12 MATERIAL ASSETS

12.1 Traffic and Transport

12.1.1 Introduction

12.1.1.1 Purpose of Section

The purpose of this Traffic and Transport EIAR Section is to assess the traffic impact of the proposed mixed-use development on the surrounding road network at Crown Square, Galway City.

This section is written as a concise summary of the Traffic and Transport Assessment, included as Appendix 12-1 of this EIAR. Rather than repeat the detailed traffic assessments carried out within this Traffic and Transport Assessment, it is referred to throughout this chapter, with the impact assessment findings discussed below.

12.1.1.2 Statement of Authority

This EIAR Section was written by Ray Owen of PUNCH Consulting Engineers, who also assisted in the preparation of the Traffic and Transport Assessment. PUNCH Consulting Engineers are in operation for over 40 years and has carried out numerous Traffic and Transportation Assessments (TTA's) for various residential, commercial, business and retail developments. PUNCH has also drafted various Traffic Chapters for EIAR's. The drafting of TTAs and Traffic Chapters involve the followings tasks:

- Liaising with local authorities, TII, clients and other key stakeholders,
- Analysis of the suitability of construction routes,
- Design and analysis of access points to all types of developments,
- Access and site layout arrangements using AutoTRACK, swept path analysis software,
- Junction analysis on priority and signalised junctions

12.1.2 Receiving Environment

12.1.2.1 Location and network summary

The proposed development site is the old Crown Equipment factory located at Crown Square, Joyce's Road, Galway City. The former Crown Equipment site at Mervue occupies an area of 5.12 Hectares or 12.65 acres with road frontage to the Monivea and Joyce's Roads. 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.

Phase 1 of the new development will comprise of the construction of five office blocks, four of which are located on the footprint of the previously constructed basement carparks, and a standalone hotel building. Also the construction of a two storey underground car park that can be accessed from both Joyce's Road and

Monivea Road. The building development is also accessed by pedestrians from the new central public space at ground level.

Phase 2 of the new development (to which this EIAR relates) is described in detail in Chapter 3 of this EIAR, but includes residential blocks, commercial/leisure facilities, a two storey underground car park and associated infrastructure, which will utilise the above-mentioned access points off Joyce's Road and Monivea Road.

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.

12.1.3 Scoping

An Initial scoping meeting was held with Galway County Council Roads and Traffic Department on 14th August 2018. During the meeting it was advised that a Traffic and Transportation Assessment; a Mobility Management Plan Report and a Stage 1 Road Safety Audit would be required as part of the planning application documents. It was agreed that one Traffic and Transportation Assessment; one Mobility Management Plan Report and one Stage 1 Road Safety Audit would be required to deal with both Phase 1 and Phase 2 of the development. The number and location of junctions was discussed and agreed as:

i. the junction of Joyce's road and Tuam Road and the provision of new traffic lights
ii. the upgrading of the traffic lights at the junction of Joyce's Road / Well Park Road / Monivea Road / Connolly Avenue
iii. the development site access onto Joyce's Road
iv. the development site access onto Monivea Road

On 17th October 2018, TII advised that they required an analysis of the junction between the N6 and the R336 Tuam Road.

12.1.4 Road Safety Audit

A Road Safety Audit has been carried out by CST Consulting Engineers independently from the design team on the proposed development. Some refinements of the site external road layout have been carried out by the design team on the back of liaison and outcomes of the Road Safety Audit. As a result, the external road layout provides an external roads network adjacent to the development which incorporates measures (such as road markings and surface materials to differentiate pedestrian, cyclist and vehicle routes etc.) that ultimately provide a higher level of safety for the pedestrian, cyclist and the driver without comprising the overall quality of the development.

Please refer to the CST's Road Safety Audit included as Appendix 12-2 for further details.

12.1.5 Mobility Management Plan

A Mobility Management Plan has been produced for the proposed development. This is included as Appendix 12-3 of this EIAR

12.1.6 Proposed Development

12.1.6.1 Trip generation of Proposed Development

PUNCH Consulting Engineers have procured Trip Rate Information Computer System (TRICS) data for similar sized developments in order to inform the trip rate associated with such a development. Details of the TRICS data utilised are included in Appendix C of the Traffic and Transport Assessment, which is itself included as Appendix 12-1 of this EIAR.

Table 12.1 below details the associated generated traffic for the AM and PM peak hours.

Table 12.1 Traffic Generation

Landuse	Number of Trips			
	AM Arrivals	AM Departures	PM Arrivals	PM Departures
Office	363	49	43	297
Hotel	19	37	23	21
Apartments	11	39	22	27
Leisure Centre	15	16	10	15
Medical Centre	11	4	19	20
TOTAL	**419**	**145**	**126**	**379**

The above table demonstrates that a total of 564 trip movements in the AM peak and a total of 505 trip movements in the PM peak are expected to result from the proposed development.

12.1.7 Existing Traffic Flows and Traffic Impact of Proposed Development

The following traffic counts were used to gain an understanding of the traffic flows on the road network within the vicinity of Crown Square:

- Existing 7-day 24-hour classified vehicle turning count at the junction of Joyce's Road and Tuam Road.
- Existing 7-day 24-hour classified vehicle turning count at the junction of the N6 and Tuam Road.
- Additional new 1-day 24-hour classified vehicle turning count at the junction of Joyce's Road and Monivea Road.
- An additional 7-day Automatic Traffic Counter Classified vehicle count along Monivea Road.

We have used a previous traffic count survey carried out at the junction of Joyce's Road and Tuam Road. This was agreed with GCC at the scoping meeting. The counts

were undertaken by Innovative Data Solutions (IDASO) on Wednesday 29th November 2017 for a 12-hour period between the hours of 7:00am and 7:00pm. The surveys found that the mean morning peak hour traffic flow occurred between 07:45am and 08:45am. The evening peak was found to be relatively flat between the hours 12:00pm and 6:00pm with the flows peaking between 2:30pm and 3:30pm.

The traffic surveys found that the mean morning peak hour traffic flow at the junction of the N6 Bothar na dTreabh junction with the R336 Tuam Road and the N83 Tuam Road occurred between 08:00am and 09:00am. The evening peak occurred between 4:15pm and 5:15pm.

A new manual classified traffic turning count survey was carried out at the traffic signal controlled cross roads junction of Monivea Road, Connolly Avenue, Wellpark Road and Joyce's Road. The counts were undertaken by Nationwide Data Collection (NDC) on Tuesday 4th September 2018 for a 24-hour period. The surveys found that the mean morning peak hour traffic flow occurred between 08:15am and 09:15am and the evening peak hour occurred between 4:00pm and 5:00pm.

The results of the survey have been reproduced in full as Appendix A to the Traffic and Transportation Assessment report which is included as Appendix 12-1 of this EIAR.

12.1.8 Likely and Significant Effects and Associated Mitigation Measures

12.1.8.1 Construction Phase

Construction traffic travelling to the proposed development site at Joyce's Road, Galway City will use initially use the existing entrance located off Joyce's Road. The new Monivea Road entrance will assist to serve the site for construction access to Phase 1 and Phase 2. This approach will assist the health and safety of the construction site during the various construction phases.

The increase in traffic volumes as a result of construction vehicles visiting the site is not considered to be excessive and will be spread out over the duration of the construction phases of the development. Due to the designated access points off the existing Joyce's Road and Monivea Road, allowing delivery vehicles to pull off onto the site, there will be no significant disruption on the traffic flows on Joyce's Road or Monivea Road as a result of the construction of the development. It is recommended that all deliveries are provided with instructions/directions on accessing the site from Joyce's Road and Monivea Road. Overall there will be a short-term not significant negative impact to local traffic during the construction phase.

12.1.8.1.1 Mitigation measures during the construction phase

As with any construction project, the contractor will be obliged to prepare a comprehensive traffic management plan for the construction phase. The purpose of such a plan is to outline the measures to manage the expected construction traffic activity during the construction period. In the interim, however, this section will provide a preliminary overview of the likely volume and routing of construction vehicles, based on a most likely scenario of construction.

The site as proposed would be expected to require approximately 3 years to complete from commencement of works. Parking for site operatives will be a requirement throughout the contract. It would be expected that a site of this size would generate a requirement for in the region of 300 site operatives during the peak period of

construction, and would lead to a parking requirement for up to about 100 vehicles. This could be accommodated within the curtilage of the site.

It is assumed that most construction traffic approaching the site will travel via the R336 Tuam Road and R339 Monivea Road. Again, the Traffic Management Plan for the construction stage would identify haulage routes and restrictions as appropriate in discussion with the Local Authority.

There will also be a requirement for comprehensive measures as part of the construction management, such as:

- Temporary warning signs;
- Banksmen controlling access and egress from the site;
- All marshalling areas and site offices will be contained within the site boundary and will therefore have little impact on external roads;
- Wheel washers/judder bars to clean off vehicles exiting the site during spoil removal;
- All loads to be properly stowed and secured with a tarpaulin, where appropriate;
- Routine sweeping/cleaning of the road and footpaths in front of the site;
- No uncontrolled runoff to the public road from dewatering/pumping carried out during construction activity.
- Hoarding will be provided along the site frontage to protect pedestrians using the footpaths.

Any increase in volumes on the surrounding highway network as a result of the proposed development's construction traffic will likely have a short-term insignificant impact.

12.1.8.1.2 Residual Impact

Overall there will be a short-term not significant negative impact to local traffic during the construction phase.

12.1.8.1.3 Significance of Effects

Based on the assessment above there will be no significant effects.

12.1.8.2 Operational Phase

Access to the proposed development is to be facilitated via the new junctions access locations and improvement to the existing road infrastructure proposed as part of the project. This includes the provision of new traffic lights at junction of Joyce's road and Tuam Road; the upgrading of the traffic lights at the junction of Joyce's Road / Well Park Road / Monivea Road / Connolly Avenue; the provision of cycle lanes and bus lanes along Joyce's Road and Monivea Road and the provision of set down areas and bus stop. TRICS data for similar sized developments were obtained in order to inform the trip rate associated with such a development. It is anticipated that 564 trip movements are expected during the AM peak period and 505 movements during the PM peak period. Details of the TRICS data utilised are included in Appendix C of the Traffic and Transport Statement, which is itself included as Appendix 12-1 of this EIAR. Overall there will be a long-term slight impact to local traffic.

12.1.8.2.1 Mitigation measures during the operational phase

As population grows throughout Ireland and in particular, in popular towns like Galway City, a continued increase in traffic volumes is not sustainable. As a result, an

ever-increasing approach by designers and planners to providing sustainable commuting alternatives is required. The use of public transport and promotion of walking and cycling will ultimately increase the overall quality of life for the people living in these fast paced, busy towns and villages located within commuter belts.

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 site allowed the design team to address any concerns initially flagged in the Road Safety Audit. A continued and collaborative approach with the road safety auditors meant that a desirable and safe external road layout could be achieved without negatively impacting the overall quality of the development.

The use of the private car will still be maintained as a primary mode of transport for a number of the visitors, staff and residents in the development. Trip generations to and from the proposed development are 564 in the morning peak and 505 in the evening peak as noted above. The external roads and junctions on the development have been designed in accordance with the DMURS manual. Liaison was sought with Galway City Council Roads & Traffic Department in relation to the roads and traffic.

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.

Mitigation measures proposed during the operational stage are as follows;

- Provision of two access points to distribute development traffic onto the R336 Tuam Road and the R339 Monivea road;
- Provision of suitable road markings and road traffic signs in accordance with the Traffic Signs Manual.
- Provision of cycle lanes and bus lanes along Joyce's Road and Monivea Road
- Provision of traffic lights at the junction of Joyce's Road and Tuam Road. This will include a pedestrian crossing facility and improve safety for right turning vehicles.
- Upgrading of the existing traffic signals and junction layout at Joyce's road/Monivea Road/Connolly Avenue/Well Park Road
- Provision of a lay-by type bus stop on Monivea Road
- Provision of drop off points on Joyce's Road and Monivea Road to preclude vehicles stopping on the carriageway.

12.1.8.2.2 Residual Impact

There is an overall reduction in traffic movement when the currently proposed development is compared with the previously consented development. The volumes of traffic generated from the currently proposed development will have a long-term slight negative effect on the surrounding roads and highway network traffic volumes and can be considered within the norms for urban developments.

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.

12.1.8.2.3 Significance of Effects

Based on the assessment above there will be no significant effects.

12.1.8.3 Cumulative Assessment

The projects referred to in Section 2.5.2 of this EIAR have been included in this cumulative impact assessment. Based on these projects, some potential cumulative impacts are discussed below.

The planning application for the N6 Galway City Ring Road (N6 GCRR) has been finalised and is believed to have been submitted to An Bord Pleanála following government approval. The N6 GCRR is a key component of the Galway Transport Strategy (GTS) which realises Galway City and County Councils' vision of all elements of transport working together to achieve an integrated sustainable transport solution. This new road infrastructure was designed to remove through traffic from the N6 and will therefore facilitate access to the subject development. Based on the N6GCRR Route Selection Report Volume 3A Table 7.5.1 and Fig 7.5.1 the predicted volume of traffic, in 2034, on the N6 either side of the junction with the R336 Tuam road will reduce very significantly once the N6 GCRR is constructed.

In the short term, there will be a slight increase in traffic on the R336 and R339 and the junction of the R336 Tuam Road with the N6. However, with the combination of the car reduction measures such as cycle lanes and bus lanes and as they become widely used, the volumes of traffic for the R336 and R339 generated from the proposed development will have a minimal effect on the overall traffic volumes. If the reduction in traffic on the N6 is reduced by the amount predicted by the proposed N6GCRR, this will result in a long term imperceptible cumulative impact on local traffic.

The provision of traffic signals at the junction of Joyce's Road and Tuam Road that include a pedestrian phase will have a long-term significant positive impact both on pedestrian safety and for right turning traffic.

12.2 Water and Other Services

12.2.1 Statement of Authority

This section of the EIAR has been prepared by John Staunton and reviewed by Michael Watson, both in MKO. John Staunton is a Project Environmental Scientist and Michael Watson is a Project Director with MKO; with over 9 and 17 years of experience in the environmental sector respectively. Their environmental experiences involves report writing of Environmental Reports (ER), Environmental Impact Statements/Environmental Impact Assessment Reports (EIS/EIAR) & Strategic Environmental Assessments (SEA) as well as project management of a variety of small and large scale jobs, including residential and commercial development projects.

12.2.2 Consultation

The relevant national and regional authorities and bodies listed in Section 2.4 were consulted to identify any potential impact on material assets. Acknowledgements were received from ESB Networks and the National Transport Authority, but no comments were made on the development. Some comments were received from Transport Infrastructure Ireland and the Department of Culture, Heritage and the Gaeltacht. The scoping responses are discussed in further detail in Section 2.4.2 of this EIAR.

12.2.3 Construction Methodology

The construction methodology detailed in Chapter 3 of this EIAR describes the manner in which the proposed development will be constructed, including any excavations and installation of services. Prior to works, the area where excavations are planned will be surveyed and all existing services will be identified. All relevant bodies i.e. ESB, Bord Gáis, Eir, Galway County Council etc. will be contacted and all drawings for all existing services sought.

Any underground services encountered during the works will be surveyed for level and where possible will be left in place. If there is a requirement to move the service, then the appropriate body (ESB, Gas Networks Ireland, etc.) will be contacted, and the appropriate procedure put in place. Back fill around any utility services will be with dead sand/pea shingle where appropriate. All works will be in compliance with required specifications. Construction methodologies are described in further detail in Chapter 3 of this EIAR.

12.2.4 Receiving Environment

The existing construction site has already been almost entirely excavated, and it is not proposed to do any significant further excavation works. With this in mind, the proposed development could have the potential to impact the following:

- Electricity Network
- Telecommunications Networks (including phone and broadband)
- Gas Distribution Networks
- Water Supply Networks
- Sewage Networks
- Land Use

12.2.4.1 Electricity

There are no major overhead electricity cables on the site of the proposed Crown Square Development. While it is unlikely that there will be any underground electrical services encountered during the construction works (as the site is already almost entirely excavated), there is still a possibility that an issue may occur while carrying out works at the site boundaries. The striking of an underground electricity cable during construction operations could potentially result in serious injury or death of site staff. A detailed map of all existing electrical cables in the vicinity of the Crown Square site is provided in Appendix A of the Engineering Report (Appendix 3-3 of this EIAR). All proposed works for the project have been designed to avoid these services as much as possible.

12.2.4.2 Telecommunications

There was one known telecommunication cable discovered along the southern boundary of the site of the proposed Crown Square Development during the previous excavation and construction works which were carried out over 10 years ago. At the time, these cables were safeguarded, and a protective concrete casing was constructed around any exposed cable. This remains an active and intact cable, which was not impacted by the previous construction works. While it is unlikely that there will be any further underground telecommunications services encountered during the construction works (as the site is already almost entirely excavated), there is still a possibility that an issue may occur while carrying out works at the site boundaries. The breaking of an underground telecommunications cable during construction operations could potentially result in disruption to businesses and homes in the area. A detailed map of all existing telecommunication cables in the vicinity of the Crown

Square site is provided in Appendix A of the Engineering Report (Appendix 3-3 of this EIAR). All proposed works for the project have been designed to avoid these services as much as possible.

12.2.4.3 Gas

There are no major gas lines on the site of the proposed Crown Square Development. While it is unlikely that there will be any underground gas services encountered during the construction works (as the site is already almost entirely excavated), there is still a possibility that an issue may occur while carrying out works at the site boundaries. Rupturing an underground gas line during construction operations could potentially result in serious injury or death of site staff, and/or disruption to local services. A detailed map of all existing gas services in the vicinity of the Crown Square site is provided in Appendix A of the Engineering Report (Appendix 3-3 of this EIAR). All proposed works for the project have been designed to avoid these services as much as possible.

12.2.4.4 Water Supply

There are no major water pipelines within the boundaries of the site of the proposed Crown Square Development. While it is unlikely that there will be any water mains encountered during the construction works (as the site is already almost entirely excavated), there is still a possibility that an issue may occur while carrying out works near the site boundaries. Rupturing a water main during construction operations could potentially result in disruption to local supply. A detailed map of the existing water supply network in the vicinity of the Crown Square site is provided in Appendix A of the Engineering Report (Appendix 3-3 of this EIAR). All proposed works for the project have been designed to avoid this network as much as possible. The project has received a confirmation of feasibility for connection to Irish Water assets outside the Crown Square development.

12.2.4.5 Sewage

There are no major sewage network pipelines within the boundaries of the site of the proposed Crown Square Development. While it is unlikely that there will be any unexpected sewer pipes encountered during the construction works (as the site is already almost entirely excavated), there is still a possibility that an issue may occur while carrying out works near the site boundaries. Unexpectedly breaking a sewer pipe during construction operations could potentially result in disruption to local services, and a risk to the health and safety of site workers. A detailed map of the existing sewage network in the vicinity of the Crown Square site is provided in Appendix A of the Engineering Report (Appendix 3-3 of this EIAR). All proposed works for the project have been designed to avoid this network as much as possible. The project has received a confirmation of feasibility for connection to Irish Water assets outside the Crown Square development.

12.2.4.6 Land Use

Development permitted under Pl Ref. 06/223/ ABP Ref. PL 61.220893 has previously commenced and substantial works have been completed. Following the onset of the economic recession, development was put on hold and the site was hoarded up. Almost the entire site had been excavated through rock to a structural formation level. There is extensive foundation construction across the site and three levels (lower basement upper basement and ground floor) of the range of retail buildings proposed along the Monivea Road complete structurally. Rising column elements extend from ground floor slab in this area. Given the extent of this structure, its adaptation and reuse are proposed as a sustainable development measure.

Leaving the site as it is would be an unsustainable and inefficient use of these strategically located CI zoned lands; particularly having regard to the substantial element of the previously permitted development has been completed. The site would remain in a state of poor repair and abandonment, with continued deterioration likely. Public access to the site would continue to be prohibited. The suitability of the lands for development, i.e. located within a broad corridor of industrial, commercial and institutional lands and adjacent to public transport and excellent road infrastructure, is also a factor in its suitability.

The previously permitted (pre-2009) retail use is advised as being no longer commercially viable and potentially inconsistent with current best practice design standards and guideline publication. The proposed mix of uses are mutually compatible and support the viable completion of development on site as well as complementing existing adjacent land use. Increased public access to the site facilities and amenities benefit both the local community and city. The site is currently a newly reactivated construction site for Phase 1 works of the site masterplan.

12.2.4.7 Waste Management

As with any project of this scale, there will be significant volumes of waste produced, both during the construction and operational phases. For the construction phase, a project specific Waste Management Plan (WMP) will be adhered to by all Subcontractors / Specialists and all other site personnel involved in the project. The WMP which will be explained during the induction process for all site personnel. The waste hierarchy will always be employed to ensure that the least possible amount of waste is produced during the construction phase. Reuse of certain types of construction wastes such as broken rock will cut down on the cost and requirement of raw materials therefore further minimising waste levels. The WMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage. Recycling of waste will be the preferred option with disposal of waste to landfill minimised as much as possible. Further details on waste management for the project during both the construction and operational phases are provided in Sections 3.7.1 and 3.8, and in Appendices 3-2, 3-6 and 3-7 of this EIAR.

12.2.5 Likely and Significant Impacts and Associated Mitigation Measures

12.2.5.1 Do-Nothing Impact

The site currently comprises an excavated partially constructed commercial development which has very recently become a reactivated construction site. Should the proposed development not proceed the current state of the site will not change materially. The potential impacts are considered imperceptible. Phase 1 of the development (which includes Commercial Offices (Blocks A-E), Hotel and Site Infrastructure, including all basement structures for the entire site) has received permission, and will be constructed regardless of whether this currently proposed phase 2 is permitted or not.

12.2.5.2 Construction Phase

The construction of the proposed development will have no impact on above ground or underground telecommunications networks.

There are no services existing beneath the proposed development main structures, however, there is the potential for brief nuisance to users of local networks and services that may be accommodated underground along the site boundary. It is

known that communication cabling runs in an underground duct along the eastern boundary of the site, and the proposed development has been designed to minimise the risk to this. The overall proposed development will have a temporary potential negative impact.

Mitigation
Specific measures are incorporated into the Construction and Environmental Management Plan, included as Appendix 3-2 of this EIAR, to ensure that the construction of the proposed development will not have any adverse effect on any service networks in the vicinity. The mitigation measures include the following:

- Any area where excavations are planned will be surveyed and all existing services will be identified prior to commencement of any works.
- Liaison will be had with the relevant sections of the Local Authority including all the relevant area engineers to ensure all services are identified.
- Excavation permits will be completed and all plant operators and general operatives will be inducted and informed as to the location of any services.
- The contractor must comply with and standard construction codes of practice in relation to working around electricity, gas, water, sewage and telecommunications networks.

Residual Impacts
There will be an overall imperceptible impact on electricity, gas, water, sewage and telecommunications networks.

Significance of Effects
Based on the assessment above there will be no significant effects.

12.2.5.3 Operational Phase

There will be no operational phase impacts or associated effects on electricity, gas, water, sewage and telecommunications networks associated with the proposed development. There will be a moderate positive impact on land use at the site, as the unused site will provide a location for employment, tourism commercial activity.

12.2.5.4 Decommissioning Phase

The proposed development will become a permanent part of the local commercial and hotel supply, and therefore the requirement for decommissioning is not foreseen. There is therefore considered to be no potential for impacts on non-traffic material assets.

12.2.5.5 Cumulative Effects

The potential cumulative impacts and associated effects between the proposed development and the projects described in Section 2.6.2 of this EIAR, hereafter referred to as the other projects, have been considered in terms of telecoms and other services. The second phase for the development of the Crown Square site was particularly considered, as services would be required for all of the proposed residential units.

The measures outlined above, and in the Construction and Environmental Management Plan (CEMP), included as Appendix 3-2 of this EIAR, will eliminate any potential for cumulative effects in relation to electricity, gas, water, sewage and telecommunications networks during the construction phases of the proposed development and the other projects.

There will be no cumulative operational phase effects in relation to electricity, gas, water, sewage and telecommunications networks. There will be a positive cumulative impact on land use in the area when the proposed development is considered with the projects listed in Section 2.6.2 of this EIAR, in particular the second phase of the overall Crown Square site.

12.3 Summary & Conclusions

12.3.1 Summary

An assessment of the traffic impact of the proposed development of the development at Crown Square site in Galway City was undertaken. The site is forecast to generate 564 vehicle movements during the AM peak and 505 movements during the PM peak times. The traffic is distributed at two access points.

It should be noted that the access to the development as previously permitted was granted on the basis of one access point. The site previously had planning permission for a development when it was predicted the volume of traffic movements was 525 vehicle movements during the AM peak and 874 movements during the PM peak times. All this traffic would enter and exit along Joyce's Road. The currently proposed development has significantly less traffic overall and it is distributed onto two roads compared with the previously permitted development.

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.

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.

There are a number of services located in the area surrounding the site including electricity, gas, water, sewage and telecommunications networks. Best practices will be implemented to ensure that there are no impacts on these, and to ensure safety of the site workers. The previously permitted (pre-2009) retail use is advised as being no longer commercially viable and potentially inconsistent with current best practice design standards and guideline publication. The proposed mix of uses are mutually compatible and support the viable completion of development on site as well as complementing existing adjacent land use. Increased public access to the site facilities and amenities benefit both the local community and city. Site specific Waste Management Plans will be in operation through the construction and operational phases.

12.3.2 Conclusion

Based on this assessment it is considered that the traffic generated by the proposed development at the Crown Square site Galway City will be accommodated on the local highway network in the vicinity of the site. There will be no significant impacts on electricity, gas, water, sewage and telecommunications networks as a result of the proposed development. There will be a significant positive impact on land use.