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Chapter 14 Schedule of Mitigation Measures

An Rínn Rua Hotel and Leisure Park
County Kerry

Rínn Rua Holiday Park Ltd

April 2024

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14. Schedule of Mitigation Measures

14.1 Introduction

This Schedule of Environmental Mitigation summarises and sets out an implementation programme for all environmental mitigation measures recommended in the Environmental Impact Statement (EIAR) for the Proposed Development. The full project description is provided in **Chapter 2 Description of the Proposed Development.**

14.2 Format of the Mitigation Schedule

The schedule on the following pages is structured in accordance with the following project phases:

- Prior to Commencement of Construction
- During Construction Phase
- Post Construction/ Operational Phase

The schedule is presented in a Table format which outlines, for each of the project phases:

I. the environmental aspect or resource for which mitigation is required,
II. the required or proposed mitigation measure(s) to undertake/implement,
III. the relevant actions, procedures and plans relating to implementation of the mitigation

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14.3 Pre-Construction Mitigation

Table 14-1 Pre-Construction Mitigation Measures

Time Frame / Schedule	Environmental Aspect	Mitigation Measures	Residual Impact
Prior to commencement of construction works	Cultural Heritage and Archaeology	**Mitigation by Prevention** Pre-construction archaeological testing under licence from the NMS should be undertaken on the footprint of the Proposed Development site within the greenfield limits of the proposed development. If features / artefacts of archaeological significance are identified, further mitigation will be required following consultation with the Kerry County Archaeologist and the NMS. A report on the results of the licensed testing will be required to be submitted to NMS and the relevant authorities on completion of the project.	Residual impacts are discussed in EIAR Chapter 9.
	Biodiversity	**Pre-construction Surveys** Physical inspections of potential bat roost features (PRFs) in trees to be felled, using endoscope and high-powered torch, and/or dusk/dawn surveys, will be undertaken by a bat specialist/suitably qualified ecologist to determine if roosts are present. If any period of time elapses, further surveys are to be undertaken by the ecologist immediately in advance of tree-felling to ensure that roosting bats are not present. Prior to any structures being demolished, physical inspections and emergence/re-entry surveys, as required, will be undertaken. The purpose of these surveys is to: • determine the current locations and characteristics of roosts in the period prior to commencement on-site to establish if the baseline conditions reported herein remain valid, given the length of time which may potentially elapse between completion of baseline surveys and reporting and commencement of construction activity and the degree to which bat species can typically vary in their usage of roost habitat features, and • ensure that the mitigation measures remain adequate to avoid or reduce predicted impacts on bats. This will ensure that any changes in Site context in relation to suitability for bats will be highlighted and that any additional mitigation measures which are then required are applied. In the event that previously unknown bat roosts are identified within the Site, best-practice mitigation will be recommended by the appointed ecologist in consultation with KCC and NPWS. A pre-construction survey for otter should be undertaken prior to the commencement of any works as per best-practice guidance set out in NRA (2008) in relation to construction works and otter. The purpose of the pre-construction survey is to identify any changes within the Site. The survey should be undertaken no more than 10-12 months in advance of construction. The survey should be supplemented by an additional survey immediately prior to site works commencing if more than four weeks have elapsed since the initial pre-construction survey.	Residual impacts are discussed in EIAR Chapter 5.

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		A pre-construction survey for badger should be undertaken prior to the commencement of any works as per best-practice guidance set out in NRA (2006b) in relation to construction works and badger. The purpose of the pre-construction survey is to identify any changes within the Site. The survey should be undertaken no more than 10-12 months in advance of construction. The survey should be supplemented by an additional survey immediately prior to site works commencing if more than four weeks have elapsed since the initial pre-construction survey. Amphibian surveys will be carried out by a suitably qualified ecologist in advance of construction works. These surveys will focus on breeding areas confirmed to be used or with the potential to be used by breeding amphibians. Methodology for frog surveys will follow Reid *et al*. (2013).	

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14.4 Construction Mitigation

Table 14-2 Construction Mitigation

Time Frame / Schedule	Environmental Aspect/Resource	Environmental Mitigation	Residual Impact
During Construction	**Population and Human Health**	**Land Use** • Limiting the construction works to the off-peak holiday periods. • Constructing the new residential access road early in the construction phase. • Prioritizing the construction of new access roads for dwellings on the south-western and north-eastern boundaries to minimize disruptions to neighbouring properties. • Utility infrastructure diversions will be planned and executed in collaboration with relevant utility providers. This collaborative approach aims to minimize any potential disruptions to essential services such as electricity and water supplies. Comprehensive noise control plans will be developed and strictly adhered to throughout the construction phase. • Residents and affected parties will be informed in advance of any planned utility diversions or potential disruptions. Clear and timely notifications will be issued to ensure residents are well-informed and can make necessary preparations. • Ongoing and transparent communication with the local community will be maintained to address any concerns related to utility service interruptions or diversions. **Tourism and Amenity** • Construction activities during the peak summer holiday period will be halted, except during the first phase of construction. • The widening of the beach access road is proposed to be undertaken during the first six months of construction work, prior to the peak holiday season during Phase 1 of construction. • Delivery of mobile homes will take place at night during the off-peak periods. • Screening and landscaping will be used to minimize visual intrusion and noise effects. **Human Health** • The health and safety mitigation measures provided in the noise, air emissions, water and traffic Chapters (numbers 7,8,10,11,12 and13) will be complied with. • The CEMP and Operational Health and Safety plans which comply with the relevant health and safety standards and protocols will be developed prior to initiation of the project.	Residual impacts are discussed in EIAR Chapter 4.

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		• All those employed on the project must be inducted in the relevant health and safety standards and protocols in these management plans before starting work on this project. Compliance with the health and safety standards must be monitored and enforced by management. • On-site waste collection and disposal facilities will be provided for construction and operational phase, encouraging responsible waste disposal practices among visitors. Educational and awareness programs may also be instituted to promote recycling and discourage the use of single-use plastics. • Scheduled clean-up and waste collection routines will be established to promptly address any littering concerns. These measures will ensure that the site remains clean and devoid of environmental hazards associated with improperly managed waste. • Waste materials that cannot be prevented or reused will be diligently sorted, recycled, or disposed of in strict compliance with local regulations and industry best practices. Licensed waste management contractors will be engaged to ensure responsible handling and disposal of construction waste and operational waste.	
	Biodiversity	All mitigation measures outlined in the Biodiversity Chapter of the EIAR are to be incorporated into the final CEMP and implemented on-site. The CEMP will be submitted to Kerry County Council (KCC) for agreement and approval prior to the commencement of any construction activity. The CEMP will include, but is not limited to, the following environmental controls: • Water Quality/Sediment and Erosion Control • Noise, Vibration, Dust and Air Control • Management of Construction and Demolition Waste • Fuel and Oils Management • Management of Concrete, and • Emergency Response Plan The CEMP will take cognisance of the following Best Practice Guidance: • CIRIA C692: Environmental Good Practice on Site, (Audus et al., 2010) • CIRIA C532: Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (Masters-Williams et al., 2001) • CIRIA C753 – The SUDS Manual; CIRIA C698 – Site handbook for the construction of SUDS, and • Bat Conservation Trust (2023). Guidance Note 08/23. Bats and Artificial Lighting at Night. **<u>Project Ecologist/Ecological Clerk of Works (ECoW)</u>** A suitably qualified and experienced Project Ecologist/ECoW will be employed during the construction phase of the project. Duties will include the review of all method statements, delivery of toolbox talks, undertaking of all required pre-construction surveys for protected species and monitoring of works throughout the construction phase to ensure that works are taking place in compliance with the CEMP and that the requirements of the Conditions of Planning and all environmental controls and EIAR mitigation is implemented in full. As part of toolbox talks, contractor staff and	Residual impacts are discussed in EIAR Chapter 5.

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Time Frame / Schedule	Environmental Aspect/Resource	Environmental Mitigation	Residual Impact
		other site personnel, as relevant, will be made aware of the procedure to follow if a protected species or their resting or breeding site is encountered. The appointed ECoW will be awarded a level of authority and will be allowed to stop construction activity if there is potential for adverse environmental effects other than those predicted and mitigated for in the EIAR. The appointed ECoW will have demonstrated professional experience in managing large-scale construction works affecting ecological receptors identified within the EIAR. **General Protection of Water Quality** **Temporary Site Compound/Parking** • Parking will only take place within designated parking areas. • The site compound including designated parking areas will be located at least 50 m from any watercourse/waterbody. • A designated wash down area within the site compound will be used for cleaning of any equipment or plant, with the safe disposal of any contaminated water. **Construction Runoff and Sediment Control** Best practice mitigation measures will be implemented with regard to runoff and sediment control as follows: • Erosion control, where runoff is prevented from flowing across exposed ground and becoming polluted, and sediment control, where runoff is slowed to allow suspended sediment to settle, are important elements in runoff and sediment control. Erosion and sediment controls are to be implemented prior to any site clearance works commencing. • Clean water runoff will be intercepted and diverted away from construction site runoff to avoid cross-contamination of clean water with soiled water. • All topsoil stripping close to sensitive areas will be carried out during periods of dry weather and all stockpiling will be kept as far as possible from surface water features. • The area of exposed ground will be minimised. The amount of material excavated is to be kept to a minimum. Excavations will only be carried out following installation of appropriate sediment controls measures which will slow run-off and trap suspended sediment, particularly if working during prolonged wet weather or if working during an intense rainfall event. • The drainage system will be inspected regularly during construction, in particular after heavy rainfall/storm events, to check for blockages/drainage issues. Where any drainage issues are identified, these will be addressed on the same day to ensure water quality protection. **Construction Wheel-wash Facilities** • Wheel wash facilities are to be provided at all entrances/exits for the site. All construction vehicles leaving or entering the site will be required to drive through these wheel wash areas. • Runoff generated at the vehicle washdown area will discharge to the drainage system for treatment and attenuation.	

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		Management of Fuel/Oil The management of fuel/oil and other chemicals on site will have regard to the following elements: • Chemicals will be bunded and where applicable, stored within double-skinned tanks/containers with the capacity to hold 110% of the volume of chemical contents. Ancillary equipment such as hoses and pipes will be contained within the bund. Bunds will be located on flat ground a minimum distance of 50 m from any watercourse or other water- conducting features, in a designated, secure, impermeable storage area. • Measures will be implemented throughout the construction stage to prevent contamination of the soil from oil and/or petrol leakages. All plant will be regularly inspected for leaks to ensure it is fit for purpose. All taps, nozzles and valves will be fitted with a lock system that will be regularly checked for signs of damage. • Where required, refuelling of plant on-site will only be carried out at a designated area within the site compound. Only designated trained operators will be authorised to refuel plant on site. Rigid and articulated vehicles will be fuelled off site as will all site vehicles (jeeps, cars and vans). • Controls will be regularly inspected and maintained. Regular cleaning and servicing of bunds, gullies, pipe work, and oil interceptors will be carried out to ensure the system is operating at its optimum. • Procedures and contingency plans will be set up to deal with emergency accidents or spills. An emergency spill kit containing oil boom and absorbers will be kept on site in the event of an accidental spill/emergency. All crews will be trained in the use of spill kit equipment. All emergency procedures and equipment will be in place prior to the commencement of any works. • The Local Authority will be informed immediately of any spillage or pollution incident that may occur on-site during the construction phase. **Management of Concrete** • There shall be a requirement for concrete works at the site. Wet concrete is silty and very alkaline (high pH). It is important to prevent concrete from entering the aquatic environment, including groundwater. • A designated trained operator, experienced in working with concrete will be employed during the concrete pouring phase. There shall be no pouring of concrete during extreme/prolonged rainfall. • Any small volumes of incidental wash generated from cleaning hand tools, cement mixers or other plant, as required, will be trapped on-site to allow sediment to settle out and reach neutral pH before the clarified water is released and allowed to percolate to ground. Settled solids will need to be appropriately disposed of off-site. • Washout of concrete trucks will not occur at the site. Washout of plant is to be carried out in designated, contained, impermeable areas. **Management of Construction Waste** • Appropriate storage of all non-hazardous and hazardous wastes on-site will be undertaken to minimise potential for environmental impacts.	

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- Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc, if required.
- In the event that any buried waste or potentially contaminated material is encountered, this will be segregated from clean, inert material, and then tested and classified.
- In the unlikely event of hazardous material being encountered, it will be transported for treatment/recovery or disposal in suitable facilities.
- All wastes are to be removed from site by appropriate licenced waste contractors to suitable waste facilities.

Storage of Materials

- The storage of materials, spoil, containers, stockpiles and waste, however temporary, should follow best practice at all times and be restricted to designated areas only. Material stockpiles should be kept to a minimum size, and be located on impermeable bases, where necessary. Storage of materials will be located away from any temporary drains and moving plant, machinery and vehicles.

Bio-security

The following measures are recommended in relation to Site bio-security and reducing the risk of introduction or spread of invasive species within the area.

- Prior to being brought to Site, validation should be provided by all suppliers that construction plant, machinery and vehicles are free from invasive species. Similarly, certification is to be obtained from suppliers that all raw materials to be imported to Site including soil, fill, sand, gravel and landscaping materials are free from invasive species.
- All vehicles, machinery and equipment/tools are to arrive to site clean and steam washed. Visual inspections are to take place. All Personal Protective Equipment (PPE) brought to site is to be clean and dry with any attached vegetation or debris removed.
- A schedule of regular site inspections for invasive species is to be prepared and undertaken for the duration of the construction works. These inspections are to encompass the IAPS growing season for the duration of the construction works programme to monitor existing IAPS growth, identify any new IAPS stands, inspect materials storage areas and monitor implementation of IAPS management measures on-site, where required e.g., fencing, signage etc.
- Where there is a requirement for IAPS control areas, all vehicles, equipment/tools, footwear etc used in these areas will be thoroughly cleaned in a designated area once works in that area are complete to prevent spread of IAPS. The use of tracked machinery within IAPS infested areas is to be prohibited. The use of tracked machinery within close proximity of IAPS infested areas is to be strictly controlled. This should be undertaken with direction from the ECoW.

Management of Alien Invasive Plant Species (IAPS)

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		• The extents of IAPS infestations on-site are extremely limited and localised. A pre-construction survey for IAPS is to take place in advance of the commencement of site works to inspect existing stands of IAPS for new growth and identify any new stands which may have emerged in the intervening period. • A construction-stage IAPS management plan will be prepared and will incorporate the following management measures. The construction stage management plan should set out clear processes for the eradication, control and containment of each IAPS on-site and is to include a detailed implementation and treatment schedule (including initial and follow-up treatments) in light of the construction schedule and the prevailing IAPS conditions on-site at the time. • Where any IAPS is identified within/adjacent to the works footprint, fencing and/or advisory signage is to be erected around stands (minimum 7 m buffer in the case of Japanese knotweed). • No non-essential ground maintenance or any other ground disturbance should take place within IAPS fenced areas. Where works are required within/adjacent to infested areas, the appointed contractor is to develop and implement an appropriate method statement with regard to managing IAPS on-site and ensuring bio-security compliance. This should be done in consultation with a suitably qualified specialist. Under no circumstances is any IAPS plant or rhizome material to be cut, dug out or in any other way disturbed without the advice of a suitably qualified specialist. • Where application of herbicides is required to treat IAPS on-site, the proximity of ecological receptors is to be taken into account. Herbicide use is to be minimised as much as possible and targeted to the specific IAPS. Where use of herbicides is required, non-residual, aquatic approved herbicides are to be used. Herbicides are not to be used in windy or foggy weather, during or preceding rainfall or where rainfall is forecast within 12 hours or during particularly cold weather to reduce risk of spray drift, run-off or poor plant uptake. Herbicides are to be applied strictly in accordance with the manufacturer's recommendations and by competent, experienced and licenced personnel registered as a Professional Pesticides User. • Monitoring of control measures should be undertaken approximately six to eight weeks after treatment to determine success of measures used. • Large areas of disturbed/bare soil should be mulched, where appropriate, and seeded/planted at the earliest opportunity with native species to stabilise the soil and deter any subsequent reinvasion. Planting should be carried out with regard to 'Horticulture Code of Good Practice: To prevent the introduction and spread of invasive non-native species (Kelly, 2012). • Where off-site removal of IAPS material or infested soil is required, then the relevant NPWS licence will be required to be procured in advance of removal of IAPS material off-site and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477). Off-site removal of such material will be undertaken in accordance with licence conditions. • All management and control measures implemented on-site during the construction phase are to be carried out in accordance with best practice guidance as set out in 'The Management of Invasive Alien Plant Species on National Roads (GE-ENV-01104)' TII (2020), 'The Management of Noxious Weeds and Non-native Invasive Species on National Roads' NRA (2010), 'Best Practice Management Guidelines Rhododendron Rhododendron ponticum and Cherry Laurel Prunus laurocerasus' Maguire, et al., (2008), 'Best Practice Management Guidelines Japanese Knotweed Fallopia japonica' Kelly, et al., (2015) and	

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		'Managing Japanese Knotweed on Development Sites: the Knotweed Code of Practice' UK Environment Agency (2006). **General Protection of Habitats** • The area of proposed works will be kept to the minimum necessary to minimise disturbance to habitats and flora. Vegetation removal within the Site is to be minimised and be restricted to those areas of vegetation which have been identified for removal (to be clearly marked by contractor staff prior to removal). Removal of vegetation from anywhere outside of marked areas will not be permitted. • The footprint of the construction area, site compound and materials storage areas will be clearly marked out prior to commencement of works with reference to design drawings, under the supervision of the project engineer and appointed ecologist, so that it is visible to all contractor staff and machine operators. • The extent of access for all construction plant and machinery is to be clearly marked out, in particular along the southern boundary of the Site to avoid impacts on more sensitive habitat, namely areas of 'Dry calcareous and neutral grassland habitat (GS1)', which have been identified along the cliff-top immediately adjacent to the Site boundary. A heavy machinery exclusion zone will be established using temporary stakes and signage, as required, to prevent encroachment by heavy machinery onto this habitat. This will be undertaken in consultation with the appointed ECoW. There shall be no side casting of material or any other construction-related activity within this area. All operatives will be made aware of this works exclusion zone. • All operatives will be made aware of the immediate proximity of the Ballinskelligs Bay and Inny Estuary SAC to the Site as part of toolbox talks. Movement of construction plant/vehicles is to be minimised within the SAC boundary. Movement of plant and machinery is to be avoided on the 'shingle gravel and banks' habitat in the south of the proposed BEA. There shall be no side casting of material or any other construction-related activity within this area. **General Protection of Fauna** • Disturbance of fauna generally will be reduced by controlling the movement of construction vehicles and personnel. • Construction materials and wastes are to be kept in designated areas to reduce risk of accidental injury/entrapment of any wildlife on-site. • In accordance with Section 40 of the Wildlife Acts, vegetation removal, including tree removal, will be conducted outside of the restricted bird nesting period (March 1st to 31st August, inclusive). This will not only protect nesting birds, but a range of biodiversity. • Where areas of dense vegetation are to be removed, such as within the conifer treeline, the ECoW will be present to oversee removal of vegetation and ensure any necessary mitigation measures are in place in the event that a previously unknown breeding or resting site of any protected mammal species is encountered during the works.	

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- Mammals and birds are mobile and so are expected to disperse from the area; however, young or hibernating animals are vulnerable to impacts during vegetation clearance. Prior to any vegetation clearance, the area will be checked by the ECoW to check for the presence of young or hibernating animals.
- Should any resting or breeding place of any protected species be discovered within the Site during the pre-construction or construction phases, the ECoW is to be informed immediately and the advice of NPWS sought. Any works in the area are to cease immediately and the area is to be cordoned off until the ECoW has authorised recommencement of works.
- All temporary construction lighting is to be switched off outside daylight hours. Construction lighting is to be directed inwards into the Site to reduce indirect alteration of adjacent habitats outside the Site and minimise nocturnal impacts on faunal species.
- To reduce the level of night-time disturbance to nocturnal fauna, construction activities should be restricted to standard construction hours. Construction work will not take place outside of these hours unless in exceptional circumstances.

Protection of Bats

- A Derogation Licence, issued under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011, is required to be granted prior to any works to the hotel or derelict cottage. This licence must be obtained from the DHLGH through NPWS in advance of any works taking place which would or potentially could disturb bats or their roosts. This licence is required irrespective of any requirement for planning consent, or otherwise.

Provision of Alternative Roost-sites (Derelict Cottage)

- It is proposed to utilise the derelict cottage located within the Site to provide alternative roosting sites for bats. The principal function of this structure as a proposed alternative roost site will be to mitigate for loss of common pipistrelle and lesser horseshoe bat 'moderate significance' bat roosts associated with the Proposed Development. While providing principally for these species, it will also aim to accommodate/provide roosting habitat for other bat species recorded on-site, such as soprano pipistrelle, to reduce impacts on local bat populations.
- The baseline data across the three proposed sampling locations will be used to inform the approach to works to the derelict cottage. The aim of this process will be to ensure that the ambient conditions within the derelict cottage (alternative roost) replicate the baseline ambient conditions within the hotel structure as much as possible, taking into account any seasonal fluctuations, to improve roosting suitability for bats within the cottage. Where discrepancies are noted, modifications will be made to the cottage to try and adjust ambient conditions accordingly, to be undertaken under the direction and guidance of the appointed ecologist in consultation with the appointed contractor. The temperature datalogger will remain in-situ within the derelict cottage until the end of the monitoring period

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		The following general mitigation measures are proposed in relation to works to the derelict cottage to make it suitable as an alternative roosting site for bats and minimise impacts on any bats occurring. • Prior to any works commencing, toolbox talks, as required, will be given by the appointed ecologist to contractor staff to explain the general approach to works and what to do in the event that bats are encountered. The appointed ecologist will remain on-site during works. • Externally, part of the original stonework of the east gable wall is visible where render has fallen away. It is proposed to remove all external render from the building to restore the original natural stone finish which will provide additional crevices and increase the availability of potential roosting habitat to bats. • Where re-pointing of stonework is required for structural stability, this will be undertaken by hand only once all crevices have been thoroughly inspected by the appointed ecologist with the use of an endoscope and have been confirmed free of bats. In this case, crevices can be temporarily packed with bubble-wrap to keep them free of bats until pointing work is undertaken. In the event that bats are encountered, crevices will be marked for retention with wildlife-friendly paint. Where re-pointing is not required to stabilise stonework, it will be left as. This will maximise potential roosting crevices available to bats. • Where required, roof slates will be removed carefully by hand. Any vegetation growth will be removed. Roof repairs will comprise natural slate. If roofing felt is required, then traditional hessian reinforced bitumen felt membrane is to be used, rather than more modern breathable roof membrane. • Any rotten timberwork at risk of disintegrating will be removed. In the event that any roof timbers require to be replaced, or any other new timber is required, then pre-treated timber will be used (timber treatment products used to be non-toxic to bats). There are multiple timber-treatment products which are considered suitable for use in or near bat roosts . Any necessary timber treatment operations e.g. within roof spaces, should be carried out during the winter months - November to March in accordance with Aughney et al., (2008). • Both the rear and front doors of the building are completely missing. Both doors will be replaced with secure, wooden doors. It is proposed that only one of these doors be used for access going forward (for roost monitoring purposes, to be kept locked otherwise), and the other is left permanently closed. • There are several windows in the building, all of which are of timber window frame construction (poor condition) and with glazing missing. To the front, there are two ground-floor and three first-floor windows, and to the rear one first-floor window. There is also a small window at first-floor level on the eastern gable wall. To minimise light penetration and draughts within the building interior, and help retain heat, reduce noise and visual disturbance, and deter unwanted human activity, all windows on the ground-floor will be closed up permanently. • It is proposed that the first-floor window openings to the rear and on the gable wall, and possibly one of the windows to the front, will be retained as roost access points. These window surrounds are to be replaced with wooden frames (appropriately treated) and left unglazed. Internally, partition boxes, open at one side, will be constructed around these roost access points using plywood sheeting painted black (using non-toxic paint). These partitions will limit light spill from the window openings into the interior of the building while allowing bats to freely enter the building. The remaining two windows to the front of the building will be permanently sealed, again to limit the level of light and wind within the building's interior and reduce noise disturbance.	

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		• Where predators could potentially access window openings by climbing stonework etc, access points will be made predator-proof using either sheets of smooth steel attached securely to the external walls around window openings or purpose-built 'tilt-trays' which prevent access by predators. • Prior to all works, including to windows and doors, stonework, roofing etc., any gaps and crevices, such as around door and window surrounds, stonework, timber framework etc., are to be thoroughly checked by the ecologist using an endoscope and torch to ensure that crevices are free of bats. • In the event that any bats are discovered during any aspect of the works, they will be carefully caught using gloves, cloth or a box, kept safely and released outside, preferably at dusk, on the same day. • Internally, all debris, rubbish etc. on the floor at ground-level will be removed. The existing damaged guttering and drainage pipes on the building's exterior will be removed and replaced. • To increase the availability of suitable bat-roosting habitat at the derelict cottage, bat-boxes are to be installed on both the interior and exterior faces of the building (minimum total 10 no.). These should be positioned between 3-5 m (minimum 3 m) off the ground, preferably close to the eaves and in sunny but sheltered locations. Installation of bat-boxes at the structure should follow BCIreland guidance . For example, timber boxes can be used internally; however, Woodcrete boxes are recommended for external positions. Boxes of Woodcrete construction are more durable and long-lasting, while also having better thermal properties for bats, over timber. • Externally, boxes facing in different directions (roughly south) to provide a range of temperature conditions are recommended to be installed. For example, boxes facing from south-east to south-west to allow the sun to fall on each box for part of the day. Boxes are to be securely attached to the structure and are not to be positioned directly over any doors or windows. In-line with BCIreland recommendations, self-cleaning boxes should be used (designed so that any bat droppings fall out the bottom removing the need for yearly cleaning out) . All boxes, in particular Woodcrete boxes due to their weight, are to be checked periodically to ensure that attachments to walls remain secure. • The large pile of boulders which is located to the rear of the building will be removed to facilitate planting in the vicinity of the structure and increase vegetation cover to support foraging and commuting bats. **Proposed Timeline** • Due to the presence of nesting jackdaw and starling within the derelict cottage, it is recommended that any works to the cottage are undertaken in autumn (September, October and November) and/or early spring (March) (outside the bat and main bird breeding season, and the bat hibernation period). • It is recommended that works to provide suitable alternative roosting habitat within the cottage take place at least several months in advance of an anticipated project start date on-site (once the required Derogation Licence has been granted to allow works). This will maximise the length of time available to bats to find the alternative roost and allow sufficient time to make any changes required with regard to achieving the necessary suitable, as discussed above.	

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		Approach to Hotel Renovation Works • it is recommended that construction works to the hotel do not commence until after the main hibernation period to minimise impacts on bats. Hotel renovation works should therefore commence in spring (March/April), prior to the breeding season, when bat numbers are likely to be lower. In the event that the project starts later in the year than anticipated, e.g., summer, it is recommended that the breeding season for bats (May to August) is avoided to reduce impacts, with works instead commencing in the autumn (September/October), prior to the start of the hibernation period. • Due to the large scale of the hotel building, the presence of confirmed roosts, the abundance of potential roost sites, and the degree to which bats can move through the various components of the building as a result of unsealed windows, areas of structural damage etc, the general approach will be to systematically preclude bats from each room/area prior to works starting. This will entail the appointed ecologist undertaking visual inspections of each room for bats, including all cracks, crevices etc., after which these and all room entry points (open doorways/windows) can be 'closed' with temporary bubble-wrap and/or coverings, such as hessian, heavy-duty plastic sheeting or similar, securely fastened to prevent bats from entering. Similarly, exposed walls should be checked for presence of bats, after which any crevices can be temporarily packed with bubble-wrap and/or the area of wall covered with hessian or other temporary covering, to prevent bats from entering before and during works. It is important that bat presence throughout the building is regularly monitored during works to ensure that bats have not re-gained access to any part of the building's interior. Regular inspections of all areas should be undertaken and any signs of bat activity searched for. • Specific measures in relation to demolition, including removal of blockwork, suspended ceilings or sub-floor materials, roof works etc. will need to be drawn up by the appointed contractor in consultation with the appointed ecologist. Specific measures in relation to exclusion procedures for either confirmed or suspected roost locations within the building will need to be drawn up. Works at these locations will need to be carefully planned to minimise potential impacts on any roosting bats which may be present. Where roosting bats are expected to be present, relevant rooms/areas can be closed off, using temporary means, as outlined above, following dusk, to minimise the chances of bats being present. The appointed ecologist should supervise such works, in particular at confirmed or suspected roost locations, and be on hand in the event that bats are discovered. • Any accumulations of ivy growing on structures are to be carefully removed in the autumn months under the supervision of the appointed ecologist and left on the ground for 24 hours to allow any residing bats to exit safely. • Using the above approaches, the likelihood of bats being present within the hotel throughout the works will be reduced. If bats, or signs of bats are found, during works, works are to cease in the area until the appointed ecologist has advised how to proceed and/or undertaken removal of bats, in which case they will be carefully relocated to the alternative roost-site (cottage). • Prior to any works commencing, a detailed work plan involving both the appointed contractor and the appointed ecologist will be required to be drawn up. This will be done in consultation with NPWS and in-line with any Derogation Licence conditions. The work plan will set out the approach to be taken and specific measures with regard to site preparation works, clearance and demolition works, and construction and renovation works which may affect bat roosts within the existing hotel structure, and will be tailored,	

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		as required, with regard to specific construction works/activities required. The work plan will also be informed by the results of the pre-construction surveys to ensure that the approach to works will be undertaken in such a way as to minimise impacts on bats. • Prior to any works commencing, toolbox talks will be given by the appointed ecologist to contractor staff to explain the general approach to works and outline any specific areas of sensitivity/measures required. Toolbox talks should be given to new contractor staff arriving to site, as required (on an 'as needed' basis). As part of toolbox talks, staff will be informed by the ecologist of the procedure to follow in the event that a bat is discovered, and the ecologist is not present. **Tree-felling** • On a precautionary basis, all tree-felling is to be conducted in a manner sensitive to bats, and in accordance with NRA (2005). Trees are to be felled between September and early November to reduce the potential for disturbance of roosting bats. Tree felling will be completed by Mid-November at the latest because bats roosting in trees are highly vulnerable to disturbance during their hibernation period (November – April). • Where trees are considered to have any potential for roosting bats, the appointed ecologist is to oversee felling in the event that bats are discovered. In this case, the procedure for dealing with any bats found will be as for general construction works, as discussed above. As a precaution, once felled, trees will be left intact on-site for a minimum 24 hours prior to disposal to allow any bats which may be present to leave. Any accumulations of ivy growing on trees are to be carefully removed in the autumn months under the supervision of the bat specialist/suitably qualified ecologist and left on the ground for 24 hours to allow any residing bats to exit safely. **Construction Lighting** • Appropriate lighting will be employed during the construction phase to minimise impacts on local bat populations. Use of lighting will be minimised and avoided, where possible. Construction lighting will be targeted to minimise/avoid light spill to enable the retention of dark-corridor connectivity within the landscape for commuting bats. • Construction phase lighting for the proposed development is to conform to the following guidelines which are to be strictly implemented throughout the construction phase: – Bat Conservation Trust (2023). Guidance Note GN08/23. Bats and Artificial Lighting at Night. Bat Conservation Trust and Institution of Lighting Professionals. – Bats & Lighting. Guidance Notes for: Planners, engineers, architects and developers (BCI, 2010). • Luminaire design is extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The BCT Lighting Guidelines (BCT, 2023) are to be followed with regard to the selection and use of luminaires. All temporary lighting used throughout the Site, other than any lighting required for Health and Safety (H&S), will be switched off after construction hours as a means of reducing light pollution/ensuring that there is no unnecessary residual lighting during hours of darkness. Any external security lighting will be set on motion-sensors and short (1 min) timers. The H&S lighting will be cowled towards the centre of compound areas. Light spillage onto retained perimeter hedgerows/treelines is to be avoided. Lighting will	

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		be reviewed and audited for implementation throughout the construction period by the appointed Ecologist. **Landscaping for Bats** • The Landscaping proposal for the Proposed Development includes targeted planting for bats within the Site. This comprises planting in the immediate vicinity of the cottage (native trees and shrubs) which will extend north-eastwards along the main internal access road to connect with the existing treeline. • This planting will replace improved and semi-improved grassland, providing enhanced foraging habitat within the vicinity of the alternative roost-site (cottage), will provide enhanced shelter to the structure from coastal winds, and will help to attenuate artificial light and visual/noise disturbance. This proposed planting will form a strong, continuous, vegetated corridor between the cottage and the existing treeline, along which bats can commute and forage and improve connectivity between the roost and higher-value foraging/commuting habitats both on and off-site. • Furthermore, the Landscaping proposal for the Site has incorporated 'bat-friendly' and 'pollinator-friendly' planting schemes throughout, with a strong focus on native species, where considered suitable for exposed, coastal locations, as native species support higher insect life for bats and other fauna. For example, the proposed planting schedule includes native and/or pollinator-friendly species such as holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*), rowan (*Sorbus aucuparia*), Scots pine (*Pinus sylvestris*), willow (*Salix cinerea*), broom (*Cytisus scoparius*), blackthorn (*Prunus spinosa*), sea holly (*Eryngium* spp.), hemp agrimony (*Eupatorium cannabinum*), heather (*Calluna vulgaris*), hebe (*Hebe* spp.), lavender (*Lavendula angustifolia*) and purple top (*Verbena bonariensis*), all of which are listed by Bat Conservation Ireland or the Bat Conservation Trust as being flora species of value to bats[1]. **<u>Protection of Chough</u>** **Provision of Alternative Nesting Habitat** • Chough nest shelters, containing a nesting platform, are designed to provide a nest site, close to an area of suitable habitat. • To mitigate for loss of the existing chough nest-site within the hotel, it is proposed to install alternative, suitable nesting habitat for this pair within their territory. To maximise the chance of successful uptake of the proposed alternative nesting-habitat by chough, it is proposed to install two different types of artificial nest, to be installed at separate locations within the Applicant's lands. • Within the Proposed Development site, it is proposed to install a chough nesting box on the hotel. This will be installed at a suitable location somewhere on top or towards the top of the building. For example, on the hotel bedroom block roof, the roof of the hotel tower or at the top of the hotel tower beneath the overhanging eaves of the tower roof. The proposed nest-box at the hotel is to be installed in the location selected as soon as is practicably possible once relevant works in that section of the hotel are complete.	

[1] https://www.batconservationireland.org/wp-content/uploads/2022/07/Gardening-For-Bats.pdf

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- There are several important factors which should be considered with regard to design and siting of chough nest-boxes generally. These include installation of the nest-box at a sufficient height above ground, avoidance of direct sunlight and ensuring sufficient shade to prevent overheating. Installation of the nest-box beneath the eaves of the roof tower would provide shade and shelter. Alternatively, installation of the nest-box on either the hotel bedroom block roof or tower roof could be facilitated by providing some form of roofing/shelter over the nest-box to ensure sufficient shade. A gap should be left between the top of the nest-box and the shelter roof to allow sufficient airflow and prevent over-heating. Adults may also roost in shelters at other times of year , therefore, it is considered that the nest-box may also provide an alternative winter roosting site for chough on-site. Installation of a chough nest-box at the hotel would provide an alternative nest-site within close proximity of both the current nest-site and winter roost-site, which would likely increase chance of uptake by the resident pair on-site.
- Boxes can be made of 12millimetre exterior plywood – marine plywood is preferable, or Ecosheet©, a recycled plastic boarding2. One or two large rocks approximately 10 centimetres tall should be placed in the front of the box. This provides a good perching point for the adults, and juveniles almost ready to fledge, and also forms a barrier for the nest to be built against and prevent chicks from falling out when young. Suitable nesting materials, including a variety of size twigs, heather, fern fronds, moss, lichens, teased sheep wool and horsehair for the nest lining can be provided somewhere close by for choughs to use for nest-building. The boxes need to be checked each year as they do suffer from being exposed to the sea air.
- It is proposed that a second alternative chough nest/roost-site is provided at a suitable location elsewhere within the Applicant's lands which encompass a large area of coastal grassland extending eastwards from the Proposed Development site. Here, due to a lack of either manmade or suitable natural structures to which a nest-box could be attached, it is proposed that a chough nesting platform be constructed. Again, adequate height and shade, and deterrence of interference, will be important considerations in the design of the nesting platform. Although this example shown below depicts a nest-platform being used in an aviary situation, this could easily be adapted as required to be used in a natural setting. Advantages of locating a chough nesting-platform within the general area outlined above include proximity to the current nest and winter roost-site at the hotel without being too close, availability of foraging habitat in the surrounding and wider area, and a location within lands under the ownership and control of the Applicant.
- The alternative chough nesting-sites proposed (nest-box and nest-platform, both discussed above) would be available to either the resident pair occurring on-site or potentially another breeding pair. Availability of both artificial nest design options and locations will increase the chance of successful uptake by chough. Final design and siting of both options will be undertaken by the appointed ecologist in consultation with NPWS. Measures are also proposed in relation to monitoring for chough.

Protection of Other Breeding Birds

- A bird box scheme comprising artificial nest boxes will be installed to provide alternative nesting habitat for species currently nesting in the hotel (starlings, swallows, and jackdaw). For example, the maintenance building in the north-east corner of the Site has been identified as a suitable location to accommodate

[2] http://www.birdsontheedge.org/2014/12/23/nest-boxes-new-homes-for-choughs/

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		nest-boxes for swallow. Nest-boxes are also to be installed in other suitable locations, such as on walls and trees within the Site, either retained or newly planted. A minimum of 20 No. bird boxes are to be installed within the Site. Installation of the nest box scheme, including the final number and location of boxes to be installed, is to be undertaken under the direction of the appointed ECoW and following guidance by BirdWatch Ireland. **Protection of Otter** • In the event of an otter breeding/resting place being discovered within or in proximity of the Site, all construction activity and site works will be undertaken in accordance with NRA (2008). Implementation of best-practice guidelines for otter will be overseen by the appointed ECoW. **Protection of Badger** • In the event of a badger breeding/resting place being discovered within or in proximity of the Site, all construction activity and site works will be undertaken in accordance with NRA (2006b). Implementation of best-practice guidelines for badger will be overseen by the appointed ECoW. **Protection of Amphibians** • In the event that there is a requirement to disturb breeding frogs, frog spawn and/or spawning habitat, then the relevant licence will be required from NPWS, prior to removal of frogs and/or spawn by the appointed ecologist to an alternative suitable location nearby.	
	Land and Soil	**Change of Land Use and Loss of Soil Potential/Soil Sealing** • Planting of various native tree and other plant species on exposed soils and berms following the construction phase for landscaping; • Minimising the footprint of the temporary works area: keeping all works within the designated footprint to avoid unnecessary soil sealing; and • Reusing all excavated material on site in landscaping. • Within excavations and around excavations, pore water pressure will be kept low by avoiding loading the soil/subsoil and giving careful attention to the existing drainage. **Soil Erosion** The CEMP includes the following minimum site management controls to mitigate for soil erosion: • Soil Stripping - The timing of the construction phase soil stripping and excavation works will take account of predicted weather, particularly rainfall. The area of exposed ground will be kept to a minimum by maintaining where possible existing vegetation. • Excavation Works - Earth movement activities will be suspended during periods of prolonged rainfall events.	Residual impacts are discussed in EIAR Chapter 6.

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- Storage and Stockpiles - Temporary stockpiles of excavated spoil, stored in the footprint of the excavation areas, will be directed for use in backfilling, landscaping and restoration or placed in the deposition areas on site. Reusable excavated sub-soils and aggregate will be stored in temporary stockpiles at suitably sheltered areas to prevent erosion or weathering and shall be shaped to ensure rainfall does not degrade the stored material. Stockpiles will be stored away from any open surface water drains, managing height and slope of all stockpiles and minimising soil movement.
- Top-soiling and landscaping works should take place as soon as finished levels are achieved, in order to reduce weathering and erosion and to retain soil properties.
- All temporary cuts/excavations will be carried out such that they are stable or adequately supported. Where appropriate and necessary, cuts and excavations will be protected against ingress of water or erosion by the use of cut off drains around the excavation works.
- Excavated soil will be reused beneficially on site for landscaping and general fill where possible which will reduce waste of the soil resource.

Compaction

The CEMP includes the following minimum site management controls to mitigate for compaction:

- The compounds, vehicles, stockpiled materials and heavy machinery will be in place for the duration of the construction phase and will be removed once commissioning is complete.
- The earthworks material will be placed and compacted in layers to prevent water ingress and degradation of the material. Within excavations and around excavations, pore water pressure will be kept low by avoiding loading the soil/subsoil and giving careful attention to the existing drainage as compaction would alter the surface drainage regime (see Chapter 07 Water).
- Measures will include the scheduling of HGVs during the construction phase to reduce the number of vehicles move in, through and off sit. Unscheduled vehicles will not have access to the site. Machinery should not operate directly on excavated/stockpiled soils. Heavy vehicles should only follow designated access tracks and avoid loading areas which are not contained within the footprint of the main works to minimise disturbance of the original soil and subsoil formations and to retain soil structure.

Slippage

- All temporary cuts/excavations will be carried out such that they are stable or adequately supported. Temporary works will be such that they do not adversely interfere with existing drainage channels/regimes.
- All site excavations and construction should be supervised by a suitably experienced engineer. The Contractor's method statements for each element of work should be reviewed and approved by the engineer prior to site operations. Prior to excavation, drains should be established to effectively intercept overland flow prior to earthworks. The existing network of drainage within the site should be utilised whenever possible. It is recommended that an emergency response system be developed for the construction phase of the project, particularly during the early excavation phase. This, as a minimum, should involve 24 hour advance meteorological forecasting (Met Eireann download) linked to a trigger-response system. When a pre-determined rainfall trigger level is exceeded (e.g. 1 in 100 year storm event

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		or very heavy rainfall at >25mm/hr), planned responses are undertaken. These responses should include cessation of construction until the storm event including storm runoff has passed over. • Excavated slopes should be no greater than 25°. Identify potential planes of weakness in the overburden such as discrepancies in the material type and foliation direction in the bedrock. Consultation with a geotechnical engineer or engineering geologist during the construction phase of the works will identify high risk areas of potential slip failure and design engineering solutions such as the installation of retaining walls, soil nails, ground anchors and drainage. **Contamination/Pollution** The CEMP includes the following minimum site management controls to mitigate for contamination/pollution: • Drainage within the temporary site compound will be directed to an oil interceptor to prevent pollution if any spillages occur. A bunded containment area will be provided within the compound for the storage of fuels, lubricants, oils etc.. • Stockpiles of stripped topsoil will be in locations with minimum trafficking to prevent damage and dusting. • Refuelling will be carried out using 110% capacity double bunded mobile bowsers. The refuelling bowser will be operated by trained personnel. The bowser will have spill containment equipment which the operators will be fully trained in using. Plant nappies or absorbent mats to be place under refuelling point during all refuelling to absorb drips. Mobile bowsers, tanks and drums should be stored in secure, impermeable storage area, 50m away from drains and open water. To reduce the potential for oil leaks, only vehicles and machinery will be allowed onto the site that are mechanically sound. An up to date service record will be required from the main contractor. Should there be an oil leak or spill, the leak or spill will be contained immediately using oil spill kits, all oil and any contaminated material will be removed and properly disposed of in a licensed facility. An oil spill kit that includes absorbing pads and socks will be kept at the site compound and also in site vehicles and machinery. Correct action in the event of a leak or spill will be facilitated by training all vehicle/machinery operators in the use of the spill kits and the correct containment and cleaning up of oil spills or leaks. This training will be provided by the Environmental Manager at site induction. In the event of a major oil spill, a company who provide a rapid response emergency service for major fuel spills will be immediately called for assistance, their contact details will be kept in the site office and in the spill kits kept in site vehicles and machinery. • Leakages of fuel/ oil from stores will be prevented by storing these materials in bunded tanks which have a capacity of 110% of the total volume of the stored oil. Ancillary equipment such as hoses and pipes will be contained within the bunded storage container. Taps, nozzles or valves will be fitted with a lock system. On-site washing of concrete truck barrels will not be allowed. The washing of the chutes at the rear of the trucks may be permitted. A designated chute wash down area, which will retain the washout water, will be located within the construction compound if required and there will be no other chute wash down activity on any other part of the site. • The drainage and treatment system will be managed and monitored and particularly after extreme rainfall events during the construction phase. Controls will be regularly inspected and maintained. A programme of inspection and maintenance will be designed and dedicated construction personnel assigned to manage	

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		this programme. A checklist of the inspection and maintenance control measures will be developed and records kept of inspections and maintenance works. • Road cleaning will, therefore, need to be undertaken regularly during wet weather to reduce the volume of sediment runoff to the treatment system. • To mitigate against possible contamination of the underlying bedrock/aquifer, refuelling of machinery and plant will only occur at designated refuelling areas.	
	Water	**<u>Drainage and Sediment Control</u>** • Fuels, oils, greases, and hydraulic fluids will be stored in bunded compounds. Refuelling of machinery, etc. must be carried out in bunded areas. Fuels will be stored during the construction phase in bunded fuel storage tanks with a 110% holding capacity. Where it is necessary to dispense fuels on site, this will be undertaken in areas covered with an impermeable surface to protect ground water; • Construction works, especially ones involving the pouring of concrete, will be conducted in the dry where possible; • To help prevent the contamination of the ground and groundwater, contaminated materials (oils, fuels, chemicals etc.) will be stored in 110% capacity bunded compounds as outlined in the relevant guidance, i.e. CIRIA (2001) and DMRB Volume 11 (1994). • Temporary toilet facilities will be managed by the Contractor during the construction phase; • A bunded containment area will be provided within the compound for the storage of fuels, lubricants, oils etc.; and • The compound will be in place for the duration of the construction phase and will be removed once commissioning is complete. • Temporary stockpiles of excavated earth will be constructed within the lands during construction; • All excavated materials from the site or introduced materials for construction will be either used or removed from the site; • No permanent spoil or stockpiles will be left on site, other than those materials required for landscaping, berm construction and construction generally; • Temporary storage areas for fuels and other hazardous materials required by the contractor during construction will be stored in appropriately bunded facilities to prevent the accidental spillage of hazardous liquids that could cause soil and groundwater contamination; • Collision with oil stores will be prevented by locating oils within a steel container in a designated area of the site compound away from vehicle movements; • Long term storage of waste oils will not be allowed on site. These waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider, as required; and • On-site washing of concrete truck barrels should not be allowed. The washing of the chutes at the rear of the trucks may be permitted. A designated wash area will be required.	Residual impacts are discussed in EIAR Chapter 7.

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	Material Assets	**Electrical Infrastructure** • The Contractor will put measures in place to ensure that there are no interruptions to existing services and all services and utilities are maintained unless this has been agreed in advance with ESB Networks. • All works in the vicinity of ESB Networks infrastructure will be carried out in ongoing consultation with ESB networks and will be in compliance with any requirements or guidelines they may have including procedures to ensure safe working practices are implemented when working near live overhead/underground electrical lines. • Where new services are required, the Contractor will apply to ESB Networks for a connection permit where appropriate and will adhere to their requirements. Cables will be laid underground to avoid effects on roadside hedgerows and disturbance to nesting birds. **Telecommunications** • In the event of interference to telecommunication services arising from the proposed development, the applicant will work with telecommunication providers to remedy any issues of interference to affected communication links. The design and construction of the required telecoms services infrastructure will be undertaken in accordance with the relevant guidelines and codes of practice. This will mitigate any potential effects during the operational phase of the development, with the exception of any routine maintenance of the site services. **Water Supply** • There is an existing watermains within the footprint of the proposed development, which will need to be replaced and enlarged. Irish Water/Uisce Éireann has confirmed feasibility of supply subject to the proposed upgrades to the supply pipeline to be undertaken by the developer. The construction of the new water supply infrastructure will involve trench excavation and installation of infrastructure such as pipes, valves, hydrants, and manhole chambers. • Any such work will require a temporary shutdown of water supply. The presence of valves within the wider vicinity of the water supply network will allow for shutoffs of water supply to be localised. Any localised shut down of water supply will ensure that downtime in supply will be brief and will occur once or rarely. Users will be notified prior to any shutdown of water supply and consultation and agreements with Irish Water/Uisce Éireann will also be required. • Excavations not carried out with best practice measures outlined in the CEMP would potentially cause negative effect to the water quality of the water supply to end users. The appointed contractor will be obliged to conduct the works in accordance with all relevant local authority and Irish Water/Uisce Éireann requirements. Appropriate construction method statements should be prepared and implemented by the appointed contractor. Hydrocarbons or any liquids that could adversely affect the water supply network will be bunded. Good construction practice and the implementation of all measures outlined in the CEMP, will effectively reduce the potential for impacts. Effects are therefore unlikely to occur. • The water supply services will be put in place in phase 1 of construction. During construction the existing water connection will be kept live until day of the changeover minimising any disruptions to a couple of hours. Works will be scheduled outside of peak holiday period and coordinated with local residents and	Residual impacts are discussed in EIAR Chapter 8.

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Irish Water, and notifications to neighboring holiday homes will be made prior to any disruptions. Once phase 1 of the proposed development is complete, the water supply network will be vested to Irish Water who will have responsibility for operation and maintenance of the water supply. It is considered that without the implementation of mitigation measures, accidental spillage during construction of the proposed development has the potential to cause noticeable changes in the hydrological regime if affected, but without significant consequences, the effects with mitigation are negative, not significant, localised, short-term, indirect, and unlikely.

- The proposed water supply system will incorporate water meters at all points of connection to the public watermain network and will facilitate ongoing monitoring of demand.

Foul Water discharge

- Effluent generated on site from the contractors sanitary facilities will be discharged to a holding tank and removed off site to a licensed removal contractor. Temporary discharge utilising the newly developed WWTP after the first phase of construction will be in agreement with the property owners and developers. All necessary health and safety measures will be undertaken to ensure the safety and welfare of construction personnel, the public and road users during construction of the foul infrastructure.
- Once phase 1 of the proposed development is complete, the foul water discharge will remain the responsibility of the developer and will be operated and serviced by a qualified contractor.

Stormwater discharge

The private wastewater treatment works and network, as well as the stormwater drainage network for the development site, will be maintained by the developers' maintenance company. Any issues going forward will therefore be addressed and mitigated against.

Waste Management

- Waste will be managed in accordance with the waste hierarchy in Council Directive 98/2008/EC on waste and section 21A of the Waste Management Act 1996, as amended, as follows: (a)Prevention; (b)re-use; (c)Recycling; (d)Other recovery (including energy recovery); and (e) Disposal;
- All waste for offsite treatment/disposal is to be stored temporarily in appropriate dedicated storage areas. The areas in which wastes are stored on site are segregated to prevent material and contaminated surface water runoff entering local surface water drains.
- All chemical, hydrocarbon or other controlled wastes will be stored in designated areas in appropriate approved containers within bunds or on spill pallets, as required.
- All waste to be removed from site will be undertaken by authorised waste contractors and transported to an authorised facility in accordance with best practice.

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	Cultural Heritage	Archaeological monitoring of all groundworks associated with topsoil / peat stripping should be undertaken to recover any potential artefacts. All works associated with the removal of the two internal sections of the Reenroe – Emlaghmore West townland boundary should be archaeologically monitored. The two impacted sections of the townland boundary shall be archaeologically recorded.	Residual impacts are discussed in EIAR Chapter 9.
	Landscape and Visual	• The existing grass cover will be improved with areas of meadow with differential cutting regime to provide improve habitat cover. Similarly, the area required for the proposed waste-water treatment plant on the unmanaged wet grassland area will be kept to a minimal with additional hedging proposed along its edges which will connect into the existing roadside hedgerow. • The proposed landscape measures seek to contain the proposed development in the receiving landscape and improve the characteristics of the existing lands. This will be done through enhancing the current vegetation cover with a diverse mix of native species suited to the coastal environment. These will include pollinator friendly species.	Residual impacts are discussed in EIAR Chapter 10.
	Noise and Vibration	• Best practice mitigation techniques as specified in BS 5228:2009+A1 2014 – Noise and Vibration Control on Construction and Open Sites will be implemented during the construction phase. Contractors will be familiar with the measures in this document, in order to implement the best practice measures. • If construction limits are found to be exceeded, noise screens will be utilised around noisy plant and machinery such as generators and cutting stations. • Noise stationary equipment will be located away from sensitive boundaries as far as practicable. • The use of inherently quiet plant is required where appropriate – all compressors and generators will be "sound reduced" or "super silent" models fitted with properly lined and sealed acoustic covers, which will be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers. • Site activities shall be staggered when working in proximity to any receptor. Construction works will be outside of peak season when there are visitors to nearby receptors which are mostly holiday homes. Construction managers will liaise with residents to identify suitable times for construction works. This proposed method of working will provide effective noise management of site activities to ensure that any receptor is not exposed to unacceptably high levels of noise over extended periods. • A nominated person from the appointed contractor will be appointed to liaise with local residents and businesses regarding noise nuisance events. • In the event of out of hours work occurring, for instance it is proposed that delivery of mobile homes will take place at night during the off-season, or due to emergency or other unforeseen circumstance, which will involve the generation of noise levels that are predicted to exceed out of hours noise limit criteria, Kerry County Council will immediately be notified prior to the works commencing	Residual impacts are discussed in EIAR Chapter 11.

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	Traffic and Transport	• The proposed construction phases are designed to ensure that no construction works will coincide with the July and August summer tourist season, which is the peak traffic season locally, when the proposed development is operational. • All construction parking and compounds will be provided within the site confines. Construction wheel wash facilities will be provided on-site. A specialist road washing and cleaning vehicle will be used regularly each day to maintain public roads, as appropriate. All necessary construction signage and other measures required by Kerry County Council will be provided, including construction traffic warning signage along the R567. • When the construction contractor is appointed, an updated Construction Traffic Management Plan will be submitted to Kerry County Council, for approval, prior to the commencement of construction	Residual impacts are discussed in EIAR Chapter 12.
	Air Quality and Climate	Construction works will be avoided during peak holiday periods, for phase 2 to phase 4. Construction during peak holiday periods will only occur during phase 1 of the proposed development. In order to develop a workable and transparent dust control strategy, the following management plan has been formulated by drawing on best practice guidance from Ireland, the UK (IAQM (2014), The Scottish Office (1996), UK Office of Deputy Prime Minster (2002) and BRE (2003)) and the USA (USEPA (1997)). **<u>Site Management</u>** • A Dust Management Plan (DMP) will be prepared and agreed with the stakeholders for implementation on-site. The DMP will describe the conditions under which dust is most likely to pose a risk of dis-amenity at sensitive receptors close to the site and set trigger levels which, when exceeded, would require further dust control measures to be implemented (i.e. over and above the routine measures) • At the construction planning stage, the siting of activities and storage of materials will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. • Particular care should be taken during periods of high winds (gales) as these are periods where the potential for significant dust emissions are highest. The following measures shall be taken in order to avoid dust nuisance occurring under unfavourable meteorological conditions: • The operator must monitor performance to ensure that the proposed mitigation measures are implemented and that dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions; • A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out; • All dust control conditions contained within shall be achieved. • At all times, the procedures put in place will be strictly monitored and assessed. • The dust minimisation measures shall be reviewed at regular intervals during the works to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practices and procedures. In the event of dust nuisance occurring outside the site boundary, site	Residual impacts are discussed in EIAR Chapter 13.

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Time Frame / Schedule	Environmental Aspect/Resource	Environmental Mitigation	Residual Impact
		activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are described below. **Site Roads and Routes** • Bowsers or suitable watering equipment will be available during periods of dry weather through the construction period. Research has found that watering can reduce dust emissions by 50% (USEPA, 1997). Watering shall be conducted during sustained periods to ensure that unpaved areas are kept moist. The required application rate frequency will vary according to soil type, weather conditions and vehicular use; • When required, any hard surface roads will be swept to remove mud and aggregate materials from their surface. • Site traffic on Public roads • Spillage and blow off of debris, aggregates and fine material onto public roads will be reduced to a minimum by employing the following measures: • Vehicles delivering or collecting material with potential for dust emissions shall be enclosed, covered or wetted at all times to restrict the escape of dust; • Public roads directly outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. **Climate** **GHG Emissions** • The prevention of on-site or delivery vehicles from leaving engines idling (even over short periods), • Minimising waste of materials due to poor timing or over ordering on site (to minimise the embodied carbon footprint of the site). • Ensure regular maintenance of plant and equipment. Carry out periodic technical inspection of vehicles to ensure they perform most efficiently. • Implementation of the Traffic Management Plan to minimise congestion; and • Construction personnel will be encouraged to car pool.	

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14.5 Operational Mitigations

Table 14-3 Operational Mitigation Measures

Time Frame / Schedule	Aspect / Resource	Environmental Mitigation / Recommendation	Residual Imapct
Post Construction / During operation	**Population and Human Health**	**Population and Settlement** Employ local people where possible. **Tourism and Amenity** The widening of the beach access road and retention of existing parking will facilitate easier access to the beach while at the same time facilitating access to the proposed development. **Human Health** • The health and safety mitigation measures provided in the noise, air emissions, water and traffic reports must be complied with. • All those employed on the site must be inducted in the relevant health and safety standards and protocols before starting work. Compliance with the health and safety standards must be monitored and enforced. • On-site waste collection and disposal facilities will be thoughtfully provided for construction and operational phase, encouraging responsible waste disposal practices among visitors. Educational and awareness programs may also be instituted to promote recycling and discourage the use of single-use plastics. • Scheduled clean-up and waste collection routines will be established to promptly address any littering concerns. These measures will ensure that the site remains clean and devoid of environmental hazards associated with improperly managed waste. • Waste materials that cannot be prevented or reused will be diligently sorted, recycled, or disposed of in strict compliance with local regulations and industry best practices. Licensed waste management contractors will be engaged to ensure responsible handling and disposal of construction waste and operational waste. **Climate Change** The mitigation measures identified in the Material Assets and the Air and Climate Change Chapters of the EIAR must be applied.	Residual impacts are discussed in the associated preceding chapter.

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Time Frame / Schedule	Aspect / Resource	Environmental Mitigation / Recommendation	Residual Imapct
	Biodiversity	**<u>Protection of Bats (Lighting Plan)</u>** The Proposed Development site is currently devoid of any form of artificial light; therefore, it is vital that the operational lighting proposal is sensitive to bats and other fauna and use of artificial light is minimised to minimise impacts on bats. It is imperative that illumination of any part of the cottage, in particular roost access points, and surrounding vegetation is avoided to facilitate bats travelling to and from the roost. Regarding bats and the Lighting Plan, particular consideration has been given to the area in the vicinity of the cottage, the proposed vegetated corridor extending north-east from the cottage, and the existing treeline and road-side vegetation further north-east with which proposed planting will link. The proposal has been designed to avoid light-spill onto these particular areas and be minimised as much as practicably possible elsewhere throughout the site. This will ensure that, in relation to the existing treeline and roadside vegetation extending north, this 'dark corridor' is retained. The Lighting Plan is to follow these guidelines. • LED luminaires to be used due to the fact that they are highly directional, sharp cut-off, lower intensity, good colour rendition and dimming capability. • All luminaires used to lack UV elements to reduce impact. Metal halide, compact fluorescent sources should not be used. • A warm white light source ((<2700 Kelvins) is to be adopted to reduce the blue light component). • Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. • Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill. • Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges. • Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards. The shortest column height allowed will be used where possible. • Only luminaires with a negligible or zero upward light ratio and with good optical control will be used. • Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt. • Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer. • The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output and increased upward light scatter from surfaces. Therefore, they should only be considered in specific cases where these issues can be resolved. • Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and	Residual impacts are discussed in the associated preceding chapter.

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		fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely. **Biodiversity Signage** Signage is to be erected at various locations to include along the Reenroe Cliff Walk and in the proposed BEA to highlight the presence of more sensitive habitats, including the species-rich coastal grassland ('Dry calcareous and neutral grassland') which occurs between the walking trail and the cliff edge around much of the headland and the 'Shingle and gravel bank habitat' at the upper shore of Inny Strand. Signage will also be erected in relation to fauna, including coastal species which could or are likely to occur in the vicinity of the development, such as chough, waders and waterbirds. The purpose of this signage is to encourage visitors to the area to be cognisant of the sensitive nature of coastal habitats to impacts, such as from trampling and erosion, which can negatively impact upon coastal habitats and flora. Signage should also educate visitors as to the sensitivity of bird species to disturbance, in particular during certain periods, such as breeding, or when foraging or roosting on-land. Signage will direct visitors to the area to keep dogs on leads and follow 'Leave No Trace' principles. **Protection of Water Quality during Operation** **Surface and Foul Water Network** • For the SUDS strategy to work as designed it is important that the entire drainage system is well maintained. It will be the responsibility of the site management team to ensure the drainage system is maintained. The recommended programme of maintenance for the proposed storm water network should be adhered to. The recommended programme of maintenance for the proposed foul water network should be adhered to. **Monitoring** **Chough** Regular monitoring of the chough nest-boxes/platforms is to be carried out to check for signs of wear or damage. At a minimum, chough nest-boxes/platforms are to be checked on an annual basis and any necessary repairs undertaken for a minimum 2 year period. A chough breeding season survey is to be undertaken by a suitably qualified ecologist to assess breeding activity and determine the outcome of the nests, as relevant. This is to be undertaken at both artificial nest locations for a minimum 2 year period following installation. Summary reports, outlining findings as above, are to be submitted to NPWS and KCC on an annual basis during this 2 year monitoring period. **Alien Invasive Plant Species (IAPS)** Invasive species will continue to be monitored, and where required, managed throughout the operational phase, in accordance with the construction-stage IAPS management plan. **Bats** As per Marnell et al., (2022), monitoring of the alternative roost-site (cottage) will take place for a two year period and will be undertaken by a suitably-qualified ecologist. The temperature data logger installed within the cottage will be left in-situ throughout this monitoring period. Monitoring will comprise the following summer surveys in each year:	

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		• static monitoring undertaken over 5 nights in each of June, July and August and, • two dusk emergence surveys undertaken between May and August. As part of monitoring, any mitigation measures implemented as part of the cottage renovation will be evaluated for effectiveness. This will inform the need for any changes or additional measures which may be required. Bat boxes installed will be inspected within one year of erection. Seasonal daytime inspections of bat boxes using an endoscope/thermal imagery scope will be undertaken once in summertime (excluding mid-June to mid-August when females with dependant young may be present) to monitor usage and once in wintertime to assess general wear and tear and carry out cleaning (only necessary where self-cleaning models are not used). This will be undertaken by a licensed bat-handler. Monitoring of bat boxes is to continue for a two-year period. Any boxes remaining unused after 1 year will be relocated in accordance with NRA, (2005). The bat box scheme is to be registered with Bat Conservation Ireland. Annual monitoring reports for bats will be prepared by a suitably qualified ecologist and submitted to KCC and NPWS for the duration of the monitoring period.	
	Land and Soil	• As vegetation becomes established and equilibrium is achieved, erosion rates will reduce to existing baseline levels. • New tree and hedge planting along old field boundaries will establish a green corridor networks which will divide the sites into smaller, clearly defined spaces, providing habitat connectivity whilst supporting visual integration in the wider landscape. • Vegetated berms will be developed along the eastern, northern and southern boundaries of the property to provide visual and sound screening, as well as along the main access road into the development and between the different types of accommodation areas. Existing hedgerows will be maintained and enhanced using native species typical of those already growing in the locality. All planting will be in line with the All Ireland Pollinator Plan. • As part of this planning application, a Habitat Enhancement Plan has been developed by qualified ecologists in consultation with the National Parks and Wildlife Service. • The risks associated with sedimentation and contamination due to erosion and runoff will be mitigated to minimal levels as areas are re-vegetated and construction traffic ceases.	Residual impacts are discussed in the associated preceding chapter.
	Cultural Heritage	All archaeological and cultural heritage issues will be resolved during pre-construction and construction phase thus no mitigation is needed for the operational phase.	Residual impacts are discussed in the associated preceding chapter.
	Noise and Vibration	As part of the detailed design of the development, plant items with appropriate noise ratings and, where necessary, appropriately selected remedial measures (e.g. enclosures, silencers etc.) will be specified in order that the adopted plant noise criteria is achieved at the facades of sensitive properties, including those within the development itself. A general noise management strategy should be developed as part of the development, including hours of operation, training for staff and signage to notify the public of the potential effect their activities, particularly at night may have on nearby residents.	Residual impacts are discussed in the associated preceding chapter.

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	Material Asset	**Foul Water** During operation, the new WWTP on site will avoid any additional pressure on the existing foul water network and facilities and the proposed plant will treat the water to the required standards.	
	Traffic and Transport	The proposed development includes the widening and upgrading of the existing beach access road, including a shared pedestrian and cycle facility, realigned junction tie-in at its R567 junction, and provision for Rural Link public transport.	Residual impacts are discussed in the associated preceding chapter.
	Air Quality and Climate	**Climate** **GHG Emissions** The proposed development will be constructed in accordance with Building Regulations. Only sustainable materials which can perform in longevity and are resistant to changes in temperature will be chosen. The proposed development will be structurally designed for snow/ice loading and braced effectively to withstand wind in accordance with Eurocodes Structural Design. The floor levels of the proposed development are designed at an elevation to mitigate against flood risk. The structural design of the proposed development is designed to carry snow loads, in accordance with Eurocodes Structural Design Standards. The structural design of the proposed development will incorporate elements to mitigate against wind damage.	Residual impacts are discussed in the associated preceding chapter.