

### 13. INTERACTION OF THE FOREGOING

The preceding Chapters 4 to 11 of this EIAR identify the potential environmental impacts that may occur in terms of Population and Human Health, Biodiversity, Soils and Geology, Water - Hydrology and Hydrogeology, Air and Climate / Noise and Vibration, Landscape, Cultural Heritage, and Material Assets, as a result of the proposed development. All of the potential impacts of the proposed development and the measures proposed to mitigate them have been outlined in the preceding sections of this report. However, for any development with the potential for significant environmental impact there is also the potential for interaction amongst these impacts. The result of interactive impacts may either exacerbate the magnitude of the impact or ameliorate it.

The following paragraphs detail the instances where there is or was an interaction between the impacts in the various sections and how any resultant adverse impacts have been averted.

Table 13.1 below sets out a summary of the identified interactions that are described below.

Chapter	4	5	6	7	8	9	10	11
4. Population and Human Health		◇			◇			◇
5. Biodiversity	◇	◇	◇	◇	◇	◇	◇	
6. Landuse, Soils & Geology				◇	◇			
7. Water		◇	◇				◇	
8. Air & Climate – Noise & Vibration	◇	◇	◇					◇
9. Landscape		◇						
10. Cultural Heritage		◇		◇				
11. Material Assets	◇	◇			◇			

Table 13.1 Summary of Identified Interactions

#### 13.1. POTENTIAL EFFECTS

##### Population and Human Health and Material Assets

The construction phase of the project will give rise to road closures and restrictions of traffic movements during the construction of Pollnacross Bridge (L1105) and Mullenmore Bridge and whilst realigning the lake road. This will create some short-term inconvenience for road users. By ensuring that these impacts occur at times and locations provided for in a traffic management plan, this will be mitigated in so far as is possible.

##### Population and Human Health and Biodiversity

The proposed scheme requires that the bypass channel becomes operational at a water level that prevents the flooding of Crossmolina Town. To achieve this, the intake weir level would have to be a level such that, to prevent flooding of the town during the 1 in 100 year event, lesser flows would be directed to the bypass channel and it would become operational several times during any given year. This could potentially result in significant effects on the

normal functioning of the river through changes to the hydrological regime. This potential interaction was overcome with the introduction of a flow control structure, which aids in directing high flows down the bypass channel and means that the intake weir level can be raised so that the lower flows in the river are not affected and the bypass channel is only operational during the very high flows when it is actually required to prevent flooding in Crossmolina Town,

### **Biodiversity and Water - Hydrology & Hydrogeology**

Site activities during the construction phase have the potential to give rise to water pollution, and consequential impacts on flora and fauna that use that water within the same catchment. The proposed scheme has been designed to minimise the potential for water pollution from the outset by limiting works on the bank of the River Deel to the minimum area necessary and by ensuring that the River Deel is unaffected by the proposed scheme in all but high flood events. In addition, extensive mitigation is proposed to minimise the potential for water pollution arising from the works which also minimises the potential for this any cumulative or interacting effect.

### **Biodiversity and Air & Climate/Noise & Vibration**

Site activity during the construction phase could give rise to noise that could cause disturbance to fauna. All construction activities will be temporary in nature with limited interaction with the River Deel or other sensitive habitats and will progress across the works area of the entire scheme, minimising the duration of works in any one area.

### **Biodiversity and Landscape**

The removal of some vegetation within the development footprint and surrounding areas will result in a change to the visual landscape during the construction phase, which will become part of the normal landscape of the wider area for the duration of the operational phase. Any vegetation that is lost as part of the proposed scheme will be replaced with planting of native species.

### **Soils & Geology, Biodiversity and Water - Hydrology & Hydrogeology**

The movement and removal of soils, overburden and rock during the construction phase has the potential to give rise to impact on water quality. The excavation of roads and other works areas has the potential to intercept larger volumes of drainage water that will require management. The EIA chapters and the Construction Environmental Management Plan provide robust information on how to avoid such effects.

### **Soils & Geology and Air & Climate/Noise & Vibration**

The movement and removal of soils, overburden and rock during the construction phase has the potential to give rise to noise and dust impacts. However, these effects and the measures that are in place to avoid any cumulative or interactive effects are fully described in this EIA.

### **Population and Human Health, Air & Climate/Noise & Vibration and Material Assets**

The movement of construction vehicles both within and to and from the site has the potential to give rise to noise and dust nuisance impacts during the construction phase. However, these effects and the measures that are in place to avoid any cumulative or interactive effects are fully described in this EIA.

#### **Cultural heritage, Biodiversity & water**

Archaeological investigations including test trenching have the potential to result in impacts on the habitats upon which the tests are being carried out and downstream watercourses. As such these procedures are either assessed as part of the project or are assessed in their own right with mitigation included where necessary to avoid any harmful impacts on biodiversity and or water quality.

#### **Cultural Heritage & Landscape and Visual**

Archaeological investigations including test trenching have the potential to result in landscape and visual impacts in terms of removal of vegetation and earth movement. As such these procedures are either assessed as part of the project or are assessed in their own right with mitigation included where necessary to avoid any detrimental landscape and visual impacts.

### **13.2. MITIGATION**

Where any potential interactive negative impacts have been identified in the above, a full suite of appropriate mitigation measures have already been included in the relevant sections of the EIA and are included in a schedule of mitigation that is included as Chapter 12 of the EIA.