

25.0 Cumulative Effects

Introduction

- 25.1 This Chapter of the Environmental Impact Assessment Report (EIAR) considers the potential for the proposed development at Stranraer Marina, to yield cumulative effects on the environment within the study area. Cumulative effects are the combined impacts of a single activity or multiple activities.
- 25.2 The individual impacts from the proposed development may not be significant on their own but when combined with other developments, the significance of the combined effects could become significant, in EIA terms.
- 25.3 This chapter also considers the combined effect of a number of individual residual impacts on a single sensitive receptor/ resource, which are referred to as in-combination or 'intra-project' interactions.

Legislation, Guidance and Policy

National Planning Policy Context

- 25.4 National Planning Framework 4 (NPF4)¹ states that “*adverse impacts, including cumulative impacts, of development proposals on the natural environment will be minimised through careful planning and design, taking into account the need to reverse biodiversity loss*”

Methodology Used For Assessment

Consultation

- 25.5 An EIA Scoping Report (March 2021)² setting out the proposed scope of the EIA for the proposed development was submitted to MS-LOT, and received in June 2021 (**Appendix 1.2 – Volume 2**). In accordance with regulation 14 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“2017 MW Regulations”), the Scottish Ministers considered the content of the Scoping Report as sufficient and issued their Scoping Opinion, (February 2023)³, which has been used to help inform the contents of this EIA Report (EIAR).
- 25.6 The Scoping Opinion (February 2023) confirmed the Scottish Ministers acceptance of cumulative effects being addressed within the individual topic chapters of the EIAR. Whilst cumulative effects have been considered within each topic, they have also been presented within this chapter, alongside an assessment of in-combination or 'intra-project' interactions.

¹ Scottish Government: National Planning Framework 4 (NPF4): February 2023. Available at - <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf>

² RPS Group: Environmental Impact Assessment Scoping Report – Stranraer Marina (March 2021)

³ Marine Scotland: Scoping Opinion adopted by the Scottish Ministers under Part 4 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Dumfries and Galloway Council Stranraer Marina Development: February 2023

25.7 The Scoping Opinion (February 2023) also highlighted the representations from the Scottish Environment Protection Agency (SEPA) and Marine Analytical Unit (MAU) in relation to cumulative effects.

Cumulative Effects - Other Projects/ Developments

25.8 As a minimum, a cumulative assessment within an EIAR needs to consider other consented developments, which may or may not be ongoing (i.e. developments with planning permission or a marine licence which may or may not have already been commenced). Beyond that, the selection criterion is whether it would be reasonable to foresee that another development would occur.

25.9 As part of the approach to the assessment, the initial step was to identify the committed developments and reasonably foreseeable projects as discussed above, as shown in **Table 25.1** below.

25.10 Each topic specialist assessed the developments (both committed and potentially forthcoming) based on the relevance to their discipline.

25.11 A systematic, topic by topic, consideration of potential cumulative effects was carried out and professional judgement was used to determine whether or not the effects were considered to be significant.

Cumulative Effects - In Combination/ 'intra-project' Interactions

25.12 This part of the assessment focussed on the combined effect of a number of individual impacts arising as a result of the Proposed Development on a single sensitive receptor/ resource.

25.13 The primary focus was upon significant residual impacts, however, the potential for a combination of non-significant residual impacts to result in a significant cumulative impact on an identified resource or receptor has also been considered. The residual impacts are identified in the individual topic assessments, as set out in Chapters 7-24 of the EIAR.

25.14 Where there was potential for interaction with other topic areas and subsequent identification of potential combined effects at sensitive receptors, this receptor was considered further.

25.15 The relevant residual in-combination/ intra project effects were then grouped together, and the potential for significant combined effects upon the receptors was assessed.

Assessment of Effects

25.16 The EIAR assesses the potential impacts of the proposed development on the scoped in environment topics and reaches a conclusion on the level of significance with regard to:

- the construction phase of the proposed development;
 - the operational phase. i.e. all the proposed development (including embedded mitigation) completed in place and operational; and
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- the residual effects remaining once proposed mitigation measures have been applied;

25.17 The EIAR considers whether the impacts of the proposed development are deemed to be:

- direct or indirect; temporary or permanent;
- over the short term, medium term or long term; and
- whether the effects are judged to be positive (beneficial) or negative (adverse)

Levels of Effects and Significance

25.18 A professional judgment on the levels of effects and significance is quantified using the following generic criteria:

- Substantial – these are likely to be important considerations at a regional or district scale, and likely to be of interest and potential concern given their relative importance and scale;
- Moderate – while important at a local scale, this level of impact are not likely to be key decision-making issues, albeit the cumulative effects of such effects could be of interest and note in a particular area or resource;
- Slight – these are very local or site specific issues but unlikely to be of any concern or relevance to the decision-making process; and
- Negligible – these are essentially beneath the level of perception.

Limitations of the Assessment

25.19 This chapter draws on the information and assessment contained in each of the topic specific chapters. The assessment provided requires an assessment of the likely interactions and the relationships between the proposed development and the schemes or developments listed below (Table 25.1), which is within the currently available public domain.

Impact Assessment

Introduction

- 25.20 The predicted impacts of the proposed development in combination with other committed and reasonably foreseeable projects has been assessed in relation to individual receptors and resources on a topic-specific basis. As a minimum, the cumulative effects assessment should include all developments that have been approved and which may or may not be ongoing (i.e. developments with planning permission which may or may not have already been commenced). Beyond that, the selection criterion is whether it would be reasonable to foresee that another development would occur.
- 25.21 Based on these categories of development, and professional judgement, **Table 25.1** below sets out the specific developments that are considered reasonable to take into consideration in the cumulative effects assessment. This judgement is based on whether or not it is reasonably foreseeable that the developments will come forward during the same time period in which the proposed development will be built out, and whether or not sufficient information is likely to be available to enable an assessment of the potential environmental impacts to be made.
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Table 25.1: List of Committed and Reasonably Foreseeable Projects

Description of Development	Location	Reference
Committed Projects		
Planning Permissions		
Installation of one 10 metre high streetworks column, 3 antennas, 1 network camera, 1 equipment cabinet and associated works	Grass Verge Next To Harbour Office West Pier Market Street Stranraer DG9 7RE	25/0778/FUL
Formation of coastal habitat for seabirds including formation of inland pool with islands, water inlets and outlets from and into loch ryan, screening bunds up to 2 metre high, 3 bird hides, access routes, upgrading bridge crossing of corsewall burn, landscaping and associated works including relocation of excavated earth to southern field	Land To The West Of Loch Ryan And North Of Corsewall Burn At Corsewall Estate Kirkcolm Stranraer DG9 0NX	24/1534/FUL
change of use of part of former port to form haulage yard (class 6), siting of office, erection of 3 metre high security fencing and access gate and installation of security lighting columns (partially retrospective)	Former Stena Port Port Rodie Stranraer	24/1407/FUL
installation of 4 electric vehicle charging points with associated charging upstands, supporting equipment cabinets and substation infrastructure	Land At Port Rodie Car Park Harbour Street Stranraer DG9 8EG	23/0739/CLP
Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter	Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer	23/0976/FUL

Description of Development	Location	Reference
Erection of watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath	Land To West Of Marina And Harbourmaster's Office Stranraer	23/0970/FUL
Consent under section 36 of the electricity act 1989 and deemed planning permission under section 57(2) of the town and country planning (Scotland) act 1997 for construction and operation of mid moile wind farm within the planning authority area of Dumfries and Galloway council	Mid Moile Windfarm Cairnryan	22/0394/S36
Marine Licences		
Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area in to the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging.	Stranraer harbour - main basin, marina and approaches	00008983 (Marine Scotland)
Deposit of Oyster Shells - Marine Licence Application	Loch Ryan, Dumfries and Galloway	07059 (Marine Scotland)
Capital Dredging and Sea Disposal - Loch Ryan Port, Cairnryan	Loch Ryan Port approach channel, berth pocket and swinging area	00009930 (Marine Scotland)

Description of Development	Location	Reference
Projects Awaiting Determination		
Planning Applications - Awaiting Determination		
Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc-bikes (accessible electric bicycles), bike wash/pump/repair station, public toilets, bus waiting area(s), internal general purpose space and external shelter with fixed benching and installation of 5no. bike stands and 4no. electric vehicle charging units	Port Rodie Car Park Port Rodie Stranraer DG9 8EG	25/1190/FUL
Erection of 77 dwellinghouses with roof mounted solar panels and air source heat pumps, formation of access and internal road and footpath layout, 178 car parking spaces, landscaping, suds drainage pond and associated infrastructure	Site Adjacent To Springbank Road Stranraer DG9 0HS	24/2518/FUL
Marine Licence Applications - Awaiting Determination		
Construction of: Platform for instructor shelter. Removal of: 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance	Stranraer Marina, Agnew Park, Stranraer	00010825 (Marine Scotland)
Marine Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (eg. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers.	Stranraer Marina, Stranraer	00010841 (Marine Scotland)
Marine Licence Application – 18 Moorings	Stranraer Marina, Stranraer	00010772 (Marine Scotland)

Cumulative effects - other projects/ developments

25.22 Following on from the review of the developments listed in **Table 25.1** above, **Table 25.2** below summarises the assessment of likely cumulative effects from other projects/ developments.

Table 25.2: Summary of Cumulative Effects

EIA Topic	Potential Cumulative effects
<p>Coastal Processes</p>	<p>It is anticipated that the proposed development will be constructed over a period of 24 months. During this period there is the potential for cumulative effects with regards to suspended sediment concentration (SSC) and deposition for projects which include activities which have the potential to elevate SSC and are also undertaken within the dredging plume envelope. It is noted that sediment plumes generated from other projects would be subject to dispersion by the same tidal currents as the proposed development. This means that plumes would not travel towards one another and would only coalesce when sediment is released from one project into the plume extent of a second. There is limited potential for cumulative impacts for other coastal processes (tidal regime, wave climate and sediment transport) as the 'project alone' impacts were seen to be limited to the immediate vicinity of the proposed development.</p> <p>Marine Licence application 00010775 relates to the placement of 18 offshore moorings. They are located in three groups of six. The closest group to the proposed development is at a distance of <i>circa</i> 500m; whilst the furthest group is <i>circa</i> 1,500m to the north of the development boundary. Initial placement of the moorings may give rise to localised, temporary increases in SSC, however cumulative impacts with the proposed development are very unlikely and, should they occur will be of negligible magnitude. The presence of the moorings will not impact on coastal processes and therefore cumulative impacts would not occur in combination with the proposed development.</p> <p>Marine Licence application 00010825 relates to the removal of the remnants of the two outfalls which lie on the seabed to the west of the West Pier, as indicated on the Admiralty chart 1401-2 in Error! Reference source not found. within Chapter 7. The Stranraer Water Sports Association (SWSA) works lie outside the proposed development boundary. The boulders and the two outfalls will be removed by a vessel-mounted or tracked excavator, depending on the weather, wind (speed and direction) and pressure. All the removed boulders and redundant outfalls will be moved above MHWS. During the removal activities there is the potential for increased SSC as seabed sediment is disturbed and the offshore works may potentially occur within the dredging plume envelope for the proposed development. However it is considered that the likelihood of these projects being undertaken concurrently is very low. Notwithstanding this, any potential cumulative impacts would be of low magnitude given the negligible contribution from each project.</p> <p>The removal of the outfall remnants and boulders would not significantly impact coastal processes. The initial removal of the outfalls may alter sediment transport in the short term as any material which has accreted on the western edge is released, as illustrated in Error! Reference source not found. within Chapter 7 of the EIAR. However in the medium to longer term coastal processes would not be impacted and no cumulative impacts would arise in combination with the proposed development.</p>

EIA Topic	Potential Cumulative effects
Coastal Processes	<p>At the time of drafting it is understood that Marine Licence application 00010825 is being updated to comprise only the removal of the two redundant outfalls and boulder clearance, as discussed. Should the application remain as it is currently published, it will also incorporate construction of a permanent concrete instructor platform and beach clearance activities, including litter and natural debris removal. The instructor platform will fall within the designated site boundary for the onshore works associated with the Stranraer Watersports Hub project and therefore has no pathway for cumulative impacts with offshore development activities as use of the slipway to access the site will be undertaken at low water. Similarly for beach clearance activities, obstructions within the intertidal zone will be removed by appropriate mechanical machinery when the tide is suitably low.</p> <p>It is understood that the related Marine Licence application 00010841 is also in the process of being withdrawn. However, should this project proceed on the basis as it is currently published, it will comprise mooring for eight pontoons and provision of three racing markers. Small craft will dock against the pontoons temporarily as rest stations. Pontoons require four moorings each, laid in a rectangle measuring <i>circa</i> 11m by 12m on sea bed and will therefore be of diminutive size. The closest pontoon is located <i>circa</i> 100m north of the breakwater. As noted for the permanent moorings under licence application 00010772, initial placement of the moorings may give rise to localised, temporary increases in SSC, however cumulative impacts with the proposed development are very unlikely and, should they occur will be of negligible magnitude. The presence of the moorings and racing markers will not impact on coastal processes and therefore cumulative impacts would not occur in combination with the proposed development.</p> <p>The cumulative effects assessment for this topic concluded that there will be no significant cumulative effects from the proposed development alongside other projects/plans.</p>

EIA Topic	Potential Cumulative effects
<p>Navigation and Safety</p>	<p>It is important to consider effects, not just in isolation, but also cumulatively, as this may show that individually analysed impacts can become significant when they are added together, or with, other effects. The co-existence of impacts may increase or decrease their combined impact. Impacts that are considered to be insignificant, when assessed individually, may become significant when combined with other impacts. The Navigational Risk Assessment (NRA) approach taken to assess navigation and safety uses and applies both embedded and additional mitigation across all identified risks, not just those which are identified as being likely significant effects. As such, each individual risk is satisfactorily reduced to 'As Low As Reasonably Practicable' (ALARP) and it is therefore considered that there are no in-combination effects which require to be separately addressed.</p> <p>Other projects can cumulatively increase risk and the consequences or likelihood of significant environmental effects. Cumulative effects are the combined impacts of a single activity or multiple activities. The individual impacts from the proposed development may not be significant on its own but when combined with other developments, the significance of the combined effects could become significant.</p> <p>Committed and reasonably foreseeable projects were reviewed and considered within the NRA framework and methodology. Additional controls were specifically identified and included in the NRA, for example, early liaison with other associated projects in the area to ensure that projects do not adversely impact the planned development. As a result of the inclusion of these additional controls within the NRA, it is concluded that there is no potential for cumulative effects to arise from the committed and reasonably foreseeable projects identified.</p> <p>Comments relating to the purpose and focus of early liaison with committed and reasonably foreseeable project owners have been provided against each project below where there is relevance to the subject matter of this topic.</p> <p>The following committed and reasonably foreseeable projects within close proximity that might impact marine navigation were reviewed and consideration given to each as follows:</p> <ul style="list-style-type: none"> • Planning Permission 23/0739/CLP: The positioning of bright lights on EV charging units can have a detrimental impact on safe navigation. Representations should be made as part of the planning process or direct to the developer to ensure that consideration is given to position any EV lights in such a way as to not interfere with safe navigation in the harbour; • Planning Permission 23/0976/FUL: This development includes the installation of floodlighting which can have a detrimental impact on safe navigation. Representations should be made as part of the planning process or direct to the developer to ensure that consideration is given to position any floodlights in such a way as to not interfere with safe navigation in the harbour; • Planning Permission 23/0970/FUL: This development includes the introduction of water-based activities which can and should work alongside those of the marina development. However, the statutory harbour authority should seek early engagement with SWSA

EIA Topic	Potential Cumulative effects
<p>Navigation and Safety</p>	<p>to agree the conduct of an NRA for this activity and to, as necessary, develop and agree a water sports management plan for the area;</p> <ul style="list-style-type: none"> • Planning Permission 22/0394/S36: No direct impact to the marina development is expected as a result of this proposed wind farm development. However, it would be prudent to liaise with the planning process or direct with the developer to check if the construction of the wind farm might require water-borne activities, such as the delivery of turbine parts through the entrance to Loch Ryan, which may impact craft using this area on approach to the marina; • Planning Permission 24/1407/FUL: This development includes the installation of floodlighting which can have a detrimental impact on safe navigation. Representations should be made as part of the planning process or direct to the developer to ensure that consideration is given to position any floodlights in such a way as to not interfere with safe navigation in the harbour; • Marine Licence 00008983: This licence expired in November 2021. No information relating to the maintenance dredging of the marina has been provided at this time. It is anticipated that maintenance dredging of the marina and its approaches will be required and the licence terms will be different from those within the expired licence. It is recommended that consideration of a maintenance dredging licence be made alongside or immediately following the approval of the marina expansion project; • Marine Licence 00009930: No direct impact to the marina development is expected as a result of this proposed capital dredge activity at Loch Ryan Port, nor is it known if or when this might be undertaken. However, it is expected that the statutory harbour authority in that area (Stena Line Ports Ltd) will control the activity and promulgate relevant information to all users. • Planning Permission 25/1190/FUL: The positioning of bright lights on EV charging units can have a detrimental impact on safe navigation. Representations should be made as part of the planning process or direct to the developer to ensure that consideration is given to position any EV lights in such a way as to not interfere with safe navigation in the harbour; • Marine Licence Applications 00010825, 00010841 & 00010772: These applications relate to proposals for beach clearance, establishment of pontoons and moorings in an area just outside and to the north and west of the marina entrance. Consideration of appropriate lighting to align with that of the marina and positioning of mooring and pontoon equipment will be vital to the success of both projects. It is recommended that these marine licence proposals would benefit from close working between the developer and the statutory harbour authority (D&GC) to ensure that the activities are risk assessed and covered by an appropriate water sports management plan.

EIA Topic	Potential Cumulative effects
Major Accidents and Disasters	<p>Chapter 9 (Major Accidents and Disasters) of the EIAR notes the presence of committed and reasonably foreseeable projects in the study area and concludes that while these developments are in proximity to the proposed development, they are not expected to have significant cumulative effects on the road network usage or the risk of accidents. Each project's design and management measures ensure that any potential impacts are effectively controlled and mitigated.</p> <p>In summary, when considering the proposed development in combination with other proposed and consented developments within 5km of the proposed development, there will be no significant cumulative impacts.</p>
Flood Risk	<p>The committed and reasonably foreseeable projects relevant to the topic of flood risk are set out in Chapter 25 (Flood Risk) in the EIAR.</p> <p>The enactment of the Flood Risk Management (Scotland) Act 2009 has imposed a duty on local authorities and other responsible authorities to contribute to managing flood risk in Scotland. As such, existing and proposed developments identified within the vicinity of the proposed development should, and will, have undergone appropriate flood risk assessment and should incorporate suitable mitigation to address any associated flood risk. As a result, it is anticipated that the significance of effect of the proposed development on flood risk will remain Negligible for the operational phase when considering the cumulative effect of these developments.</p>

EIA Topic	Potential Cumulative effects
<p>Water Quality</p>	<p>During the construction phase, it is possible that the projects identified above could have additional short term effects on water quality and/or hydromorphology in Loch Ryan during their respective construction phases. Particularly any dredging associated with Loch Ryan Port at Cairnryan (Marine Licence 00009930). However, these projects will be subject to strict environmental controls by regulators and will be required to implement extensive mitigation, comparable to that outlined in Paragraphs Error! Reference source not found. to Error! Reference source not found. within Chapter 11 of the EIAR, to negate or minimise impacts. The construction phases of these projects will also not necessarily be concurrent with the proposed development. Additionally the Loch Ryan Port is located over 8km north of Stranraer harbour and is unlikely to lead to an in-combination effect with the proposed development. As a result, it is anticipated that the effect on water quality and hydromorphology will remain Slight/Moderate for water quality and Negligible for hydromorphology for the construction phase when considering the cumulative effect of these projects.</p> <p>When considering operational phase effects, it is noteworthy that all terrestrial developments constructed since the enactment of the Water Environment and Water Services Act in 2003 are expected to incorporate suitable drainage systems, with pollution treatment measures where required in line with SEPA's Supporting Guidance WAT-SG-12. It is, therefore, expected that proposed developments identified within the vicinity of the proposed development will incorporate drainage strategies which mimic natural catchment hydrology, providing appropriate treatment where required to prevent adverse effects on water quality from any associated increase in pollutant sources.</p> <p>Permitted dredging at Loch Ryan Port is for the purpose of ensuring the port meets the original capital dredge design depth as completed in 2011, and so is not considered to represent any further hydromorphological change to the water body. Other potential marine developments (awaiting determination) are limited to local moorings, markers and instructor platforms associated with the consented Boathouse (23/0976/FUL) and Watersports Centre (23/0970/FUL) to the west of the Marina. Given the minimal footprint of these proposals within the 42km² Loch Ryan, this is expected to have sufficient capacity to absorb these additional hydromorphological pressures on a water body scale and associated impacts are considered to remain of Low magnitude.</p> <p>As a result, it is anticipated that the effect on water quality and hydromorphology will remain as Negligible for water quality and Slight/Moderate for hydromorphology for the operational phase when considering the cumulative effect of these developments.</p>

EIA Topic	Potential Cumulative effects
<p>Benthic Ecology</p>	<p>The potential impacts of the proposed development on benthic ecology will be assessed following completion of the analysis of the results from the benthic and intertidal survey. It is intended that this will form an addendum to the main EIAR. As part of the assessment, the potential for cumulative effects when considered alongside other committed and reasonably foreseeable projects will be considered.</p>
<p>Fish and Shellfish Ecology</p>	<p>As set out in Chapter 13 (Fish and Shellfish Ecology) of the EIAR, the known additional projects that are committed to or reasonably foreseeable and may potentially provide cumulative effects in relation to fish and shellfish ecology, in combination with the proposed development include:</p> <ul style="list-style-type: none"> • Deposition of oyster shells within Loch Ryan (Loch Ryan Oyster Fishery Co Ltd); • Capital dredging and sea disposal of sediments from the Loch Ryan Port approach channel, berth pocket, and swinging area (Stena Line Ports); • The construction of a platform for instructor shelter and removal of redundant sewer outfall pipes, debris, unlit beacon and boulders as well as beach clearance at Stranraer Marina (Stranraer Watersports Association); • Marine construction and pontoon deposit for eight pontoons and three racing markers at Stranraer Marina (Stranraer Watersports Association); and • An additional 18 moorings at Stranraer Marina (Stranraer Watersports Association). <p>The above projects are either located considerably further up Loch Ryan and outside the zone of influence from any predicted impacts associated with the proposed development, or else consider that that their actions will result in no detrimental impact on the marine environment.</p> <p>Chapter 11 (Water Quality) of this EIAR assesses that any cumulative/in-combination effects arising from the above projects are unlikely to alter any of the potential impact assessments made in relation to the proposed works in terms of water quality. Chapter 7 (Coastal Processes) of this EIAR likewise concludes that localised, temporary increases in suspended sediment levels may occur in relation to the other planned developments in the area, however that cumulative impacts with the proposed development are very unlikely and, should they occur will be of negligible magnitude. Any underwater noise generated by these additional is also likely to be considerably less than that generated by the proposed development, as stated in Chapter 20 (Underwater Noise). Given these conclusions, and considering that the construction phases of these projects will not necessarily be concurrent with the proposed development, it is assessed that none of the potential impacts from any of the proposed additional projects will significantly alter the assessment made in relation to this environmental topic, thus the effects of potential impacts on fish and shellfish ecology will remain as described in the impact assessment of Chapter 13.</p>

EIA Topic	Potential Cumulative effects
<p>Marine Mammals</p>	<p>Table 14.7, within chapter 14 of the EIAR, sets out a summary of the committed and reasonably foreseeable projects, which could potentially result in cumulative effects in relation to marine mammals, when considered alongside the proposed development</p> <p>The EIAR chapter concludes the following in relation to potential cumulative effects:</p> <ul style="list-style-type: none"> • 23/0976/FUL - Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer - Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter: <ul style="list-style-type: none"> ○ Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected. ○ The development does encroach onto the beach however no overwater works are required and therefore no cumulative effects are predicted in relation to marine mammals. • 23/0970/FUL - Land To West Of Marina And Harbourmaster's Office Stranraer - Erection of Watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath: <ul style="list-style-type: none"> ○ Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected. ○ The development does not appear to have any over water/ marine component and therefore no cumulative effects are predicted in relation to marine mammals. • 22/0394/S36 - Mid Moile Windfarm Cairnryan - Consent under section 36 of the Electricity Act 1989 and deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997 for construction and operation of mid moile wind farm within the planning authority area of Dumfries and Galloway Council: <ul style="list-style-type: none"> ○ The application is located several kilometres away from the application site, and is generally separated from the coastal habitats and environment which is affected by the proposed Stranraer Marina project. On that basis no cumulative effects are expected as a result of this application.

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<p>Marine Mammals</p>	<ul style="list-style-type: none"> • 24/2518/FUL - Site Adjacent To Springbank Road Stranraer DG9 0HS - Erection of 77 dwellinghouses with roof mounted solar panels and air source heat pumps, formation of access and internal road and footpath layout, 178 car parking spaces, landscaping, suds drainage pond and associated infrastructure: <ul style="list-style-type: none"> ○ This scheme is separated from the Marina by much of the town and therefore effects such as habitat loss and construction disturbance or pollution are not expected to result in a cumulative effect. ○ During operation additional residences may result in increased use of the marine environment however this has been considered in relation to the increased marina capacity separately and this was not identified as a potential effect on the PEA for the Spring bank Road Scheme. No in-combination effects are expected. • 24/1407/FUL - Former Stena Port Port Rodie Stranraer - Change of use of part of former port to form haulage yard (class 6), siting of office, erection of 3 metre high security fencing and access gate and installation of security lighting columns (partially retrospective): <ul style="list-style-type: none"> ○ All works are retained on the terrestrial environment for this application and therefore no cumulative effects are expected in relation to marine mammals. • 24/1534/FUL - Land To The West Of Loch Ryan And North Of Corsewall Burn At Corsewall Estate Kirkcolm Stranraer DG9 0NX - Formation of coastal habitat for seabirds including formation of inland pool with islands, water inlets and outlets from and into loch Ryan, screening bunds up to 2 metre high, 3 bird hides, access routes, upgrading bridge crossing of corsewall burn, landscaping and associated works including relocation of excavated earth to southern field: <ul style="list-style-type: none"> ○ The project appears to be strategic mitigation for the effects of offshore wind development in other parts of the UK. While the scheme is designed as offsetting for breeding seabirds in other locations the scheme may have an overall beneficial effect on breeding waders and terns which could be affected by the Stranraer Marina scheme. Overall the in predicted cumulative effects are considered to be negligible. • 25/1190/FUL - Application for a new Transport Hub - Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc bikes (accessible electric bicycles), bike wash/pump/repair station, public toilets, bus waiting area(s), internal general purpose space and external shelter with fixed benching and installation of 5no. bike stands and 4no. electric vehicle charging units:

EIA Topic	Potential Cumulative effects
<p>Marine Mammals</p>	<ul style="list-style-type: none"> ○ No ecology report is available however the application is located on existing sealed surface and no effects on the marine environment or marine mammal receptors are anticipated. • 25/0778/FUL - Installation for permission of one 10 m high street works column. Installation of one 10 metre high street works column, 3 antennas, 1 network camera, 1 equipment cabinet and associated works: <ul style="list-style-type: none"> ○ The works are close to Loch Ryan however are small scale and construction work is expected to be very short term and temporary. All works are located outside the marine environment and therefore no effects on marine mammals are expected. • 00008983 (Marine Scotland) - Stranraer harbour - main basin, marina and approaches - Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area into the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging: <ul style="list-style-type: none"> ○ Stranraer Marina has a history of maintenance dredging with materials moved from the Marina to other features within Loch Ryan. Depending on the timing of implementing maintenance dredging this has the potential to increase construction stage disturbance both through increased duration and scale of works. Similarly if the maintenance dredge associated with this coincided with the capital dredging required for the Marina, then increased risk of sediment may occur. Based on historic maintenance and the results of sediment modelling undertaken for the Marina redevelopment the cumulative effect of this is unlikely to increase in significance. Pollution risks are not considered likely to change given the nature of the sediment analysis presented for the maintenance dredge application and for the Marina development project. Given the nature of the two projects it is considered highly unlikely that they would be planned simultaneously or in immediate succession and therefore cumulative increases in construction stage disturbance are not predicted. • 07059 (Marine Scotland) - Loch Ryan, Dumfries and Galloway - Deposit of Oyster Shells - Marine Licence Application: <ul style="list-style-type: none"> ○ No in-combination effects are considered relevant to the application to deposit oyster shells with an aim to enhance oyster beds in Loch Ryan.

EIA Topic	Potential Cumulative effects
<p>Marine Mammals</p>	<ul style="list-style-type: none"> • 00009930 (Marine Scotland) - Loch Ryan Port approach channel, berth pocket and swinging area Capital Dredging and Sea Disposal - Loch Ryan Port, Cairnryan: <ul style="list-style-type: none"> ○ This capital dredge licence is valid between December 2022 and December 2025. Given that the Marina works are expected to take place from 2026 onwards there is not considered to be a risk of construction and dredging operations coinciding and therefore no cumulative effects are predicted. • 00010825 (Marine Scotland) - Stranraer Marina, Agnew Park, Stranraer - Construction of: Platform for instructor shelter. Removal of: 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance: <ul style="list-style-type: none"> ○ This marine licence relates to planning application 23/0970/FUL considered above and accordingly no in cumulative effects are expected. • 00010841 (Marine Scotland) - Stranraer Marina - Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (e.g. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers: <ul style="list-style-type: none"> ○ Proposals entail relatively minor works within the marine environment for the installation of pontoons and racing markers and associated removal of former sewage pipes. The timescales for delivery are not clear however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect. No cumulative effects are expected. • 00010772 (Marine Scotland) - Stranraer Marina - Licence Application – 18 Moorings: <ul style="list-style-type: none"> ○ Proposals entail relatively minor works within the marine environment for the installation of rowing moorings. The timescales for delivery are not clear (potential start in June 2024) however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect. No cumulative effects are expected.

EIA Topic	Potential Cumulative effects
<p>Terrestrial Biodiversity and Ornithology</p>	<p>Error! Reference source not found. within Chapter 15 of the EIAR sets out a summary of projects which are considered in relation to cumulative effects and highlights where cumulative effects may be possible and considers whether such cumulative effects results in a change to the significance of any effects identified after mitigation measures applied for the Stranraer Marina project and the other projects (where relevant).</p> <p>The EIAR chapter concludes the following in relation to potential cumulative effects:</p> <ul style="list-style-type: none"> • 23/0739/CLP - Land At Port Rodie Car Park Harbour Street Stranraer DG9 8EG - Installation of 4 electric vehicle charging points with associated charging upstands, supporting equipment cabinets and substation infrastructure: <ul style="list-style-type: none"> ○ It is considered that habitat loss affects car park only on negligible value. Installation timescales will be short term and temporary within an existing car park facility and therefore in combination effects relating to construction disturbance will be negligible. • 23/0976/FUL - Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer - Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter: <ul style="list-style-type: none"> ○ Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected. • 23/0970/FUL - Land To West Of Marina And Harbourmaster's Office Stranraer - Erection of watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath: <ul style="list-style-type: none"> ○ Based on a review of the application details no specific ecological effects are identified as part of this application. The application does however fall within the wider red line boundary of the Marina scheme considered within this assessment and therefore relevant assessment and mitigation details remain relevant and no in combination effects are expected.

EIA Topic	Potential Cumulative effects
<p>Terrestrial Biodiversity and Ornithology</p>	<ul style="list-style-type: none"> • 22/0394/S36 - Mid Moile Windfarm Cairnryan - Consent under section 36 of the electricity act 1989 and deemed planning permission under section 57(2) of the town and country planning (Scotland) act 1997 for construction and operation of mid moile wind farm within the planning authority area of Dumfries and Galloway council: <ul style="list-style-type: none"> ○ The application is located several kilometres away and is generally separated from the coastal habitats and environment which is affected by the proposed Stranraer Marina project considered in this report. On that basis no in-combination effects are expected as a result of this application. • 24/2518/FUL - Site Adjacent To Springbank Road Stranraer DG9 0HS - Erection of 77 dwellinghouses with roof mounted solar panels and air source heat pumps, formation of access and internal road and footpath layout, 178 car parking spaces, landscaping, suds drainage pond and associated infrastructure: <ul style="list-style-type: none"> ○ This scheme is separated from the Marina by much of the town and therefore effects such as habitat loss and construction disturbance or pollution are not expected to result in a cumulative effect. During operation additional residences may result in increased use of the marine environment however this has been considered in relation to the increased marina capacity separately and this was not identified as a potential effect on the PEA for the Spring bank Road Scheme. No in-combination effect is expected. • 24/1407/FUL - Former Stena Port, Port Rodie Stranraer - Change of use of part of former port to form haulage yard (class 6), siting of office, erection of 3 metre high security fencing and access gate and installation of security lighting columns (partially retrospective): <ul style="list-style-type: none"> ○ While no ecology report is available for review on the Dumfries and Galloway Planning Portal the location and nature of this may result in some in combination effects with the Stranraer Marina Application. The site is located in close proximity to areas to the east of the rail line used by roosting birds and areas used by roosting birds on the former ferry terminal itself. This may result in habitat loss for some nesting species (Herring Gull, Black Headed Gull and Arctic tern) and potentially short term construction disturbance affecting winter roosting areas. It is recommended that construction works / site set up should avoid the period April – August to avoid direct effects on birds while breeding. Should construction or site set up be undertaken during the winter then tidal restrictions may be necessary to avoid impacts on high tide roosts. • 24/1534/FUL - Land To The West Of Loch Ryan And North Of Corsewall Burn At Corsewall Estate Kirkcolm Stranraer DG9 0NX Formation of coastal habitat for seabirds including formation of inland pool with islands, water inlets and outlets from and into Loch

EIA Topic	Potential Cumulative effects
<p>Terrestrial Biodiversity and Ornithology</p>	<p>Ryan, screening bunds up to 2 metre high, 3 bird hides, access routes, upgrading bridge crossing of corsewall burn, landscaping and associated works including relocation of excavated earth to southern field:</p> <ul style="list-style-type: none"> ○ The project appears to be strategic mitigation for the effects of offshore wind development in other parts of the UK. While the scheme is designed as offsetting for breeding seabirds in other locations the scheme may have an overall beneficial effect on breeding waders and terns which could be affected by the Stranraer Marina scheme. Overall the in-combination effect is considered to be negligible although the coastal habitat is generally likely to create an overall beneficial effect locally. <ul style="list-style-type: none"> • 25/1190/FUL - Application for a new Transport Hub - Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc bikes (accessible electric bicycles), bike wash/pump/repair station, public toilets, bus waiting area(s), internal general purpose space and external shelter with fixed benching and installation of 5no. bike stands and 4no. electric vehicle charging units: <ul style="list-style-type: none"> ○ No ecology report is available however the application is located on existing sealed surface man-made habitats not capable of supporting protected or notable species. The site is located at the inshore end of an existing car park and therefore construction and operation activities are not considered likely to result in disturbance to breeding or overwintering birds associated with the Marina environment. No in combination or cumulative effect is expected because of this development. • 25/0778/FUL - Installation for permission of one 10 m high street works column - Installation of one 10 metre high street works column, 3 antennas, 1 network camera, 1 equipment cabinet and associated works: <ul style="list-style-type: none"> ○ The works are close to Loch Ryan however are small scale and construction work is expected to be very short term and temporary. Any cumulative effects of disturbance to marine fauna is likely to be minimal due to the small scale of the scheme. • 00008983 (Marine Scotland) - Stranraer harbour - main basin, marina and approaches - Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area into the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging: <ul style="list-style-type: none"> ○ Stranraer Marina has a history of maintenance dredging with materials moved from the Marina to other features within Loch Ryan. Depending on the timing of implementing maintenance dredging this has the potential to increase

EIA Topic	Potential Cumulative effects
<p>Terrestrial Biodiversity and Ornithology</p>	<p>construction stage disturbance both through increased duration and scale of works. Similarly if the maintenance dredge associated with this coincided with the capital dredging required for the Marina then increased risk of sediment may occur. Based on historic maintenance and the results of sediment modelling undertaken for the Marina redevelopment the cumulative effect of this is unlikely to increase in significance. Pollution risks are not considered likely to change given the nature of the sediment analysis presented for the maintenance dredge application and for the Marina development project.</p> <ul style="list-style-type: none"> • 07059 (Marine Scotland) - Loch Ryan, Dumfries and Galloway - Deposit of Oyster Shells - Marine Licence Application: <ul style="list-style-type: none"> ○ No in-combination effects are considered relevant to the application to deposit oyster shells with an aim to enhance oyster beds in Loch Ryan. • 00009930 (Marine Scotland) - Loch Ryan Port approach channel, berth pocket and swinging area Capital Dredging and Sea Disposal - Loch Ryan Port, Cairnryan: <ul style="list-style-type: none"> ○ This capital dredge licence is valid between December 2022 and December 2025. Given that the Marina works are expected to take place from 2026 onwards there is not considered to be a risk of construction and dredging operations coinciding and therefore no cumulative effects are predicted. • 00010825 (Marine Scotland) - Stranraer Marina, Agnew Park, Stranraer - Construction of: Platform for instructor shelter. Removal of 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance: <ul style="list-style-type: none"> ○ This marine licence relates to planning application 23/0970/FUL considered above and accordingly no in cumulative effects are expected. • 00010841 (Marine Scotland) - Stranraer Marina - Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (e.g. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers: <ul style="list-style-type: none"> ○ Proposals entail relatively minor works within the marine environment for the installation of pontoons and racing markers and associated removal of former sewage pipes. The timescales for delivery are not clear however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect for feeding or

EIA Topic	Potential Cumulative effects
<p>Terrestrial Biodiversity and Ornithology</p>	<p>roosting waders. Given the very localised nature and small scale of the installations birds of open water are also unlikely to be affected by disturbance which is significant as a result of this proposal. No cumulative effects are expected.</p> <ul style="list-style-type: none"> • 00010772 (Marine Scotland) - Stranraer Marina - StranraerMarine Licence Application – 18 Moorings: <ul style="list-style-type: none"> ○ Proposals entail relatively minor works within the marine environment for the installation of rowing moorings. The timescales for delivery are not clear (potential start in June 2024), however given the location of the features presented they are unlikely to result in a cumulative construction stage disturbance effect for feeding or roosting waders. Given the very localised nature and small scale of the installations birds of open water are also unlikely to be affected by disturbance which is significant as a result of this proposal. No cumulative effects are expected.
<p>Transportation</p>	<p>It is noteworthy that none of the planning applications for the considered projects include a construction traffic management plan. However, some associated consultation documents have some indication of the works and these have been used to inform the construction traffic estimates. Where no documentation exists, assumptions have been made, using professional judgement.</p> <p>Only the Springbank Road application includes a publicly available Transport Assessment. Where a planning application development is considered to have an operational impact, TRICS has been used to estimate the generated traffic.</p> <p><i>Construction Phase</i></p> <p><i>Cumulative Construction Phase (Temporary) Severance</i></p> <p>The harbour access road will remain open, therefore, the magnitude of impact due to severance on all users is negligible. The sensitivity of the receptor is low, resulting in the significance being negligible, in EIA terms.</p> <p>The Core Paths are assumed to be closed, therefore, the magnitude of impact due to severance on NMUs is high. The sensitivity of both receptors is low, resulting in the significance being moderate.</p>

EIA Topic	Potential Cumulative effects
Transportation	<p>Cumulative Construction Phase (Temporary) Driver Delay</p> <p>The volume of traffic used in this study results in an average of 1 vehicle every 30 seconds (based on an eight-hour day). This increase in traffic onto the harbour access road, which is predicted to have an existing average of one vehicle every 15-minutes represents a significant increase in traffic. However, the frequency of this additional traffic is low and unlikely to increase delay by any noticeable amount, the magnitude of impact is therefore negligible, the sensitivity is low, resulting in a significance of negligible.</p> <p>Cumulative Construction Phase (Temporary) Pedestrian Delay</p> <p>For the harbour access road, the increase of 248 two-way movements represents a 477% increase in traffic. However, as above, the frequency of vehicles results in the magnitude of impact on pedestrian delay also considered to be negligible. The sensitivity of the receptor is low, therefore, the significance of the impact is negligible</p> <p>Cumulative Construction Phase (Temporary) Non-motorised User Amenity</p> <p>Including the construction traffic, the harbour access road Star Ratings do not change, therefore, the magnitude of impact on NMU amenity is negligible. The sensitivity of the receptor is low, resulting in the significance of impact on NMU amenity being negligible. Whilst not affected by traffic, the Core Paths are expected to be closed during construction, affecting NMU amenity. The magnitude of impact is high, the sensitivity of the receptor is low, resulting in the significance being moderate.</p> <p>Cumulative Construction Phase (Temporary) Fear and Intimidation</p> <p>The change in traffic due to construction activities results in no change to the hazard scores (Institute of Environmental Management and Assessment (IEMA) guidance Table 3.1) on the harbour access road receptor, therefore the levels (IEMA guidance Table 3.2) of fear and intimidation remain 'small'. The increase in traffic due to construction activities does represent a step change and the corresponding magnitude of impact (IEMA guidance Table 3.3) is low. The receptor sensitivity is low, resulting in a significance of effect being negligible/ slight.</p> <p>Cumulative Construction Phase (Temporary) Road Safety</p> <p>The collision data shows no incidents on the harbour access road, which is the assumed route for construction vehicles and therefore a low risk. It is considered that the volume of construction vehicles is unlikely to affect this rating and therefore the magnitude of impact is low. The sensitivity of the receptor is low; therefore, the significance of impact is negligible/ slight.</p>

EIA Topic	Potential Cumulative effects
<p>Transportation</p>	<p>Cumulative Construction Phase (Temporary) Road Safety Audits</p> <p>The standard and prescribed Road Safety Audits (GG 119 – Road Safety Audit DMRB) should be used to review the road safety attributes of any proposed engineering changes in the adopted highway prior to submission.</p> <p>Cumulative Construction Phase (Temporary) Hazardous / Large loads</p> <p>It is currently unknown whether there will be hazardous or large loads. It is considered that a Construction Traffic Management Plan be prepared by the contractor that clearly outline the estimated number and composition of such loads. Where the number of movements is considered to be significant, the assessment should include a risk or catastrophe analysis to illustrate the potential for an accident to happen and the likely effect of such an event.</p> <p>Operational Phase</p> <p>The increase in traffic on the Market Street and harbour access road receptors is predicted to be 7% and 0%. In accordance with IEMA Rules 1 and 2, no further assessment is required.</p> <p>The completed development will return the Core Paths STRA/544/1 and 2 to their original route and provide local improvements. This results in no further assessment being required.</p> <p>It is therefore concluded that the operational phase has no significant traffic and movement effects, in EIA Terms and no additional mitigation is required.</p>
<p>Air Quality and Dust</p>	<p>During the construction phase, there is the potential for cumulative dust effects with other foreseeable projects, which overlap with the proposed development’s study area. However, with the effective implementation of appropriate mitigation measures at all sites, the risk of cumulative dust effects is minimal and as a result no significant effects are anticipated during the construction phase. Cumulative dust effects are assessed as ‘negligible’ and “not significant”.</p> <p>For the construction and operational phase traffic, cumulative effects have been explicitly considered within the traffic flows provided by the project’s traffic consultants. Specifically, the cumulative effects associated with consented developments and schemes awaiting determination. Details are contained in the EIA Traffic chapter and the traffic note ‘161379_GL_T_TN01.3 Stranraer Marina Air and</p>

EIA Topic	Potential Cumulative effects
Climate Change	<p><i>Noise Calculations 20250402'</i> (see Appendix 17.4 – Volume 2). It is to be noted that in addition to the developments listed within the traffic note, planning application 24/1407/FUL has also been accounted for in the final traffic flows in Appendix 17.3 (Volume 2).</p>
	<p>As is detailed within the IEMA guidance on assessing GHG emissions, all developments that emit, avoid or sequester greenhouse gas emissions (GHGs) have the potential to impact the atmospheric mass of GHGs as a receptor, and so may have a cumulative impact on climate change irrespective of geographic location. Consequently, cumulative effects due to other specific local development projects are not individually considered, but are taken into account when considering the impact of the proposed development by defining the atmospheric mass of GHGs as a high sensitivity receptor.</p>
Noise and Vibration	<p><i>Construction and Operational Noise Cumulative Impact</i></p> <p>In regard to the marine license applications considered, these practices are standard and form part of the soundscape of a coastal town with a marina. The location of the applications is mainly offshore and considered at a distance from the proposed development which is unlikely to result in a cumulative impact.</p> <p>In regard to the planning applications, for those approved, the only cumulative impact could relate to construction phase should it occur concurrently. The only approved developments in close proximity to the proposed development are Planning Refs 23/0739/CLP, 23/0976/FUL, 23/0970/FUL and 24/1407/FUL, however, it is considered that due to the size and nature of these developments, any noise generated from these would have negligible impact on the noise levels predicted from construction of the proposed development. For those awaiting decision, only Planning Ref. 25/1190/FUL is deemed close enough to cause a potential cumulative impact. Due to the size and nature of the development however, it is unlikely to have any influence, with noise from the proposed development dominating.</p> <p><i>Construction Traffic Noise Cumulative Impact</i></p> <p>In regard to traffic associated with the committed and reasonably foreseeable projects, traffic flow data has been provided by the projects transport consultant which includes traffic associated with these projects on the road network assessed, in addition to traffic associated with the proposed development.</p> <p>Traffic data was provided for the following scenarios:</p>

EIA Topic	Potential Cumulative effects
<p>Noise and Vibration</p>	<ul style="list-style-type: none"> • Scenario 1 – 2026 Baseline – baseline traffic flows in 2026; and • Scenario 7 – 2026 Baseline + approved construction traffic – baseline traffic flows, plus construction traffic associated with approved development; and • Scenario 8 – 2026 Baseline + approved construction traffic + proposed construction traffic – baseline traffic flows, plus construction traffic associated with approved development and the proposed development. <p>A summary of the traffic flow data and associated noise levels for each of the links and scenarios is provided in Appendix 19.4 (Volume 2 of the EIAR). The change in noise arising on the road link as a result of the proposed development, and other committed developments traffic has been calculated for the following:</p> <ul style="list-style-type: none"> • Scenario 8 – Scenario 1 <p>With reference to Appendix 19.4, the noise change on Market Street is + 0.6 dB. This change results in a negligible impact. Therefore, at high sensitivity Noise and Vibration Sensitive Receptors (NVSRs) (as defined in Error! Reference source not found.), with a negligible impact of magnitude, the significance of effect in regard to construction traffic noise is slight. The effects however are considered to be not significant, as the minor increase in noise level would have no effect on the residual sound levels experienced by receptors in the area.</p> <p><i>Operational Traffic Noise Cumulative Impact</i></p> <p>In regard to traffic associated with the committed and reasonably foreseeable projects, traffic flow data has been provided by the projects transport consultant which includes traffic associated with these projects on the road network assessed, in addition to traffic associated with the proposed development.</p> <p>Traffic data was provided for the following scenarios:</p> <ul style="list-style-type: none"> • Scenario 3 – 2028 Baseline – baseline traffic flows (DMOY) • Scenario 5 – 2043 Baseline – baseline traffic flows (DMFY) • Scenario 9 – 2028 Baseline + approved development – baseline traffic flows, plus traffic associated with approved development

EIA Topic	Potential Cumulative effects
<p>Noise and Vibration</p>	<ul style="list-style-type: none"> • Scenario 10 - 2028 Baseline + approved development + proposed development – baseline traffic flows, plus traffic associated with approved development and the proposed development • Scenario 11 – 2043 Baseline + approved development – baseline traffic flows, plus traffic associated with approved development • Scenario 12 - 2043 Baseline + approved development + proposed development – baseline traffic flows, plus traffic associated with approved development and the proposed development <p>A summary of the traffic flow data and associated noise levels for the road link and scenarios is provided in Appendix 19.4 (Volume 2 of the EIAR). The increase in noise arising on the road link as a result of the proposed development is provided in the last columns of the appendix, calculated using the methodology presented in the Calculation of Road Traffic Noise (CRTN).</p> <p>The following noise change has been calculated:</p> <ul style="list-style-type: none"> • Scenario 10 – Scenario 3 (short term change) • Scenario 12 – Scenario 3 (long term change) <p>With reference to Appendix 19.4, the noise change on Market Street is + 0.3 dB in the short term and + 0.2 dB in the long term. The change results in a negligible impact on Market Street, in both the short term and long term period. Therefore, at high sensitivity NVSRs (as defined in Error! Reference source not found., within Chapter 19 of the EIAR), with a negligible impact of magnitude, the significance of effect in regard to operational traffic noise is slight. The effects however are considered to be not significant in EIA terms, as the minor increase in noise level would have no effect on the residual sound levels experienced by receptors in the area.</p>
<p>Underwater Noise</p>	<p>As noted in Chapter 20 (Underwater Noise) of the EIAR, the impact piling will be the activity with the loudest underwater noise profile by a large margin, meaning any other noise source will be insignificant in comparison and hence, are not contributing to cumulative effects.</p> <p>Dredging, rock dumping and vibratory sheet piling are similar in noise level to large vessels. For animals in between the dredging/rock dumping and a large vessel, there could be an increased risk of exceedance either to 1.4-2 times the range or from shorter exposure duration (by a factor of 0.5-0.7). This variation in increase in range or decrease in exposure time is dependent on both the proximity to the sound sources and the propagation loss from the sources to the animal, which will vary with location and time.</p>

EIA Topic	Potential Cumulative effects
<p>Soils, Geology and Contamination</p>	<p>Existing off-site sources of contamination are present in proximity to the proposed development; however, any future development of these sites would require any pollutant linkages to be broken by appropriate remediation as part of the planning and regulatory process. This also applies to the following projects in the immediate surrounding area:</p> <ul style="list-style-type: none"> • Application for a new Transport Hub – Ref: 25/1190/FUL; • Permission for the formation of coastal habitat for seabirds on the land to the west of Loch Ryan – Ref: 24/1534/FUL; • Permission for the installation of one 10 metre high street works column, 3 antennas, 1 network camera, 1 equipment cabinet and associated works - Ref:25/0778/FUL; and • Planning permission for the change of use application at the Former Stena Port site - Ref: 24/1407/FUL. <p>As a result, there are considered to be no cumulative effects.</p>
<p>Cultural Heritage</p>	<p>The potential for cumulative effects to arise has been considered in relation to projects that either physically overlap with the Site or which lie immediately adjacent, as the addition of the proposed development to these may theoretically give rise to greater or additional impacts relating to the physical fabric or setting. Following an initial filtering process (see Table 22.5 of Chapter 22 of the EIAR) it has been concluded that there is no potential for cumulative effects to arise from the following committed and reasonably foreseeable projects:</p> <ul style="list-style-type: none"> • Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer - 23/0976/FUL - Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter: <ul style="list-style-type: none"> ○ No potential for cumulative effects and currently under construction. • Land To West Of Marina And Harbourmaster's Office Stranraer - 23/0970/FUL - Erection of watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath: <ul style="list-style-type: none"> ○ No potential for cumulative effects and currently under construction.

EIA Topic	Potential Cumulative effects
<p>Cultural Heritage</p>	<ul style="list-style-type: none"> • Stranraer harbour - main basin, marina and approaches - MS 00008983 - Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area in to the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging: <ul style="list-style-type: none"> ○ No potential for cumulative effects. • Stranraer Marina, Agnew Park, Stranraer - MS 00010825 - Construction of: Platform for instructor shelter. Removal of: 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance: <ul style="list-style-type: none"> ○ No physical overlap with proposed development. The project has no potential to affect the setting of heritage assets. o No potential for cumulative effects. • Stranraer Marina, Stranraer - MS 00010841 - Marine Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (e.g. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers: <ul style="list-style-type: none"> ○ No physical overlap with proposed development. The project has no potential to affect the setting of heritage assets. No potential for cumulative effects. • Stranraer Marina, Stranraer - MS 00010772 - Marine Licence Application – 18 Moorings <ul style="list-style-type: none"> ○ No physical overlap with proposed development. The project has no potential to affect the setting of heritage assets. No potential for cumulative effects. • Port Rodie Car Park - 25/1190/FUL - Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc-bikes (accessible electric bicycles), bike wash / pump / repair station, public toilets, bus waiting areas, internal general purpose space and external shelter with fixed benching and installation of 5 bike stands and 4 electric vehicle charging units: <ul style="list-style-type: none"> ○ No physical overlap with proposed development. The project has no potential to affect the setting of heritage assets. No potential for cumulative effects.

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<p>As recorded in chapter 23 (Landscape and Visual) of the EIAR, the Landscape and Visual Impact Assessment (LVIA) also gives consideration to the potential for cumulative effects, based on a number of committed and reasonably foreseeable projects:</p> <ul style="list-style-type: none"> • Site 1 - Land At Port Rodie Car Park Harbour Street Stranraer DG9 8EG - 23/0739/CLP - Installation of 4 electric vehicle charging points with associated charging upstands, supporting equipment cabinets and substation infrastructure: <ul style="list-style-type: none"> ○ No anticipated cumulative landscape or visual effects at construction or operation. This is due to Site 1 being for the installation of 4 electric charging points in an existing car park. The introduction of these features is in keeping with the existing situation (existing car park that already contains vertical / built / hard features). • Site 2 - Land Between West Pier And Agnew Park, Stranraer Harbour, Stranraer - 23/0976/FUL - Erection of boat shelter with roof mounted solar panels; extension to boat yard including formation of hardstanding area, installation of pole mounted flood lights, erection of 2 metre high security fencing and formation of gated access; formation of instructor platform, equipment lay down area, open air showers, stepped access to the beach and erection of instructor shelter: <ul style="list-style-type: none"> ○ As there is a large overlap with the red line boundaries, works in this area, including built form, are assessed as part of this LVIA. Site 2 introduces additional hardstanding to the east of an existing slipway onto the beach. This hardstanding provides stepped access to the beach and an instructor platform. This will introduce minor cumulative effects at construction (should construction phases overlap) and at operation to the landscape character of the shoreline edge, which would be in conjunction with the reclaimed land area and the revetment. There is already a hard built edge onto the beach in this area, so the proposals at Site 2 will be an extension of an existing situation. This will have a minor / negligible effect on the Peninsula Landscape Character Type. Visual receptors of the beach will also experience a minor effect of this extension. No other landscape or visual cumulative effects are anticipated due to changes to this land largely being assessed within this LVIA. • Site 3 - Land To West Of Marina And Harbourmaster's Office Stranraer - 23/0970/FUL - Erection of watersports centre and installation of roof mounted solar photovoltaic panels, formation of additional parking area with associated hard and soft landscaping and formation of footpath:

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<ul style="list-style-type: none"> ○ Site 3 is for the erection of a new watersports hub directly to the west of the existing Harbourmaster Building. There will also be an increase in parking as well as some external space for picnic tables / cycle parking. ○ Whilst Site 3 does increase built form within the vicinity of the proposed development, it will be seen as a slight increase in built form in the area. The area is already urban in nature based on the amount of hardstanding and built form / vertical structures. Elements such as these have been assessed in this LVIA as part of the proposed development. ○ There will be minor cumulative landscape and visual effects at construction (should construction phases overlap) and at operation with Site 3 and the proposed development based on the increase in built form, but this is in keeping with the existing situation at Stranraer Marina and is in keeping with the proposed development. ● Site 4 - Mid Moile Windfarm Cairnryan - Consent under section 36 of the electricity act 1989 and deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997 for construction and operation of a windfarm within the planning authority area of Dumfries and Galloway Council: <ul style="list-style-type: none"> ○ Site 4 is outwith the 5km study area of the proposed development. As site 4 is a windfarm to the north east, in some views elements of the proposed development and site 4 could be seen together. However, the proposed development comprises works to an existing marina and existing car parks / areas of built form as well as the creation of the reclaimed land area, which will be seen as a minor extension to the existing marina and land. The proposed development therefore isn't incongruous with the existing marina and urban situation and therefore any cumulative landscape and visual effects, at construction (should construction phases overlap) and at operation, from both the proposed development and site 4 are minor in nature. ● Site 5 - 25/0778/FUL - Grass Verge Next To Harbour Office West Pier Market Street Stranraer DG9 7RE - Installation of one 10 metre high streetworks column, 3 antennas, 1 network camera, 1 equipment cabinet and associated works: <ul style="list-style-type: none"> ○ Site 5 is for the erection of a 10m high column directly to the north of the Harbourmaster Building. Within this area and the adjacent area, including within the existing site, there are 8m high light columns. This feature introduces a slightly wider and taller column into an area of existing built form and vertical features, therefore minor landscape and visual effects on localised receptors, at construction (should construction phases overlap) and at operation.

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<ul style="list-style-type: none"> • Site 6 - 24/2518/FUL – Site Adjacent To Springbank Road Stranraer DG9 OHS - Erection of 77 dwellinghouses with roof mounted solar panels and air source heat pumps, formation of access and internal road and footpath layout, 178 car parking spaces, landscaping, SuDS drainage pond and associated infrastructure: <ul style="list-style-type: none"> ○ Site 6 is a residential development on greenfield land but directly adjacent to an existing residential area. There will be minor cumulative effects on the Peninsula Landscape Character Type due to slight increase in built form as a result of Site 6 and the proposed development. There are no anticipated visual cumulative effects at construction and at operation. • Site 7 - 24/1407/FUL - Former Stena Port Port Rodie Stranraer - change of use of part of former port to form haulage yard (class 6), siting of office, erection of 3 metre high security fencing and access gate and installation of security lighting columns (partially retrospective): <ul style="list-style-type: none"> ○ There will be cumulative landscape and visual effects with the proposed development and Site 7. This is due to the close proximity between the two sites. Site 7 is works on an existing area of hardstanding but includes new vertical elements in the form of security fencing and built form. As the land along the coast at Stranraer Marina is already urban in nature, the development at Site 7 is not incongruous with the existing situation or the proposed development. On localised visual receptors using the local road and footpath network, car parks and nearby workplaces or places or residents there will be minor cumulative visual effects as a result of both developments. There may be some beneficial effects at operation due to both proposed developments as the designs could be an improvement for the area. There will also be minor landscape cumulative effects at construction (should construction phases overlap) and at operation, on the Coastal Flats Landscape Character Type due to a slight increase in urbanisation. • Site 8 - 24/1534/FUL - Land To The West Of Loch Ryan And North Of Corsewall Burn At Corsewall Estate Kirkcolm Stranraer DG9 ONX - Formation of coastal habitat for seabirds including formation of inland pool with islands, water inlets and outlets from and into Loch Ryan, screening bunds up to 2 metre high, 3 bird hides, access routes, upgrading bridge crossing of Corsewall Burn, landscaping and associated works including relocation of excavated earth to southern field:

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<ul style="list-style-type: none"> ○ Site 8 is outwith the 5km study area for the proposed development. Site 8 is for works that will be of environmental benefit and create costal habitats. Whilst some bunding and hides, as well as formalisation of recreational routes will introduce minor elements of built form, the scheme overall is to improve the area for environmental purposes. There are no anticipated landscape or visual cumulative effects of Site 8 and the proposed development at construction and at operation. • Site 9 - 25/1190/FUL - Port Rodie Car Park, Port Rodie Stranraer DG98EG - Erection of transport hub with roof mounted photovoltaic panels incorporating provision of secure bicycle locker storage for bicycles, e-bikes (electric bicycles) and acc-bikes (accessible electric bicycles), bike wash/pump/repair station, public toilets, bus waiting area(s), internal general purpose space and external shelter with fixed benching and installation of 5no. bike stands and 4no. electric vehicle charging units: <ul style="list-style-type: none"> ○ Site 9 is an erection of a Transport Hub with roof mounted photovoltaic panels south east of the site. ○ Although Site 9 introduces additional built form near the proposed development, it will be perceived as only a modest increase within an already urbanised setting. The surrounding area is characterised by substantial hardstanding and existing built structures, reinforcing its urban nature. ○ Minor cumulative landscape and visual effects may occur during construction (if phases overlap) and during operation due to the increase in built form and the proposed development. However, these effects are consistent with the existing character of Stranraer Marina and align with the nature of the proposed development. • Site 10 – Ref: 00008983 (Marine Scotland) - Maintenance Dredging and sea deposit - Use of plough dredger to move material from the dredging area in to the deep void situated off the old Stena Line terminal between the East Pier and Ross Pier. Water injection will be used to liquefy and move any material under the marina pontoons which are inaccessible to the plough dredger. This material will then also be moved by plough dredging: <ul style="list-style-type: none"> ○ Should this dredging take place during construction of the proposed development then there would be some localised visual effects due to the increase in vessels on the sea and general construction activity in the area. Otherwise no anticipated landscape or visual effects anticipated. This is for both operation and construction.

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<ul style="list-style-type: none"> • Site 11 - 07059 (Marine Scotland): Deposit of Oyster Shells - Marine Licence Application – <ul style="list-style-type: none"> ○ Minimal to no cumulative landscape and visual effects anticipated. There could be an increase in vessels / activity on the water at both Site 11 and the proposed development due to the increase in the marina size and visiting boat / yacht sizes that may give rise to minor visual and seascape effects, at construction (should construction phases overlap) and at operation, due to increase in activity on the water but there is some distance between the sites and unlikely to be any close range views that encompass both sites whereby vessels would be dominating in the view from both sites at the same time: • Site 12 - 00009930 (Marine Scotland): Capital4 Dredging and Sea Disposal - Loch Ryan Port, Cairnryan – Consented: 15/12/2022; Expires:14/12/2025: <ul style="list-style-type: none"> ○ Should this dredging take place during construction of the proposed development then there would be some localised visual effects due to the increase in vessels on the sea and general construction activity in the area. Otherwise no anticipated landscape or visual effects anticipated. This is for both construction and operation. • Site 13 - 00010825 (Marine Scotland) - Construction of: Platform for instructor shelter. Removal of: 2 no. redundant sewer outfall pipes & debris, unlit beacon, removal of boulders, beach clearance: <ul style="list-style-type: none"> ○ Site 13 is offshore works associated with Sites 2 and 3 and see's the introduction of two pontoons offshore to the north of the marina. Whilst the pontoons introduce additional small hard elements on the water, these are minimal and minor to no anticipated additional seascape or visual effects anticipated at construction and operation.

⁴ Licence application details indicate that this is required for the purposes of ensuring the port meets the original capital dredge design depth as completed in 2011 if required.

EIA Topic	Potential Cumulative effects
<p>Landscape and Visual</p>	<ul style="list-style-type: none"> • Site 14 - 00010841 (Marine Scotland) - Marine Construction & Pontoon Deposit - 8 (pontoons) + 3 (racing markers). Moorings are for offshore pontoons as opposed to vessels. Small craft (e.g. SUP, dinghies) will dock against the pontoons temporarily as rest stations. No vessels will be moored to the racing markers: <ul style="list-style-type: none"> ○ Minimal to no cumulative landscape and visual effects anticipated. Site 14 see's the introduction of pontoon / moorings and therefore increase in craft in the water. There could be an increase in vessels / activity on the water at both Site 14 and the proposed development due to the increase in the marina size and visiting boat / yacht sizes that may give rise to minor visual and seascape effects due to increase in activity on the water but there is some distance between the sites and unlikely to be any close range views that encompass both sites whereby vessels would be dominating in the view from both sites at the same time. This is for both construction and operation. • Site 15 - 00010772 (Marine Scotland) - Marine Licence Application – 18 Moorings <ul style="list-style-type: none"> ○ Site 15 is offshore works associated with Sites 2 and 3 and see's the introduction of three sets of moorings offshore to the north west of the marina. There will be an increase in vessels / activity on the water at both Site 15 and the proposed development due to the increase in the marina size and visiting boat / yacht sizes that may give rise to minor visual and seascape effects at operation due to increase in activity on the water but there is some distance between the sites and unlikely to be any close range views that encompass both sites whereby vessels would be dominating in the view from both sites at the same time. If both sites are constructed at the same time there will be some minor visual effects. <p>In summary, there are no predicted significant adverse cumulative seascape, landscape or visual effects of the proposed development, when considered alongside the list of committed and reasonably foreseeable projects, as set out in Table 23.12, within Chapter 23. Due to a slight increase of urban features for some of the nearby on land sites, there are some minor landscape and visual cumulative effects on nearby receptors. Also due to an anticipated increase of vessel mooring opportunity both at the marina through the proposed development and some of the Sites assessed under the marine licence section of Table 23.12, there are some minor seascape and visual cumulative effects due to the increase in waiting vessels on the water.</p>

EIA Topic	Potential Cumulative effects
<p>Socio Economics</p>	<p>As set out in Table 24-11 of Chapter 24 (Socio Economics), based on the relevant identified committed and reasonably foreseeable proposed developments, it is considered that in total there is 532 estimated person years jobs created per annum from the projects. When combined with the employment from the proposed development (1,484) this equates to 2,016 person years of employment.</p> <p>During the construction of the proposed development, there is the potential for an increase in demand for housing / short term rentals to accommodate non-resident workers.</p> <p>Furthermore, the Construction Industry Training Board's (CITB) 'Workforce Mobility and Skills in the UK Construction Sector 2022 – Scotland (2023) states <i>“One in twenty (6%) construction workers in Scotland report that they are currently staying in temporary accommodation while working at their site, in line with previous years (2% in 2018/19 and 7% in 2015), and with the UK average.”</i></p> <p>Based on this there is expected to be temporary accommodation need for only 121 construction workers (6% of 2,016) to accommodate the above listed cumulative developments.</p> <p>Notwithstanding the low number of workers envisaged to require accommodation, AirDNA data for short-term rentals is presented within the baseline assessment, within Chapter 24. This shows that, within the study area, there is circa 162 of short-term rental providers. Each rental provider has a variety of bedspaces with some ranging from 3 beds to 10 beds. The assessment has chosen a worst case scenario approach with 3 beds and multiplied this by the units. This equates to circa 3 rooms which creates 486 bedspaces from the serviced accommodations.</p> <p>Furthermore, there are circa 5 hotels within a 5km radius of the application site with an estimated capacity of 76 rooms.</p> <p>This means there are circa 562 bed spaces available within a commutable distance from the proposed development which is sufficient to cover the 121 temporary construction workers need for accommodation.</p> <p>Taking the above information into account the construction of the proposed development will result in a minor beneficial cumulative effect on Socio-Economics, which is not significant in EIA terms.</p> <p>In relation to construction worker supply, Chapter 24 of the EIAR notes that Dumfries & Galloway has 2,500 employees working in the construction sector. This is circa 500 construction workers more than the estimated total person years from the proposed development and the most relevant cumulative developments assessed in the chapter. This supply is considered to be sufficient.</p>

Cumulative effects - in combination/ 'intra-project' interactions

25.23 When reviewing the potential for combined / intra-project effects on individual receptors, it is considered that the following receptors / group of receptors have the potential for multiple environmental effects, as discussed within the various chapters of the EIAR set out below:

- **Loch Ryan;**
 - Coastal Processes;
 - Water Quality;
 - **Local Wildlife and Habitats;**
 - Fish and Shellfish Ecology;
 - Marine Mammals;
 - Terrestrial Biodiversity and Ornithology;
 - Noise and Vibration;
 - Air Quality and Dust;
 - Underwater Noise;
 - **Local Residents and Businesses;**
 - Landscape and Visual;
 - Noise and Vibration;
 - Air Quality and Dust;
 - Transportation;
 - Socio Economics;
 - **Core Path and users of;**
 - Noise and Vibration;
 - Air Quality and Dust;
 - Landscape and Visual;
 - Transportation;
 - Socio Economics.
 - **Existing Marina and users of;**
 - Navigation and Safety;
 - Major Disasters and Accidents;
 - Transportation;
 - Air Quality and Dust;
 - Noise and Vibration;
 - Landscape and Visual; and
 - Socio Economics.
-

- 25.24 EIA is an iterative process and opportunities for embedded environmental mitigation, have been considered throughout the design process of the proposed development. Where possible, environmental mitigation measures have been developed into the Design Fix, to ensure that the final development design and site layout represents the optimum approach to reduce potential environmental effects. The proposed development has been subject to a multi-disciplinary design process, which for example, has included input from Landscape Architects.
- 25.25 Construction of the proposed development will result in activity and temporary disturbance during certain activities e.g. disruption of views, construction traffic, temporary path closures, and potential noise and vibration, construction dust and exhaust emissions. However, these are temporary in nature, and during certain phases and activities of the construction phase.
- 25.26 With the implementation of standard construction and additional mitigation measures e.g. a Noise and Vibration Management Plan (NVMP); Dust Management Plan (DMP); Construction Traffic Management Plan (CTMP) and final CEMP, it is considered that potential environmental effects can be alleviated.
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Abbreviations

CEMP	Construction Environmental Management Plan
CITB	Construction Industry Training Board's
CTMP	Construction Traffic Management Plan
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
GHG	Greenhouse Gas Emissions
IEMA	Institute of Environmental Management and Assessment
LVIA	Landscape and Visual Impact Assessment
MAU	Marine Analytical Unit
MS-LOT	Marine Scotland – Licensing Operations Team
NMU	Non Motorised User
NPF	National Planning Framework
NRA	Navigational Risk Assessment
NVMP	Noise and Vibration Management Plan
NVSR	Noise and Vibration Sensitive Receptor
SEPA	Scottish Environment Protection Agency
SSC	Suspended Sediment Concentration
SWSA	Stranraer Water Sports Association

List of Tables

Table 25.1: List of Committed and Reasonably Foreseeable Projects

Table 25.2: Summary of Cumulative Effects