute significantly to alleviating the shortage of residential space in Galway and brings into use lands zoned for development.

In addition, the construction industry such as the subject development, make a significant contribution to economic development in Ireland. The recent upturn in the economy and thus the construction industry has led to an increase in demand for high quality residential space in the Galway area, which the proposed development will be able to provide for.

Purpose and Structure of this EIAR
The purpose of the EIAR is to document the current state of the environment in the vicinity of the proposed development site and to quantify the likely significant effects of the proposed development on the environment. The EIAR submitted by the applicant provides the relevant environmental information to enable the Environmental Impact Assessment (EIA) to be carried out by the competent authority.

The information to be contained in the EIAR is prescribed by statutory regulation and informed by various guidelines. The Environmental Protection Agency (EPA) recently published its *'Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'* (EPA, August 2017), which are intended to guide

practitioners during the transition to new Regulations transposing the updated Directive. These draft guidelines have also been used in the compiling of this EIAR.

The EIAR project team comprises a multidisciplinary team of experts with extensive experience in the assessment of similar developments and in their relevant area of expertise. Each chapter of this EIAR has been prepared by a competent expert in the subject matter. The chapters of this EIAR are as follows:

1. Introduction
2. Background to the Proposed Development
3. Description of the Proposed Development
4. Human Beings, Population & Human Health
5. Biodiversity. Flora & Fauna
6. Land, Soils and Geology
7. Hydrology and Hydrogeology
8. Air and Climate
9. Noise and Vibration
10. Landscape and Visual
11. Archaeology & Cultural Heritage
12. Material Assets (including Traffic and Transport)
13. Interactions of the Foregoing

A Natura Impact Statement has also been prepared in line with the requirements of the Habitats Directive, and will be submitted to the Planning Authority as part of the planning application documentation.

2. Background to the Proposed Development

The Background to the Proposed Development chapter presents information on the strategic planning context for the proposed development, the site selection and design process, a description of the proposed development site and its planning history, the assessment of alternatives, scoping and consultation, and the cumulative impact assessment process.

The subject lands are designated 'Commercial/Industrial' (CI with a stated objective 'to provide for enterprise, light industry and commercial uses other than those reserved to the City Centre zone'. The site is also identified as a 'Neighbourhood Centre' in the retail hierarchy of the City. The extant Development Plan includes a specific development objective pertinent to the proposed site, as set out below:

> *'Former Crown Equipment Site zoned CI. The majority of retail floor space to be dedicated for bulky goods retailing and the balance for local retailing needs. Parking shall be kept back from Monivea Road and separated from the Monivea Road by buildings. The design of frontage facing Monivea Road shall be of a high architectural standard'.*

Development permitted under Pl Ref. 06/223/ ABP Ref. PL 61.220893 has previously commenced and substantial works were completed in 2008. Following the onset of the economic recession, development was put on hold and the site is currently hoarded up. An Extension of Duration was granted until the 12th September 2017 which has since expired.

There is extensive foundation construction across the site and three levels (lower basement to ground) of the range of retail buildings proposed along the Monivea

Road complete structurally. This structure extends to approximately 26,800m^2 over ground and two basement slab levels. Rising column elements extend from ground floor slab in this area. Given the extent of this structure, its retention, adaptation and reuse is proposed as a sustainable development.

The existing completed development has contributed to the proposed site layout planning and design. The long range of completed structure along the Monivea Road is proposed to be re-used, most suitably as office. The entire site has been excavated already to lower basement level. This suggests the development of the western part of the site substantially as commercial office, technology and hotel over the previously proposed basement level car-parking. Planning permission has been obtained (Pl Ref 18/363) by Crown Square Developments Ltd. for a ten-year permission for Phase 1 of a mixed-use development located on the site. Galway City Council (GCC) granted planning permission for the proposal on 10th May 2019 subject to 27 no. conditions.

A scoping letter providing details of the application site and the proposed development, was prepared by McCarthy Keville O'Sullivan Ltd. and circulated on 29th November 2018 in relation to this Phase 2 EIAR. Prior to this, a scoping letter for Phase 1 of the development (located on the same site footprint) was circulated on 27th September 2018. These letters were sent to the agencies, NGOs and other relevant parties.

This EIAR also considers the potential for cumulative effects from the proposed development with other key existing, permitted or proposed projects in particular the first Phase of the proposed development as set out below.

3. Description of the Proposed Development

A preliminary masterplan for the entire site has been developed, setting out proposals for buildings, spaces and a movement and land use strategy. The proposed project strategy envisages that the subject lands will be developed in two distinct stages, with two separate planning applications:

- Phase 1: Commercial Offices (Blocks A-E), Hotel and Site Infrastructure, including all basement structures for the entire site
- Phase 2: Strategic Housing Development - Residential, Leisure and Ancillary Uses

The proposed masterplan includes 85,554sq m of gross floor area (above ground) on a stated site area of 5.1 ha ,(51,148 sqm), which equates to a plot ratio of 1.67:1. It is considered that the proposed development will provide for a development of suitable mass and scale which makes a considerable contribution to the civic amenity of this rejuvenating area.

The second phase of development (to which this EIAR applies) comprises a residential scheme with associated commercial, leisure and ancillary uses. The Phase II development will consist of:

1. A residential scheme comprising 288 no. apartments and amenity accommodation with a gross floor area of 32,379 sqm, which will include:
    - Block G (104 no. units); Block H (136 no. units) and Block J (48 no. units).

- 75 no. one-beds (26%); 185 no. two-beds (64.2%); and 28 no. three-bed units (9.7%)
- Ancillary residential amenity areas (1,275 sqm).
- Block G extends to eight-storeys, Block H extends to seven-storeys and Block J extends to five-storeys.
- External balconies are provided on all elevations.

2. A commercial scheme with a cumulative gross floor area of 4,096 sqm, which will include:
    - A neighbourhood facility comprising a restaurant (500 sqm), café (50 sqm), local convenience store (225 sqm), a pharmacy (200 sqm), 5 no. retail/commercial units (797 sqm in total), a crèche (310 sqm)
    - A fitness/leisure facility (1,140 sqm); and
    - A medical centre (655 sqm).
3. Public realm and landscaping works, including pedestrian and cyclist linkages.
4. Vehicular access to the double basement permitted under Pl Ref 18/363 and the allocation of 288 no. car parking spaces located on the lower basement level to service the residential units. Visitor car parking will be provided on the upper basement level and will be managed in accordance with an Operational Management Plan and a Mobility Management Plan.
5. The provision of a dedicated cyclist ramp and 733 no. secure bicycle parking spaces located in the upper basement permitted under Pl Ref 18/36 (comprising 529 no. residential; 144 visitor parking and 60 no. bicycle parking spaces to service the neighbourhood facility).
6. All other associated site development, plant and servicing works.
7. The application will be supported by an Environmental Impact Assessment Report and a Natura Impact Statement.

The IDA Business Park and Mervue Industrial Estate are located to the west/south-west of the site and the Eircom Telecommunications site immediately borders the subject site to the north-east. Medium density residential development is located to the east of the site along the Monivea Road.

Development permitted at the site previously commenced work with substantial excavations and works completed in 2008. Following the onset of the economic recession, development was put on hold and the site was hoarded up since then. Recently, the site has been reactivated for the construction of Phase one of the proposed site masterplan.

The proposed development is the second of two distinct phases for the site. This EIAR deals directly with this second phase, as well as cumulatively assessing the first phase of the site works.

Phase 2 will front the eastern end of the Monivea Road frontage and extend to the northern site boundary over the following basement level completion. This basement structure is included in both the Phase 1 and Phase 2 applications, as it is intrinsically linked to both. Phase 2 is mainly residential apartments. Other complementary and neighbourhood facilities are proposed including a Restaurant, Cafe/Coffee Shop, Convenience Store, Medical Centre, Pharmacy, Other Small Retail/Service. These are proposed at ground/lower ground and first floor levels fronting both Monivea Road and the new Phase 2 public open space.

The site as proposed would be expected to require approximately 3 years to complete from occupation of the site. Activities would include:

- Site Clearance;
- Excavation and Spoil Removal;
- Construction of Substructure;
- Construction of Superstructure; and
- Fitting and finishing.

In general, the hours in which vehicles will arrive and depart will coincide with the expected site working hours of 7.00am to 7.00pm in the evening from Monday to Friday, and 7:00am to 2:00pm on Saturday.

Before completion of the construction phase of the proposed development, landscaping works will be carried out to improve the visual amenity of the site. These landscaping works will follow the layout of the landscape plan provided in the Landscape Master Plan.

Routine inspections of construction activities will be carried out on a daily and weekly basis by the Senior Project Manager, Senior Engineers and Foremen to ensure all controls to prevent environmental impact, relevant to the construction activities taking place at the time, are in place.

4. Population & Human Health

One of the principle concerns in the development process is that people, as individuals or communities, should experience no diminution in their quality of life from the direct or indirect impacts arising from the construction and operation of a development.

Information used in this study was sourced from the Census of Ireland 2011 and 2016, which is the most recent census, the Census of Agriculture 2010 and from the CSO website, www.cso.ie. Census information is divided into Republic of Ireland, CO. Galway and Galway City. The 2016 census data for the Republic of Ireland was consulted as part of the assessment process, and upon comparison with the relevant 2011 data, was found to be consistent. Although, as shown in Chapter 4; between 2011 and 2016 there has been a steep increase of approximately 3000 people, as represented in the census data.

The site of the proposed development is located within the environs of Galway City, where services are generally found throughout the city. There are numerous services found in the area surrounding the site of the proposed development. These include retail services, hospitality/tourism services (hotels, car rental, etc.), medical (doctor' clinics are located in the Terryland Retail Park and the Liosbán Industrial Estate and sporting facilities (Eamonn Deacy park, Galway City Karting, etc). Galway water treatment facility is located approximately two kilometres west of the proposed development site.

The nearest primary school to the boundary of the site of the Proposed Development is Holy Trinity National School, located in Mervue, approximately 800 metres southeast of the proposed development site. The closest secondary school to the proposed site is Galway Community College, which lies approximately 650 metres southwest of the site. The third-level institution of Galway-Mayo Institute of Technology (Cluain Mhuire Campus) is located approximately 1 kilometre southeast of the proposed development site. The National University of Ireland (NUI) Galway main campus is located 2.3 kilometres to the southwest of the site. It is estimated

that approximately 20% of the population of Galway city are students. The majority of amenities and community facilities, including GAA and other sports clubs, youth clubs and recreational areas available in the area are located in areas surrounding the site (i.e. Mervue, Ballybane and Wellpark), as well as in the wider Galway City.

Key tourist attractions within the wider area of Galway City include NUI Galway, a number of theatres, Sports facilities (Eamon Deacy Park, The Sportsground, Galway Racecourse, Pierce Stadium, etc.). The proposed hotel will be a positive effect for tourism in the City.

5. Biodiversity

The Biodiversity, Flora & Fauna chapter has been informed by both a desk study and site visits. Dedicated ecological surveys of the proposed development were undertaken on the 29th of August 2018, 9th of October 2018 and 11 June 2019. Habitats within the site were classified according to guidelines outlined in "A Guide to Habitats in Ireland," (Fossitt, 2000), which classifies habitats based on vegetation present and management history. During the multi-disciplinary ecological walkover surveys, the potential for the study area to support protected birds, mammals, amphibians and additional fauna was assessed.

The site is a brown-field site in an urban area which has recently become an active construction site again. The site has been subject to excavation works and contains a single large building from a previous development. The results of the survey returned no signs of protected or ecologically sensitive habitat. All habitats recorded on-site were determined to be of local importance and of low ecological value in accordance with 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009). The site is dominated by spoil and bare ground (Fossitt: ED2), contains buildings and artificial surfaces (Fossitt: BL3), and supports dry meadows and grassy verges (Fossitt: GS2) around the periphery of the site, as well as a Leyland cypress (Cupressus leylandii) treeline (Fossitt: WL2) along the southern site boundary. This treeline is to be removed as part of the construction of the proposed development. The treeline was also assigned as being of ecologically local importance (lower value) and impacts upon local flora and fauna as a result of the removal of this treeline are not anticipated. No surface watercourses were recorded on-site and any surface water arising on the site will be discharged to the public storm sewer. No third schedule invasive species were recorded on site, nor was any evidence of protected fauna and flora recorded. No impacts upon receptors of ecological significance are anticipated during the operational phase of the proposed development.

Effects upon flora and fauna as a result of removal of the treeline during the construction phase of development were determined to be negative, but short-term in duration, and given that the landscaping plan accompanying this development includes replacement planting which will enhance local biodiversity by providing suitable habitat, residual long-term effects are likely to be positive. Effects upon nationally designated sites as a result of the proposed development are not anticipated, given that impacts on ground and surface water will be prevented, or mitigated where necessary, during the construction and operation of the proposed development. Measures to prevent and mitigate any effect upon groundwater have been detailed in the hydrology chapter of this EIAR. Effects upon European Sites are discussed within the Natura Impact Statement which accompanies this report. The NIS concluded that the proposed development, by itself or in combination with other plans and projects, in light of best scientific knowledge in the field, will not, in view of

the site's conservation objectives, adversely affect the integrity of any European sites. No significant effects upon biodiversity, flora and fauna as a result of the proposed development are anticipated, provided that the proposed development is carried out in compliance with procedures of best practice, and that mitigation is duly applied where necessary.

6. Land, Soils and Geology

The entire site has been excavated to structural formation level and so the soil, subsoil and bedrock at and around the site are currently exposed and easily visible. As it is not proposed to carry out any further significant excavations, further intrusive investigations are not required.

The general topography of the site excluding the excavation is largely flat. Levels vary on Joyce's Rd from 28-29m AOD (above ordnance datum) and rise to approximately 30.5m AOD on Monivea Road at the eastern extremity of the site. The excavated site area has been reduced to formation level for the original basement which was at an FFL of 23.3m AOD.

The overall local topography outside the excavated site generally slopes from northeast to southwest with areas to the north and south of the site sloping to the north and south respectively. The dominant land use on the bordering land is residential housing to the south, and commercial and industrial to the east, west and north.

The site is underlain by the Burren Formation which, at the proposed development site, comprises Visean Limestones (undifferentiated). The limestones are classified by the GSI as a Regionally Important Aquifer – Karstified (conduit) (Rkc). The aquifer in this area is shown as extremely vulnerable, with an area of rock at surface to the northeastern end of the site.

There are no known areas of soil or ground contamination on the site. During the site walkovers, no areas of particular contamination concern were identified. There are no recorded Geological Heritage sites within the proposed development area.

An assessment of the construction and operational phases of the development have been completed, along with a cumulative assessment for the development. An assessment of the potential health effects in relation to soils and geology has also been undertaken. Based on the above, and with implementation of the outlined mitigation measures, no significant impacts on human health and the soils and geology environment are predicted to occur.

7. Hydrology and Hydrogeology

The hydrology and hydrogeology aspects of the site has been characterised using desk study information and detailed site walkover completed in September and October 2018. Any potential sources of flooding, likely routes of floodwaters and key features of the site were assessed to inform a Site Specific Flood Risk Assessment completed for the development.

The proposed development site does not contain field drains or natural watercourses and rainfall that falls on the site percolates through the soils and exposed bedrock to ground. As is the case for any large excavation, after periods of heavy rainfall surface water ponds on site but ultimately percolates to ground.

The Terryland/Sandy River is located approximately 750m North West of the Site and flows in from the River Corrib and discharges to ground. There are no direct discharges to the Terryland/Sandy River from the proposed project.

A detailed flood risk assessment has been completed and there are no recurring flood incidents within the study area boundary according to the OPW's flood mapping nor any significant flood risk associated with the site which is slightly elevated when compared to its surrounds. Mitigation measures are proposed to deal with any potential flooding of the constructed development.

The bedrock, which underlie the site are classified as a Regionally Important Aquifer (Rkc). The vulnerability of the aquifer underlying the site is classified as predominately "Extreme". The site has been excavated and therefore there is no protection afforded to it by soils and subsoils.

Due to the relatively high transmissivity nature of the limestone bedrock aquifer underlying the site and the highly karstified nature of the bedrock, there is a higher potential for groundwater dispersion and movement within the aquifer and aquifer vulnerability has been considered in the mitigation measures for the site.

There are no groundwater protection zones mapped within the proposed development site or study area. A borehole well (GSI database to accuracy of 2km) for the Ballinfoyle Group Scheme water supply is located to the northwest of the site. There are two other mapped private well locations (GSI database to accuracy of 100m) within 1km, which were obtained from the GSI well database (www.gsi.ie).

The primary risk to groundwater at the site would be from hydrocarbon spillage and leakages but this is not unique and applies to any construction site. These are common potential impacts on all construction sites (such as road works and industrial sites) and well established and proven mitigation measures will be employed onsite. All potential contamination sources are to be carefully managed at the site during the construction and operational phases of the development and mitigation measures are proposed below to deal with these potential minor impacts.

As the basement is already excavated only minimal water / rainwater will need to be managed on site. It is planned to let rainwater soak naturally back into the ground in areas not being worked on. In zones under construction it is proposed to run any excess water through a settlement tank / silt trap and pump clean water into the combined sewer at an agreed discharge rate during the construction phase (subject to Galway City Council agreement).

Surface water drainage measures, pollution control and other preventative measures have been incorporated into the project design to minimise significant adverse impacts on water quality and downstream designated sites.

Overall the proposal presents no significant potential for impacts to surface water and groundwater quality provided the proposed mitigation measures are implemented.

8. Air and Climate

Due to the nature of the development, the general character of the surrounding environment and publicly available information on air quality, air quality sampling, was deemed to be unnecessary for the EIAR.

The Environmental Protection Agency (EPA) has designated four Air Quality Zones for Ireland:

- Zone A: Dublin City and environs
- Zone B: Cork City and environs
- Zone C: 16 urban areas with population greater than 15,000
- Zone D: Remainder of the country.

These zones were defined to meet the criteria for air quality monitoring, assessment and management described in the Framework Directive and Daughter Directives. The site of the proposed development lies within Zone C, which represents urban areas with a population of greater than 15,000.

The ambient air quality monitoring carried out closest to the subject site is at Bohermore in Galway City. This monitoring location also lies within Zone C. The air quality in the vicinity of the proposed development site is likely to be quite similar in nature and composition. For the purposes of this assessment, air quality monitoring data from the station at Bohermore in Galway City is used.

Dust is a common emission from construction sites and requires management. As limited excavation works are proposed, the potential for dust generation is limited however mitigation measures have been developed to reduce any potential dust levels.

9. Noise and Vibration

Land use on the northern and eastern sides of the site is distinctly commercial in character, extending north and east towards the Tuam Road, the N6, and beyond. The area to the west of the site, on the opposite side of Joyce Road, is commercial and industrial, and a number of facilities here lie spread across several commercial estates. The area to the south, on the opposite side of Monivea Road, is urban residential in character, consisting of medium density housing accessed by a network of roadways. Some of the dwellings here face the site. The proposed development site does not directly border any residential plots.

The soundscape in the vicinity of receptors surrounding the proposed development site was characterized through an unattended noise survey undertaken in September 2018. Monitoring was carried out at three stations. As proposed construction activities will be undertaken during daytime only, the survey was confined to daytime hours. Recorded data indicate that local and distant road traffic dominates the soundscape.

The proposed overall development will consist of offices, a hotel with conference/banqueting facilities, a fitness and leisure centre, several small commercial units, residential accommodation units, and car parking. It is worth noting here, at the outset, that the closest receptors to most onsite sources will consist of the proposed onsite residential units, hotel bedrooms and offices. Onsite noise sources will be controlled so as to minimize noise impacts at these. This in turn will benefit receptors offsite, outside the boundaries.

Predictive modeling indicates that noise levels at the nearest receptors attributable to construction operations will not exceed acceptable noise limits and levels at the

nearby office buildings will not exceed levels appropriate for them, subject to mitigation requirements identified in the report.

10. Landscape and Visual

The Landscape & Visual assessment is based on desk study of the study area, field surveys of the site and surrounds and the use of photographs and photomontages from representative viewpoints of the site. The landscape of the area is described in terms of its existing character, which includes a description of the physical and visual character, landscape values and the landscape's sensitivity to change. The potential impacts in both landscape and visual terms are then assessed, including cumulative impact.

Excluding the excavation work previously carried out on site, the topography of the study area is predominantly flat with a gentle slope falling towards the west of the site. The site is generally dominated by scrub and bare ground. Most of the vegetation present on site are weeds and grasses that have flourished on rubble and rock piles. A row of large leylandii trees can be seen along the Monivea Road bordering the site. The site has only recently been reactivated and represents a brownfield site, as the site has been left in a partially constructed state since previous development on site ceased in c 2008. Development had significantly advanced with evidence of site works clearly visible and is having a negative landscape and visual effect locally in its current state.

Land-use in the wider landscape is a mix of commercial and residential. The townland of Mervue runs from south east to south west of the site and is predominately residential. Industrial elements that surround the site include, Mervue Buisness Park to the south with Thermo King, a manufacturing facility located south west of the site.

As part of the assessment, 12 viewpoint photos were taken to so as to represent a variety of views within 2 kilometres of the site. The choice of viewpoint locations is influenced by both the views available and the type of viewer. These include viewpoint locations from or close to local settlements, such as VPs 3, 8 and 4 as well as locations on regional and local roads at varying distances from the site. Viewpoint 9 was chosen as it is a designated protected view. Care was taken to provide a range of views form various elevations, distances and orientations.

The Landscape Master Plan, prepared by Cunnane Stratton Reynolds, has been well designed and will provide an attractive setting for the mixed-use development. Special attention has been given to the Monivea Road and Joyce's Road to tie in the proposed development with the existing vegetation along this road and in the surrounding area. It is proposed that a double row of semi-mature street tree planting be used to screen views of the new buildings and visually soften the high-quality architectural design in a complimentary manner. This will provide significant screening to this side of the development and soften the transition from the urban character of the mixed-use development.

Landscape Effects

The landscape effects of the proposed development are described in relation to both effects on the wider landscape character and effects on the landscape of the site. The site is not of high landscape value due to its previous development history. In Viewpoint 3 boundary trees are being replaced to strengthen the character of the existing vegetation. Changes to the landscape will be minor in Viewpoints 4 and 2.

Due to the landscape degradation on site the proposed development is seen as improving the landscape. Due to the close proximity of Viewpoint 11 to the development, the effects are amplified, however the landscape masterplan proposed by Cunnane Stratton Reynolds softens the development.

The overall likely landscape effect of the proposed development is considered to be generally positive when compared to the existing situation.

Visual Effects

The site of the proposed development is in most places well screened from the surrounding areas in general. While the proposed development will be visible from some views in the immediate vicinity, particularly from the north, as seen in Viewpoint 11, it is not visible over a significant area. The subject site will be visible intermittently from roadways to the south east. Extensive planting of trees and shrubs as part of the proposed landscape masterplan will help to visually integrate and partially screen the proposed buildings. The views will be slightly modified, but on a localised level.

Overall the visual impact is deemed moderate which means it alters the character of the environment in a manner consistent with existing and emerging trends. The proposed development is in keeping with its zoning status and the emerging trends of development proposed in the vicinity and can be considered positive when compared to the existing situation.

11.Archaeological & Cultural Heritage

There are no protected structures on or near the site.

The Record of Protected Structures (RPS) for Galway City (CGDP 2017-2023), lists three protected structures in Ballybaan Beg townland. None are within or in the immediate vicinity of the proposed development site. The closest protected structure (1061) is 240m from the proposed development site.

The Record of Monuments and Places for County Galway (1997) (Figure 11.2) and www.archaeology.ie (Figure 11.3) lists the following thirteen (13) monuments which are located within 1km of the development area.

The proposed development will have no adverse impact on the Cultural Heritage of the wider area given the distance to the nearest recorded monuments and protected structures.

There will be no direct impact of the proposed development on the archaeological heritage as ground levels have already been reduced during previous phases of work. The significance of the direct impact of the proposed development on the architectural heritage is rated as imperceptible, as no protected structures are located within or in the immediate vicinity of the proposed development site.

12.Material Assets

The proposed development site is the old Crown Equipment factory located at Crown Square, Joyce's Road, Galway City. The Crown factory has been demolished and a previously permitted development has been partially constructed c.2008 as shown in Figure 2.1 of this EIAR. This previously permitted development predicted the volume of generated traffic movements as 525 vehicle movements during the AM peak and

874 movements during the PM peak times. All this traffic was planned to enter and exit along Joyce's Road in accordance with the previously permitted development.

As you travel away from the site, the traffic generated as a result of the new development, becomes more dispersed and the impact more diluted. The provision of two access points for the proposed development results in a dispersal of traffic onto the R336 Tuam Road and the R339 Monivea Road. As a result, this has formed the main area where the study is concentrated on to determine what future impact the development will have on the roads networks. The R336 and the R339 link to the N6 dual carriageway and N83 single carriageway National Roads.

The N6 and N83 are good quality roads and within the urban area generally have a speed limit of 50 kph.

Proposed Development

The proposed development is suitably located close to a number of amenities located in Galway City including, schools, shops, sports facilities etc. The majority of these amenities are within a reasonable walk of the proposed development. The area also offers a variety of public transport options with the nearest bus stop adjacent to the site.

It should be noted that if the construction of the proposed N6 Galway City Outer Ring Road proceeds and the predicted reduction in traffic volumes, on the existing N6, occur then as a result of the proposed development there will be an imperceptible impact.

Mitigation Measures

The proposed development has integrated a number of measures in line with the relevant standards and guidelines, such as DMURS 2013 and the National cycle Manual, which promotes the use of sustainable travel to and from the site.

The Road Safety Audit carried out for the proposed development during the planning stage considered various aspects such as, junction design, provision for pedestrians, provisions for cyclists and road signage, marking and lighting. Recommendations noted from the independent company undertaking the road safety audit, CST, have been taken into account and the concerns raised have either been designed out or will be considered and suitable measures put in place during the detailed design stage.

13.Interaction of the Foregoing

The preceding Chapters 4 to 12 of this EIAR identify the potential environmental impacts that may have occur as a result of the proposed development in terms of Population and Human Health, Biodiversity, Flora and Fauna, Land, Geology and Soils, Hydrology and Hydrogeology, Air and Climate, Noise and Vibration, Landscape and Visual, Archaeological and Cultural Heritage and Material Assets. All of the potential significant effects of the proposed development and the measures proposed to mitigate them have been outlined in the preceding sections of this report. However, for any development with the potential for significant environmental effects there is also the potential for interaction amongst these potential significant effects. The result of interactive effects may exacerbate the magnitude of the effects or ameliorate them, or have a neutral effect.

Interactions have been identified between effects on Population and Human Health and effects on Noise and Vibration, Air and Climate, Hydrology and Hydrogeology. Interactions have been identified between effects on Biodiversity, Flora and Fauna with effects on Soils and Geology, Hydrology and Hydrogeology, Noise and Vibration. Interactions have been identified between effects on Soils and Geology with effects on Hydrology and Hydrogeology. Interactions have been identified between effects on Air and Climate with effects on Material Assets.

Where any potential interactive effects have been identified, appropriate mitigation is included in the relevant sections (Sections 4-12) of the EIAR.

In general, there are no significant negative effects associated with the proposed development or potential interactions. The development has been designed to ensure it is in keeping with its surrounds, has limited potential for environmental emissions and will have a generally positive effect for the local community and. Galway City.