14 SCHEDULE OF MITIGATION

14.1 Introduction

This section of the Environmental Impact Assessment Report (EIAR) provides a schedule of mitigation measures which are taken from all previous chapters of the EIAR. It is provided in an easily viewed table (Table 14.1). Further detail and background information is provided in the relevant EIAR Section.

Table 14.1 – Schedule of Mitigation

Ref. No.	Reference Heading	Location	Mitigation Measure
Pre-Commencement Phase			
MM1	Surveys	EIS/EIAR Section 12	Any area where excavations are planned will be surveyed and all existing services will be identified prior to commencement of any works.
MM2	Liaison with relevant authorities	EIS/EIAR Section 12	Liaison will be had with the relevant sections of the Local Authority including all the relevant area engineers to ensure all services are identified.
MM3	Excavation permits	EIS/EIAR Section 12	Excavation permits will be completed, and all plant operators and general operatives will be inducted and informed as to the location of any services.
MM4	Pre-Condition Survey	CEMP Section 2	Prior to any works commencing a dilapidation / condition survey will be conducted of the adjoining roads, footpaths and adjoining buildings, photographing and noting any existing damage or defects to structure or road surfaces. A copy of this survey will be retained on site and issued to Galway City Council if required.
MM5	Traffic Management Plan	CEMP Section 2	A Traffic Management Plan (TMP) will be issued to Galway City Council for approval prior to works commencing on site. The approved TMP and any revisions thereof will be set up and implemented on site. All necessary signage will be erected in the weeks prior to any works commencing along and on adjacent roads to the proposed development giving advance warning to traffic, pedestrians / members of the public
MM6	Communication with the public	CEMP Section 2	The Senior Project Manager will be responsible for communication with the public, local residences and businesses adjacent the development. All parties will be kept up to date and informed both shortly prior and during the construction period at all times. Two to three weeks before any work commencing reasonable efforts will be made to inform all parties of the oncoming works.

MM7	Noise Levels	CEMP Section 3	Noise baseline levels will be agreed prior to commencement of construction.
MM8	Silt Fencing	EIS/EIAR Section 7	Prior to the commencement of earthwork silt fencing will be placed down-gradient of the construction areas where drains or drainage pathways are present.
MM9	Effluent Discharge License	EIS/EIAR Section 7	A Trade Effluent Discharge License which will regulate flow volumes and quality will be applied for to Galway City Council prior to construction commencing.
Construction Phase			
Construction Management			
MM10	Operating hours	EIS/EIAR Section 9	Construction operations will in general be confined to the period Monday-Friday 0700-1900 h, and Saturday 07:00-14:00 h.
MM11	Health and Safety	EIS/EIAR Section 4	▪ A site-specific Health and Safety Plan will be in place for the proposed facility. All site staff will be made aware of and adhere to the company Health and Safety Plan. ▪ Only appropriately qualified and trained personnel will be permitted to operate machinery onsite. ▪ Appropriate barriers and signage will be used. ▪ The proposed development site will not be accessible to members of the public. ▪ The site will also be secure to prevent the risk of trespass through signage and provision of barriers.
MM12	Road Cleaning and Wheel Wash	EIS/EIAR Section 3	The Contractor will make provision for the cleaning by road sweeper etc. of all access routes to and from the site during the course of the works as required. It is intended that cleaning will be undertaken as required. A wheel wash facility will be provided on site to clean site traffic leaving the site. Waste water generated at this washing facility will be suitably treated on site and all settled silts disposed offsite to licensed landfill. All road sweeping vehicles will be emptied off site at a suitably licensed facility as per our construction stage environmental waste management document.
MM13	Wastewater Management	EIS/EIAR Section 3	Temporary toilets will be provided for the workers on the construction site. An application will be made to connect temporarily to the local sewage network for these site toilets. Wastewater arising on-site from these toilets will be then discharged to the foul sewer network for treatment.

MM14	Water Supply	EIS/EIAR Section 3	Water will be supplied on site by an existing water main connection. Potable drinking water will be supplied via water coolers located within the staff facilities, which will be restocked on a regular basis as required during the construction phase. A supply contract will be set up with a water cooler supply company with water supplies delivered to site as required for the duration of the construction period.
MM15	Site Signage	EIS/EIAR Section 4	Temporary warning signs and Hoarding will be provided along the site frontage to protect pedestrians using the footpaths.
MM16	Other Services	EIS/EIAR Section 12	The contractor must comply with and standard construction codes of practice in relation to working around electricity, gas, water, sewage and telecommunications networks.
Drainage Design and Management			
MM17	Hydrocarbons	EIS/EIAR Section 6, CEMP Section 3	▪ Minimal maintenance of construction vehicles or plant will take place on site, any broken-down plant will be removed from site to be fixed; ▪ Drip trays will be used to control on-site refuelling at controlled fuelling stations. ▪ On-site diesel tanks will be double skinned to 110% of their capacity. ▪ Containment stores will be used for refuelling of small plant such as consaws etc. ▪ Any fuel bowsers used on site will be custom-built / bunded to 100% of capacity. Fuel bowsers will be parked on a level area in the construction compound when not in use. ▪ Only designated trained and competent operatives will be authorised to refuel plant on site. Mobile measures such as drip trays and fuel absorbent mats will be used during all refuelling operations. ▪ Fuels volumes stored on site will be minimised. Any fuel storage areas will be bunded appropriately for the fuel storage volume for the time period of the construction. ▪ Plant used will be regularly inspected for leaks and fitness for purpose. ▪ Any Hazardous Materials will be stored in drip trays in secure containment stores. ▪ Refuelling/containment store signage will be erected at predetermined locations around the site. ▪ An emergency plan for the construction phase to deal with accidental spillages will be contained within Environmental Management Plan. Spill kits will be available to deal with any accidental spillage in and outside the refuelling area.

MM18	Overburden	EIS/EIAR Section 6	Any infill material/landscaping that is required will be placed and levelled in appropriate lift thicknesses to ensure the material is not over compacted thereby retaining it drainage properties.
MM19	Concrete Deliveries and Management	EIS/EIAR Section 7	No batching of wet-cement products will occur on site. Ready-mixed supply of wet concrete products will be used and where possible
MM20	Concrete Deliveries and Management	EIS/EIAR Section 7	No washing out of any plant used in concrete transport or concreting operations will be allowed on-site
MM21	Concrete Deliveries and Management	EIS/EIAR Section 7	Where concrete is delivered on site, only the chute need be cleaned, using the smallest volume of water possible. No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed. Chute cleaning water is to be directed into a dedicated lined washout area. This lined area will be removed from site once the construction phase is complete;
MM22	Concrete Deliveries and Management	EIS/EIAR Section 7	Weather forecasting will be used to plan dry days for pouring concrete. Ensure pour site is free of standing water and plastic covers will be ready in case of sudden rainfall event
MM23	Sediment Control	CEMP Section 6	Sandbags around storm water gullies will be employed as required to prevent any silty runoff to the storm network.
MM24	Pumping out	EIS/EIAR Section 7	It is proposed to run any excess water through an environmental structure such as 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).
MM25	Surface water	EIS/EIAR Section 7	As the basement is already excavated only minimal water / rainwater will need to be removed from 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 an environmental structure such as 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).
MM26	Silt Bags	EIS/EIAR Section 7	Silt bags will be used where small to medium volumes of water need to be pumped from excavations. As water is pumped through the bag, most of the sediment is retained by the geotextile fabric allowing filtered water to pass through. Silt bags will be used to the east of the site and the discharge allowed percolate to ground.
Felling			
MM27	Tree Feeling	EIS/EIAR Section 5	The existing *Cupressus leylandii* treeline will be removed in accordance with best practice guidelines, outside of the bird breeding season, in line with legislation described in the Wildlife Acts (1976-2012). If it is removed within the bird nesting season, it will be subject to ecological

			supervision to ensure that no nesting birds are impacted upon. The treeline will be replaced by two rows of deciduous trees as part of the landscaping plan. This will provide a substitute habitat for birds, bats, and other fauna which may currently use the existing treeline and other habitats on-site.
Peat, Subsoils and Bedrock			
MM28		EIS/EIAR Section 6	Construction of service trenching, pumping station and surface water attenuation features will generate excess material, and all excess material will be used locally within the site for landscaping where possible
Flora and Fauna			
MM29	Replanting	EIS/EIAR Section 5	The treeline will be replaced by two rows of deciduous trees as part of the landscaping plan. This will provide a substitute habitat for birds, bats, other fauna, and flora which may currently use the existing treeline and other habitats on-site.
Noise			
MM30	Decibel limits	EIS/EIAR Section 3	Noise emissions arising from construction phase operations at the proposed development site will not exceed the identified 65 dB LAeq 1 h criterion at residential receptors,. The 70 dB office building criterion will also not be exceeded where a small number of plant items operate simultaneously.
MM31	Rock breaking	EIS/EIAR Section 3	If Rock breaking occurs and the 70 dB criterion is exceeded, and the following mitigation measures are recommended here: ▪ It is recommended that management at these buildings be given adequate advance notice. ▪ As the duration of breaking may be shortened to several hours by using two or more breakers simultaneously, it may be possible to agree suitable breaking periods which allows shorter intense breaking, thus completing the operation more quickly. ▪ Alternatively, it may be practical to carry out breaking near these buildings on a Saturday, when the buildings are less occupied. ▪ The use of quiet breakers is recommended. Such breakers typically produce sound pressure levels which are 2-5 dB lower than conventional units. ▪ Depending on the location of breaking, it may be feasible to insert a temporary barrier between the breaker and the office buildings. The requirement for a barrier, and the specific dimensions and type, may be determined following identification of locations to be broken out.

MM32	Construction Noise	CEMP Section 3, EIS/EIAR Section 3	▪ Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise-sensitive receptors. ▪ Local hoarding, screens or barriers will be erected as required to shield particularly noisy activities. ▪ Drop heights will be minimised when loading vehicles with rubble. ▪ Vehicles will be prohibited from waiting within the site with their engines running or alternatively, located in waiting areas away from sensitive receptors. ▪ The use of particularly noise plant will be limited, i.e. avoiding use of particularly noisy plant early in the morning. ▪ All pneumatic tools will be fitted with silencers/mufflers. ▪ Diesel generators will be sound proofed to minimise the potential for noise impacts. ▪ Plant and machinery with low inherent potential for generation of noise and/or vibration will be selected. All construction plant and equipment to be used onsite will be modern equipment and will comply with the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations. ▪ Regular maintenance of plant will be carried out in order to minimise noise emissions. Particular attention will be paid to the lubrication of bearings and the integrity of silencers. ▪ All vehicles and mechanical plant will be fitted with effective exhaust silencers. ▪ Compressors will be of the "sound reduced" models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers. ▪ Machines, which are used intermittently, will be shut down during those periods when they are not in use.
Air Quality/Dust			
MM33	Air Quality and Dust	EIS/EIAR Section 3,8. CEMP Section 3	▪ All construction vehicles and plant will be maintained in good operational order while onsite, thereby minimising any emissions that arise. ▪ Overburden will be progressively removed from the working area in advance of construction. ▪ Dampening down the dust at the source by the use of barriers such as debris netting on scaffolding around the building to block dust escaping where the building is within 10m of the site boundary where residential properties exist.

			▪ Site road ways will be maintained in a stoned hard core condition not allowing soil to accumulate which when dry can create dust. ▪ Plant and equipment that have the potential to create volumes of dust will have appropriate attachments to allow water source to dampen dust to not allow it to get airborne. ▪ Deploy Road Sweeper as required on External Roads. ▪ Any site haul roads with the potential to give rise to dust will be regularly watered, as appropriate, during dry and/or windy conditions. ▪ Water misting or sprays will be used if required particularly if dusty activities are necessary during dry or windy periods.
MM34	Dust Suppression	CEMP Section 7	If necessary water will be pumped into a bowser or water spreader to dampen down haul roads and site compounds to prevent the generation of dust. Silty or oily water will not be used for dust suppression.
Traffic			
MM35	Construction Traffic	EIS/EIAR Section 3	Construction traffic travelling to the proposed development site will use the existing entrance located off the existing local road between the Monivea Road (R339) and Tuam Road (R336).
MM36	Speed Limit	CEMP Section 3	All construction related traffic will have speed restrictions on un-surfaced roads to 15 kph.
MM37	Traffic Management Plan	EIS/EIAR Section 3	During the construction phase, an increased number of trucks may arrive at the site during certain activities eg. during concrete pours. The Traffic Management Plan will prevent unnecessary congregation of trucks around the site entrance, and state that queuing is prohibited on Monivea Road.
			Operational Phase
MM38	Drainage	EIS/EIAR Section 3	It is proposed that any surface water that enters the basement levels of the proposed development will drain via gravity to a silt trap and then an attenuation tank acting as a basement sump, with a hydrocarbon interceptor which is already existing on site. From here, water will be pumped to the Monivea foul sewer which runs along the public road on the Monivea Road. Surface water from the site will pass through a silt trap before entering attenuation tanks prior to discharging to outfalls on either Connolly Avenue or the Monivea Road. It is proposed that approximately 70% of this surface water discharge will be to Connolly Avenue, while the remaining 30% will be to the Monivea Road.

MM39	Traffic	EIS/EIAR Section 4	▪ 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.