



نيوم NEOM

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## NEOM AUTHORITY – COASTAL DEVELOPMENT TECHNICAL GUIDELINE

### SCOPE OF WORK



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## 1. INTRODUCTION

### 1.1 Background

NEOM is the vision of His Royal Highness Crown Prince Mohammed Bin Salman and is a centrepiece of Saudi Arabia's 2030 Vision plan to grow and diversify the Saudi economy and position the country to play a leading role in global development. NEOM will introduce a new model for urban sustainability and be a place that is focused on setting new standards for community health, environmental protection, and the effective and productive use of technology.

Strategically located along the Red Sea, NEOM is the first independent special zone within the Kingdom of Saudi Arabia with a total area of 26,500 km<sup>2</sup>. It is expected to emerge as a leading global hub that exemplifies the future of human civilization by offering its inhabitants an idyllic lifestyle combined with exceptional economic prospects. NEOM seeks to attract top talent from around the world to push the boundaries of innovation like never before, and drive the growth of this zone, its residents, the Kingdom, and the Region.

NEOM will enjoy an 'investor friendly' governance and regulatory framework, focused on ease of doing business and supported by streamlined visa requirements. The region will be powered by 100% renewable energy, primarily by a combination of solar and wind energy generation. The targeted economic sectors encompass a wide range of advanced technology, research and 'high value' businesses, including Energy, Water, Mobility, Biotech, Food, Advanced Manufacturing, Media, Entertainment, Technology and Digital sciences.

In this context, NEOM aspires to be the safest, most efficient, most future-oriented, and best place to live and work.

### 1.2 NEOM Authority

As an independent special zone, NEOM will provide a regional government to oversee its 'investor friendly' regulatory framework. The NEOM Authority Environment Department and the NEOM Authority Conservation Department will be components of the government body responsible for completing and implementing the regulatory framework under what will be the NEOM Environmental Protection and Sustainability Law and the NEOM Nature Conservation Law, respectively.

## 2. REQUIRED SERVICES

### 2.1 Overview

The NEOM Authority Environment Department and the NEOM Authority Conservation Department, in consultation with other Authority Departments, have developed a draft Coastal Development Technical Guideline (Appendix 1), which establishes the conditions under which coastal development will be allowed within NEOM. The Technical Guideline is intended to become legally binding when the NEOM laws and regulations come into force in March 2023.

The NEOM Authority Environment and Nature Conservation Departments require the support of a qualified Consultant with substantial experience in providing advice on the sustainable development of coastal areas and integrated coastal zone management. The following key tasks are required for this scope of work:

1. Technical Guideline review and benchmarking exercise
2. White paper on the privatization of beaches in NEOM
3. Update and finalize the NEOM Authority Coastal Development Technical Guideline
4. Outline the requirements for a long-term coastal zone management program for NEOM.

Tasks 1 to 3 require completion no later than 31 December 2022.

Further detail on each task is provided in the section that follows.



## 2.2 Description

### **Task 1: Guideline Review and Benchmarking**

This task comprises the following components:

- Review the current draft Coastal Development Technical Guideline (Appendix 1)
- Benchmark the current draft Guideline against Kingdom of Saudi Arabia requirements
- Review and benchmark holistic approaches/methods for managing coastal development both regionally and internationally (e.g. setbacks, zoning, receptor-based approaches, outcomes-based approaches, approaches based on sensitivity analysis and any other approaches the consultant is familiar with).
- Provide advice on the effectiveness of the various approaches and recommendations on the best practice approach (or combination of approaches) for NEOM, taking into consideration:
  - (a) NEOM's coastal environment and social values, and
  - (b) NEOM's proposed development plans.
- Provide advice on key gaps/aspects/issues with the current draft Technical Guideline that should be addressed in a final version of the Guideline (see Task 3 below).

### **Task 2: White Paper – Privatization of Beaches in NEOM**

This task comprises the following components:

- Conduct a literature review on the privatization of beaches regionally and internationally
- Develop a White Paper on the privatization of beaches in NEOM that considers the following questions:
  - Can a balance be struck between maintaining sufficient public access to the majority of the coastline whilst enabling some beaches to be private?
  - How should the NEOM Authority manage this from an environmental and social perspective (e.g. zoning, targets for protection, through exemptions)?

### **Task 3: Update and Finalize the NEOM Authority Coastal Development Technical Guideline**

This task involves first proposing updates to the current draft Coastal Development Technical Guideline (Appendix 1). Proposed updates should include but not be limited to:

- Changes based on the recommendations (following agreement with NEOM) from the benchmarking activity (Task 1) and the White Paper (Task 2)
- Including figures, maps and diagrams to complement the guideline, for example:
  - figures showing coastal zone boundary, setbacks if applicable, habitat sensitivity if applicable, etc.
  - cross-sectional diagrams that illustrate the development limitations for various areas (e.g., public access setback, environmentally sensitive areas, plot line and building setback, etc.)
- Incorporating requirements for marinas, jetties and other coastal access facilities such as pontoons, boardwalks, etc.
- Incorporating requirements for islands and the marine environment in general
- Building on existing targets for environmental protection
- Building on existing requirements for public amenities provision, building/development limits (e.g., building heights, footprint, density) within restricted development areas, shading requirements for improved outdoor thermal comfort in public areas
- Consider including a list of permitted versus prohibited uses for different coastal areas
- Incorporating additional detail on the exemptions approach and process that should be implemented<sup>1</sup> (to allow for flexibility, but that as a lean government reduces the number of exemptions where possible)
- Considering and addressing open reviewer comments on previous drafts of the guideline (which NEOM will provide when the contract is awarded).

Following agreement on the proposed updates with the Environment and Nature Conservation Departments, the Consultant will then be required to conduct a series of stakeholder workshops (6 x 1-hour workshops) to communicate the proposed updates to stakeholders and seek input on the changes.

Following stakeholder consultation, the consultant will be required to make the updates and finalize the Technical Guideline. The Consultant should cost for two rounds of NEOM comments prior to finalization of

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<sup>1</sup> The NEOM Authority is required to operate as a lean government, therefore reducing the need for exemptions and the administrative burden associated with exemptions is desirable.



the document as Rev 1.0.

#### **Task 4: Requirements for an Integrated Coastal Zone Management Program for NEOM**

This task involves consulting with the relevant stakeholders within the NEOM Authority (e.g. Environment Department, Nature Conservation Department, Urban Planning, etc.) and developing a report that provides holistic advice and recommendations to the NEOM Authority on the need for, and key components of an Integrated Coastal Zone Management (ICZM) Program for NEOM. The report will assist the NEOM Authority in determining whether to proceed, and how to proceed with the development of an ICZM Program.

The consultant should:

- Consider the existing data, information and organisational arrangements within NEOM (e.g. NEOM laws and regulations, existing sustainability, environmental and social data, proposed Marine Spatial Plan, proposed NEOM Authority organisational structure, and Department mandates under the regulations pertaining to the planning and management of coastal areas, etc.)
- Provide justification for an ICZM Program (the problems to be addressed)
- Provide justification for and recommendations on how NEOM can adopt a green and blue economy approach to ICZM
- Provide an overview of what a green and blue economy ICZM Program would look like for NEOM (components of the program, legal and institutional framework, roles and responsibilities, stakeholders, spatial planning and environmental and social monitoring inputs and requirements, etc.)
- Outline the approach to be undertaken in the development of such a Program and the timeline for implementation.

### **2.3 Deliverables and Timeframes**

The minimum deliverables and indicative timeframes are summarized in Table 1.

**Table 1. Deliverables and Timeframes**

<b>Deliverable</b>	<b>Description</b>	<b>Timeframe for Rev 1.0 Delivery*</b>
Task 1: Benchmarking Report	<p>The Consultant shall deliver one report summarizing the outcomes of the actions detailed under Task 1 in Section 2.2, including:</p> <ul style="list-style-type: none"> <li>• Outcomes of benchmarking against KSA requirements</li> <li>• Outcomes of benchmarking coastal management approaches/methods regionally and internationally</li> <li>• Effectiveness of coastal management approaches/methods</li> <li>• Recommendations on best practice approach to coastal management for NEOM</li> <li>• Key gaps and issues with the current draft Coastal Development Technical Guideline, that should be addressed.</li> </ul>	Six weeks following kick-off
Task 2: White Paper	<p>The Consultant shall conduct a literature review and deliver one White Paper on the privatization of beaches in NEOM that considers the following questions:</p> <ul style="list-style-type: none"> <li>• Can a balance be struck between maintaining sufficient public access to most of the coastline whilst enabling some beaches to be private?</li> <li>• How should the NEOM Authority manage this from an environmental and social perspective (e.g. zoning, targets for protection, through exemptions)?</li> </ul> <p>The White Paper should contain the outcomes of the literature review and make clear recommendations to NEOM on how to manage the issue.</p>	Six weeks following kick-off



Deliverable	Description	Timeframe for Rev 1.0 Delivery*
Task 3: Coastal Development Technical Guideline	<p>The Consultant shall deliver a final Rev 1.0 version of the NEOM Coastal Development Technical Guideline that includes consideration of the items listed under Task 3 in Section 2.2.</p> <p>As part of finalization of the Technical Guideline, the Consultant must facilitate three workshops with stakeholders and ensure that the proposed changes are agreed with NEOM prior to updating and finalizing the document.</p> <p>The Consultant must ensure they allow for two rounds of NEOM comments on the Technical Guideline prior to finalization.</p>	12 weeks following kick-off, or no later than 31 December 2022
Task 4: Coastal Zone Management Program	<p>The Consultant shall deliver one report summarizing the outcomes of the actions detailed under Task 4 in Section 2.2, including:</p> <ul style="list-style-type: none"> <li>• Current situation and arrangements within NEOM</li> <li>• Justification for an ICZM Program</li> <li>• Justification and recommendations for adopting a green economy approach to ICZM</li> <li>• Overview of what a green economy ICZM Program would comprise for NEOM</li> <li>• The approach to be undertaken and the timeline for implementation.</li> </ul>	16 weeks following kick-off

\*Except for Task 3, the timeframes are indicative and can be further discussed and agreed following contract award.

## 2.4 Additional Information

The following information shall be noted by the Consultant:

- It is expected that sufficient project management support is provided by the Consultant to track progress, and ensure the deliverables are developed on time in accordance with the agreed schedule, and to the agreed scope.
- The Consultant is expected to provide the necessary document control and editorial support to ensure the deliverables are developed, reviewed, edited, formatted and finalised to a high degree of professionalism.
- The Consultant will be required to report progress on a weekly basis via a weekly meeting with NEOM.
- The Coastal Development Technical Guideline shall be in the designated NEOM template, with no Consultancy branding.
- Each deliverable must be provided to NEOM as a Rev A (draft for review), Rev B (final draft), then Rev 1.0 (for approval). The Consultant should therefore ensure they cost for two rounds of NEOM review comments.
- NEOM expects Rev A documents to be completed drafts (i.e. no 'HOLD' points or outstanding information required).
- The Consultant must provide deliverables in both WORD and PDF formats and provide originals/raw data for any data / figures / maps produced.
- The estimated deliverable review period for NEOM review is 1-2 weeks, depending on the length of the deliverable.
- Graphics support must be included in the cost quoted.
- The Consultant will be expected to work with members of the NEOM Authority Environment Department, Nature Conservation Department, and other key stakeholders and teams from the wider NEOM organisation, particularly during update and finalization of the Coastal Development Technical Guideline.

## 3. PROPOSAL REQUIREMENTS

This section sets out the main components of the Technical and Commercial Proposals to be submitted.

Tenderers should note that a 70 / 30% percentage weighting will be applied for Technical / Commercial



Evaluations associated with this Scope of Work.

Tenderers are reminded that deviations from the stated scope and requested Commercial Submission / Deliverables formats is not advisable.

## Technical Proposal

The Technical Proposal shall contain the components specified in Table 2. It should be noted that the Technical Proposal shall not include any pricing or financial information.

Within the Technical Proposal, the Tenderer shall:

- Demonstrate substantial experience with advising clients on the sustainable development of coastal areas and integrated coastal zone management
- Demonstrate understanding of the Scope of Work and present their proposed approach/methodology
- Provide a project organizational structure and point of contact, provide CVs of proposed personnel who will work on the project
- Provide a Project Execution Plan
- Provide a project schedule
- Tenderer should confirm their availability to deliver the work.

**Table 2. Technical Proposal Components**

Section Title	Description
Scope of Services	<p>In this section, the Tenderer shall include:</p> <ul style="list-style-type: none"><li>• A Scope of Services, including their 'Understanding of the Project'</li><li>• A Project Execution Plan, including a schedule.</li></ul> <p>This should have sufficient detail to enable the NEOM evaluation team to assess your understanding of the requirements and the methods and approaches (including software) you will use to produce the deliverables and outcomes required. Tenderers are requested to be brief and reduce the volume of material submitted to expediate the Tender Evaluation.</p>
Team Structure and Key Personnel	<p>In this section, the Tenderer shall include:</p> <ul style="list-style-type: none"><li>• Proposed organisational structure and the roles of each team member</li><li>• The team's availability and proposed start date</li><li>• CVs of proposed key members. Such resumes should follow the structure below and be limited to two (2) pages:<ul style="list-style-type: none"><li>○ Name, geographic location, key skills and role proposed</li><li>○ Education/qualifications/certifications (including membership in relevant Professional Societies)</li><li>○ Evidence of specialised experience relevant to coastal management</li><li>○ Experience on similar projects in the Kingdom of Saudi Arabia (KSA), GCC and globally (including dates for each assignment)</li><li>○ Portfolio, credentials, awards and industry recognition.</li></ul></li></ul>
Company Profile and Experience	<p>Company and team experience on similar projects in KSA, GCC and globally (including dates for each assignment) specifically in relation to coastal management. Company and team experience working for and with government entities.</p>

## Commercial Proposal

In the Commercial Proposal, the Tenderer shall include lump sum prices for the base deliverables set out in the SAP portal.

It should be noted that the Commercial Proposal shall be inclusive of all applicable taxes within and outside the KSA, including VAT and Withholding Tax and any other expenses incurred for the execution of this project.



## **APPENDIX 1 DRAFT COASTAL DEVELOPMENT TECHNICAL GUIDELINE**





نيوم NEOM

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## COASTAL DEVELOPMENT TECHNICAL GUIDELINE

NEOM AUTHORITY



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## 1. INTRODUCTION

### 1.1 Overview

As NEOM develops into a new, vibrant society, it is necessary to ensure that coastal development in NEOM is sustainably managed in a way that safeguards social, cultural and ecological values, and ensures that infrastructure is designed, built and operated to withstand coastal conditions.

NEOM's coastal environment contains a unique diversity of habitats and species and is inherently dynamic, shaped by the interaction of marine, terrestrial and atmospheric processes. The dynamism of coastal areas makes them vulnerable to stresses and changes, particularly from development. These pressures and the forms of pollution that result, threaten NEOM's coastal ecosystems and the goods and services that future generations will derive from them. In addition, sea level rise and extreme weather events due to anthropogenic climate change will threaten communities, habitats and coastal infrastructure.

Coastal areas are a critical interface between marine and terrestrial ecosystems. These areas host multiple niche habitats and species that are sensitive to disturbance and human use. NEOM's coastal areas contain globally important nesting beaches for sea turtles, including the hawksbill turtle (IUCN Red-Listed as Critically Endangered) and green turtle (IUCN Red-List as Endangered). They also provide important nesting sites for seabirds such as the sooty gull, the Red Sea endemic white-eyed gull and the sooty falcon (IUCN Red-Listed as Vulnerable).

These biologically diverse coastal areas are often also culturally important. This is particularly true for NEOM which has a long history of trading routes through the region since Egyptian Dynasties, both along the coast and by sea. NEOM's natural assets are the foundations for achieving key elements of NEOM's development vision, including liveability, wellbeing, tourism and sustainability. In a global arena of competing destinations and places to live, NEOM's natural and cultural assets set it apart and endow it with a unique advantage.

Development in NEOM's sensitive coastal areas has the capacity to overwhelm the foundational natural and cultural capital that provides multiple ecosystem services, including its role as a central driver of tourism visitation. Key areas of concern include physical damage to coastal habitats through construction, land reclamation, shoreline modification, beach nourishment, material extraction and dredging. Developments that extend into the marine environment such as piers, jetties, slipways, marinas, moorings and other marine structures pose similar concerns. Finally, discharges into the marine environment such as nutrients and sediments, chemical, noise, light and litter that have the potential to impact wildlife and natural ecosystems and disturb the visitor experience.

### 1.2 Purpose

The purpose of this Technical Guideline is to ensure that coastal development is sustainably planned and executed in a manner that protects the social, cultural and ecological values of the NEOM coastal zone.

This Technical Guideline has been issued by the NEOM Authority Environment Department, in consultation with the NEOM Authority Nature Conservation Department, Heritage Department, Water Department and Urban Planning Department. Under the NEOM Environmental Protection and Sustainability Law, the Environment Department has the authority within NEOM to regulate all activities affecting the human and natural environment and will be authorized to create coastal development and associated environmental planning and land and marine management regulation.

This Technical Guideline establishes the conditions under which coastal development will be allowed within NEOM, and signals intent for future environmental protection that may impact coastal development.

This Technical Guideline is intended to complement other environmental standards and technical guidelines issued by the NEOM Authority. It must be noted that in the event there are differences between any standards or technical guidelines and this Technical Guideline, the more stringent requirement prevails.

The following guidance is provided regarding mandatory, recommended and discretionary requirements in this Technical Guideline:

- "Will", "shall" and "must" statements – mandatory requirements that must be complied with.
- "Should" statements – compliance with these requirements is recommended but not mandatory.



- “May” statements – requirements that are discretionary based on project objectives, needs, site conditions, etc.

### 1.3 Objectives

The objective of this Technical Guideline is to ensure that coastal development:

- Protects and enhances the sensitive marine and terrestrial habitats and species of NEOM’s unique coast
- Provides adequate public access and public amenities along and to the coast, and facilitates opportunities for a world-class visitor experience, recreation and enjoyment of the coast
- Maintains the ecosystem services provided by the coast, including shoreline stability and erosion prevention, carbon sequestration and storage, nutrient cycling and fisheries
- Protects the landscape and seascape characteristics and visual amenity values of the coast
- Supports the resilience of the coast to climate change, including sea level rise, coastal hazards and extreme weather events
- Protects the cultural heritage values of the coast for current and future generations.

### 1.4 Scope and Applicability

This Technical Guideline applies to development projects that impact on the marine and terrestrial environment in the coastal zone of NEOM, including NEOM’s islands. The coastal zone is described in Section 2. Under the NEOM Environmental Protection and Sustainability Regulatory Code, a “development project” is:

“a project or activity that substantially alters the natural environment or the setting for culturally significant resources, and can include construction and non-construction activities, including activities that involve the carrying out of building, engineering, mining or other operations in, on, over or under land or submerged land, or the making of any material change in the use of any buildings or other land or submerged land; and, for purposes of these regulations, a development project also refers to a defined set of business activities, including those where specific physical elements, aspects, and facilities are likely to generate risks and impacts, have yet to be identified and, where applicable, include aspects from the early developmental stages through the entire life cycle (design, construction, commissioning, operation, decommissioning, closure or, where applicable, post-closure) of a physical asset.”

Examples of development projects and activities that could impact on the marine and terrestrial environment in the coastal zone include, but are not limited to:

- Demolition, replacement, or changes to existing buildings and structures
- Construction of new buildings, structures, and infrastructure
- Grading, removal of, or placement of rock, soil, or other materials
- Clearing of vegetation
- Excavation and construction activities
- Agricultural activities
- Landscaping activities
- Installation of buildings, facilities or structures, including those that extend into the marine environment
- Marine infilling or land reclamation
- Activities or infrastructure that impede access to the beach.

This Technical Guideline does not apply to development activities or infrastructure associated with national defence or security. Planners and developers must be able to demonstrate that the project or activity is for the purposes of safeguarding national security. Exemptions are further outlined in Section 5 of this Technical Guideline.

### 1.5 Definitions

Coast	The area where the land meets the sea, or a line (coastline) that forms the boundary between the land and water.
Coastal hazard	Physical processes or phenomena that threaten people, property and the environment in coastal areas (e.g. coastal erosion, coastal flooding, storm



surge, dune mobility, landslide or rockfall, seismic events, sea level rise, etc.).

Coastal setback	A prescribed distance within which all or certain types of development are prohibited (Cambers, 1998). Coastal setbacks for NEOM are defined in Section 3.2.
Coastal zone	<p>The interface between land and sea where the part of the land is affected by its proximity to the sea, and that part of the sea that is affected by its proximity to the land (US Commission on Marine Science, Engineering and Resources, 1969).</p> <p>For coastal management within NEOM, the coastal zone is the land area that extends ten kilometres inland from the highest astronomical tide (HAT), or the land area that extends from the HAT to the 0-50 m topographical contour with a horizontal buffer of 500 m, whichever is closer to the coast. This concept applies to the islands as well as the mainland. The coastal zone also extends from the coastline seaward to the NEOM maritime boundary.</p>
Development project	A project or activity that substantially alters the natural environment or the setting for culturally significant resources, and can include construction and non-construction activities, including activities that involve the carrying out of building, engineering, mining or other operations in, on, over or under land or submerged land, or the making of any material change in the use of any buildings or other land or submerged land; and, for purposes of these regulations, a development project also refers to a defined set of business activities, including those where specific physical elements, aspects, and facilities are likely to generate risks and impacts, have yet to be identified and, where applicable, include aspects from the early developmental stages through the entire life cycle (design, construction, commissioning, operation, decommissioning, closure or, where applicable, post-closure) of a physical asset.
Highest astronomical tide	The highest level that can be predicted to occur under average meteorological conditions and any combination of astronomical conditions.
Island	A naturally formed area of land surrounded by water (ignoring artificial structures such as causeways), and above water at high tide.
Mitigation hierarchy	<p>The component of an Environmental and Social Impact Assessment or Strategic Environmental and Social Assessment process by which project effects are accounted for in order to meet the standards of “no net loss to the environment” and “net positive biodiversity,” including the following five steps:</p> <ul style="list-style-type: none"><li>(a) avoidance; and</li><li>(b) minimization; and</li><li>(c) restoration; and</li><li>(d) offset; and</li><li>(e) enhancement.</li></ul>



## 2. COASTAL ZONE

The coastal zone encompasses shoreline environments and adjacent coastal waters where the land meets the sea (Post and Lundin 1996). The coastal zone for NEOM (Figure 1) was determined based on coastal habitat sensitivity analysis undertaken by the NEOM Authority Nature Conservation Department. It is **the land area that extends ten kilometres inland from the HAT, or the land area that extends from the HAT to the 0-50 m topographical contour with a horizontal buffer of 500 m, whichever is closer to the coastline**. This concept applies to the islands as well as the mainland. The coastal zone also extends from the coastline seaward to the NEOM maritime boundary.

For the coastal habitat sensitivity analysis undertaken by the NEOM Authority Nature Conservation Department, the coastline was divided into nine conservation areas (Figure 2). The conservation areas are illustrative only (adopted for the purposes of the analysis) and represent areas with similar physical and ecological characteristics. The habitat sensitivity analysis within the coastal zone is shown in Figure 3 and is available in GIS format. The nine conservation areas identified for the purposes of the sensitivity analysis were:

- Gulf of Aqaba – North (Figure 4)
- Gulf of Aqaba – Central (Figure 5)
- Gulf of Aqaba – South (Figure 6)
- Ras Al Sheikh Hamid (Figure 7)
- Haddah Beach (Figure 8)
- NEOM Bay (Figure 9)
- Tiran Straits Complex (Figure 10)
- NEOM Islands (Figure 11)
- Al Muwaileh (Figure 12).

The coastal setbacks indicated in some of the figures are described in Section 3 of this guideline.

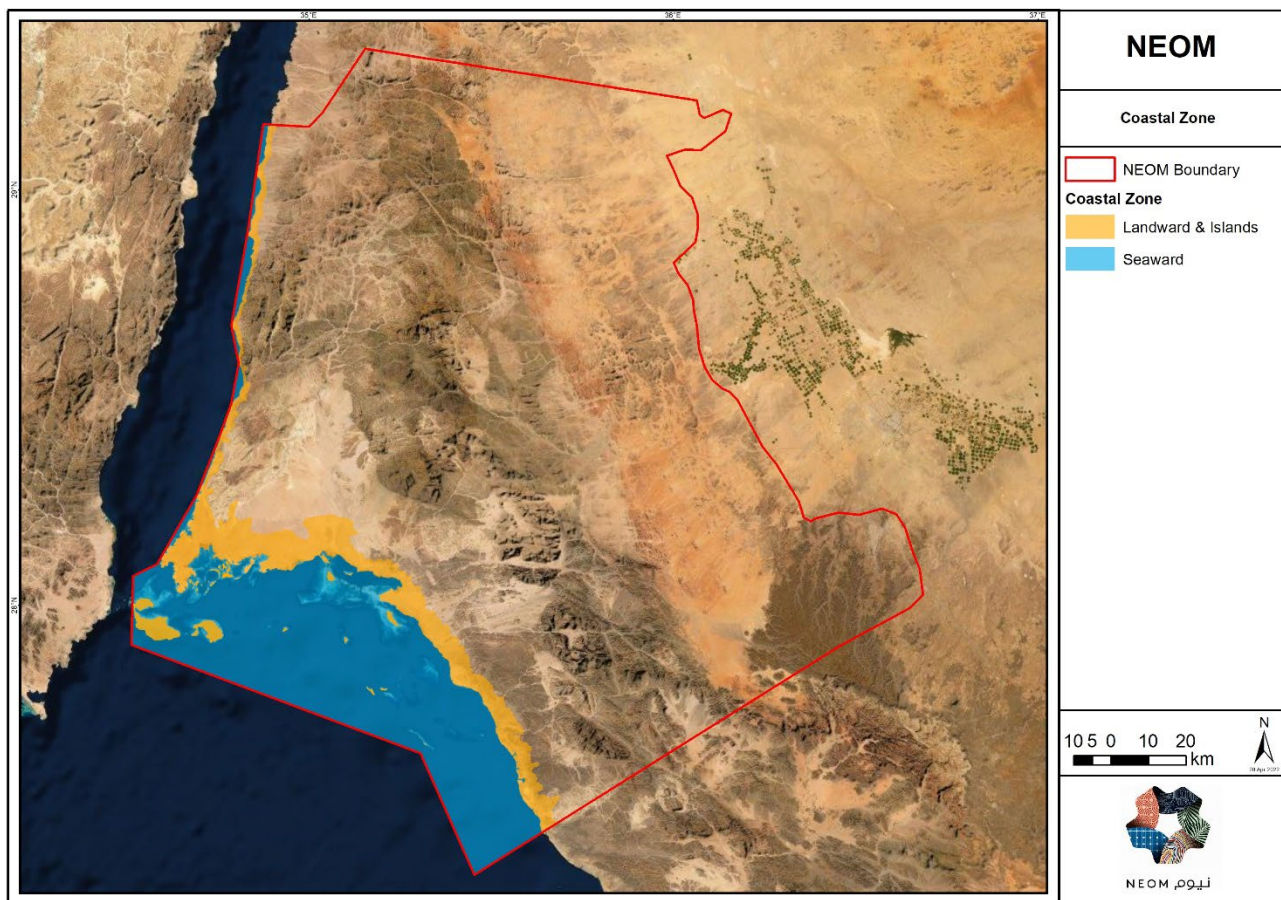


Figure 1. NEOM Coastal Zone



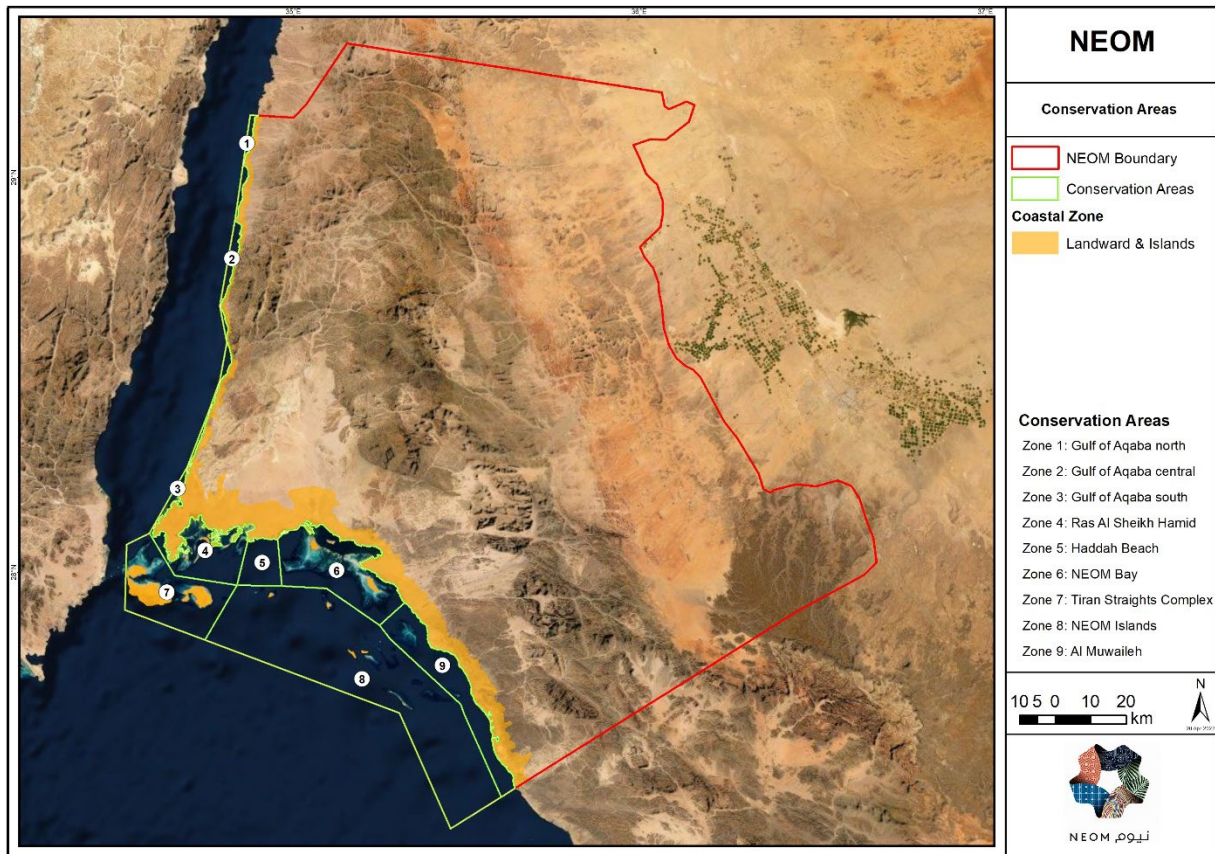


Figure 2. Coastal Sensitivity Conservation Areas

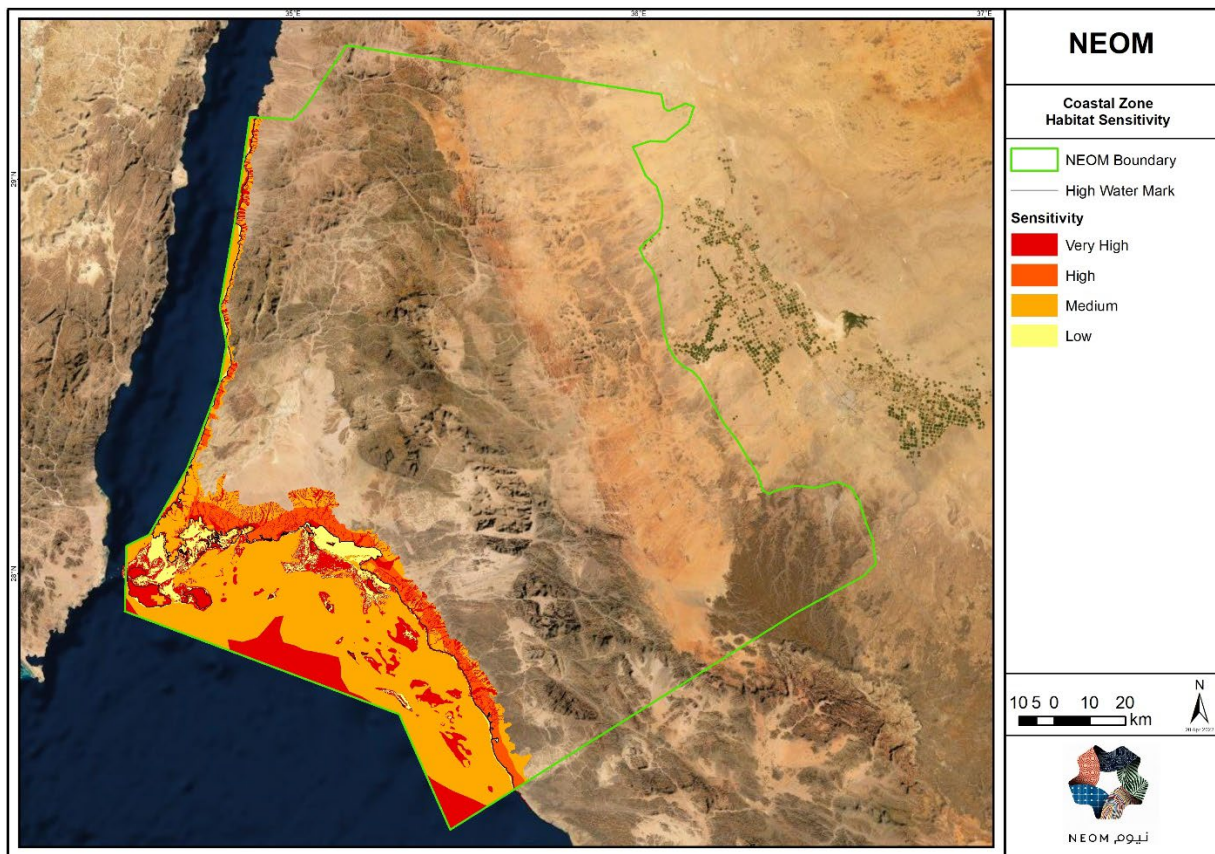


Figure 3. Habitat Sensitivity within the Coastal Zone



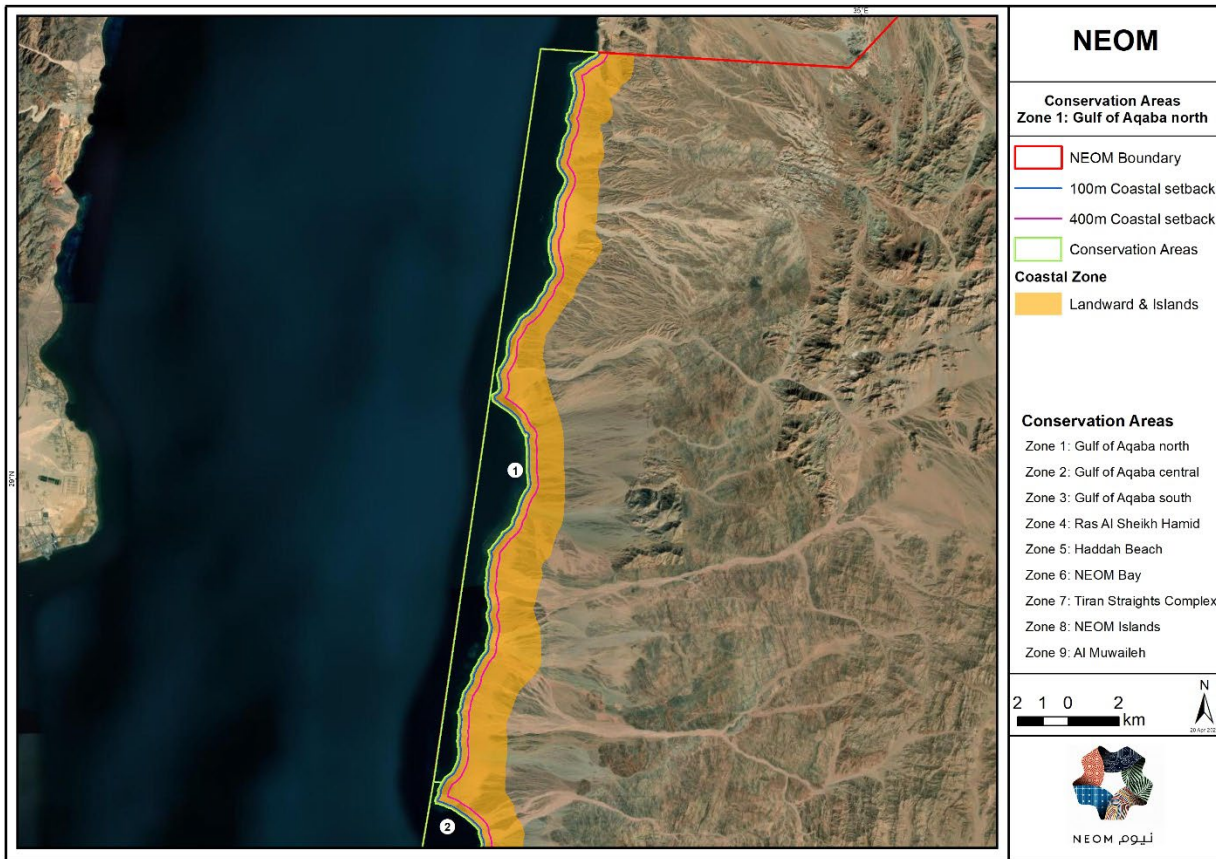


Figure 4. Gulf of Aqaba – North

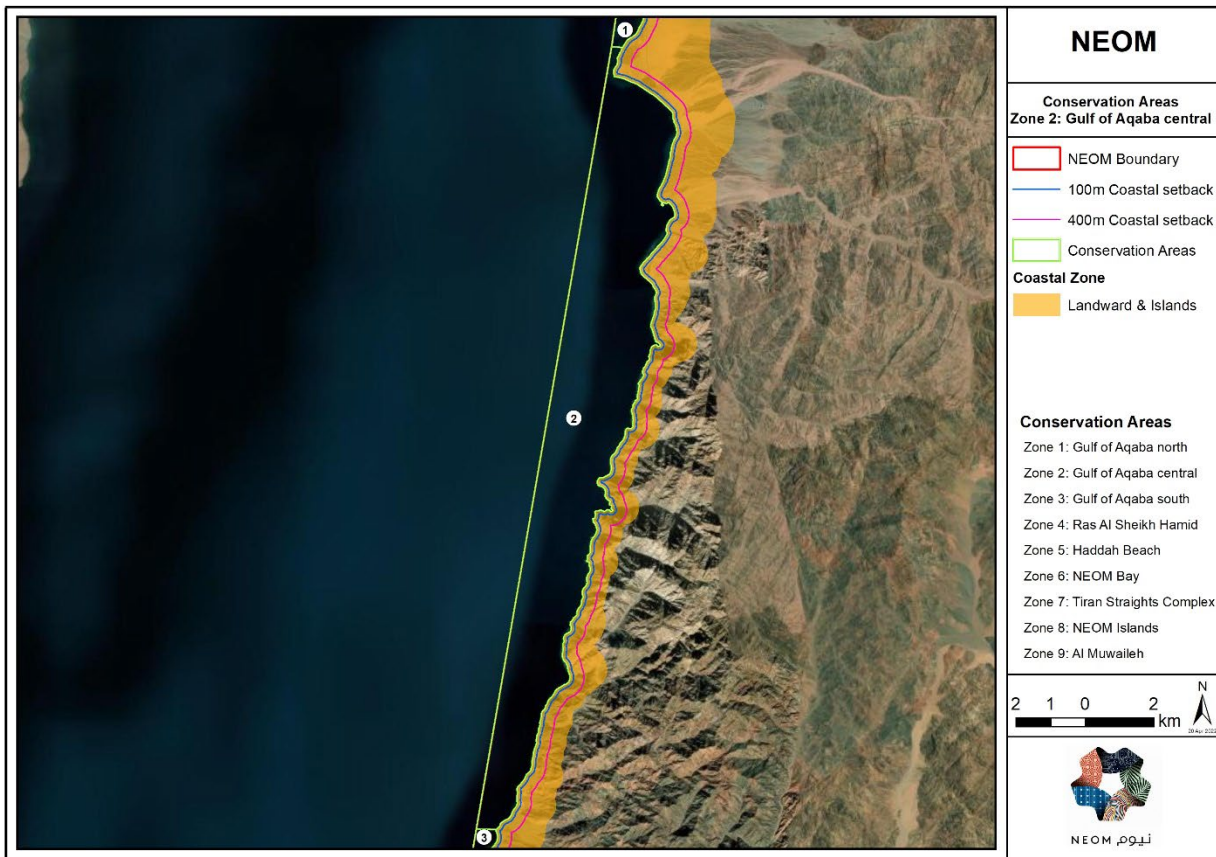


Figure 5. Gulf of Aqaba – Central



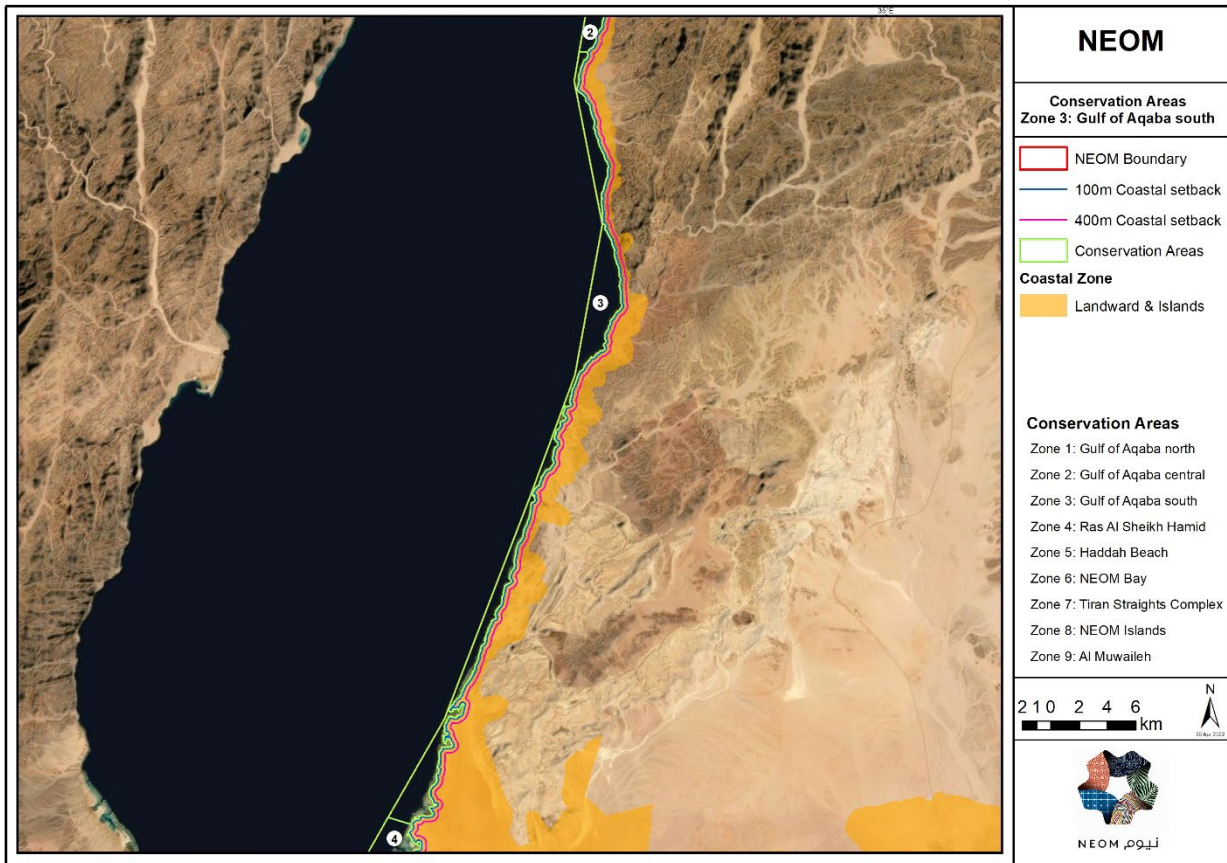


Figure 6. Gulf of Aqaba – South

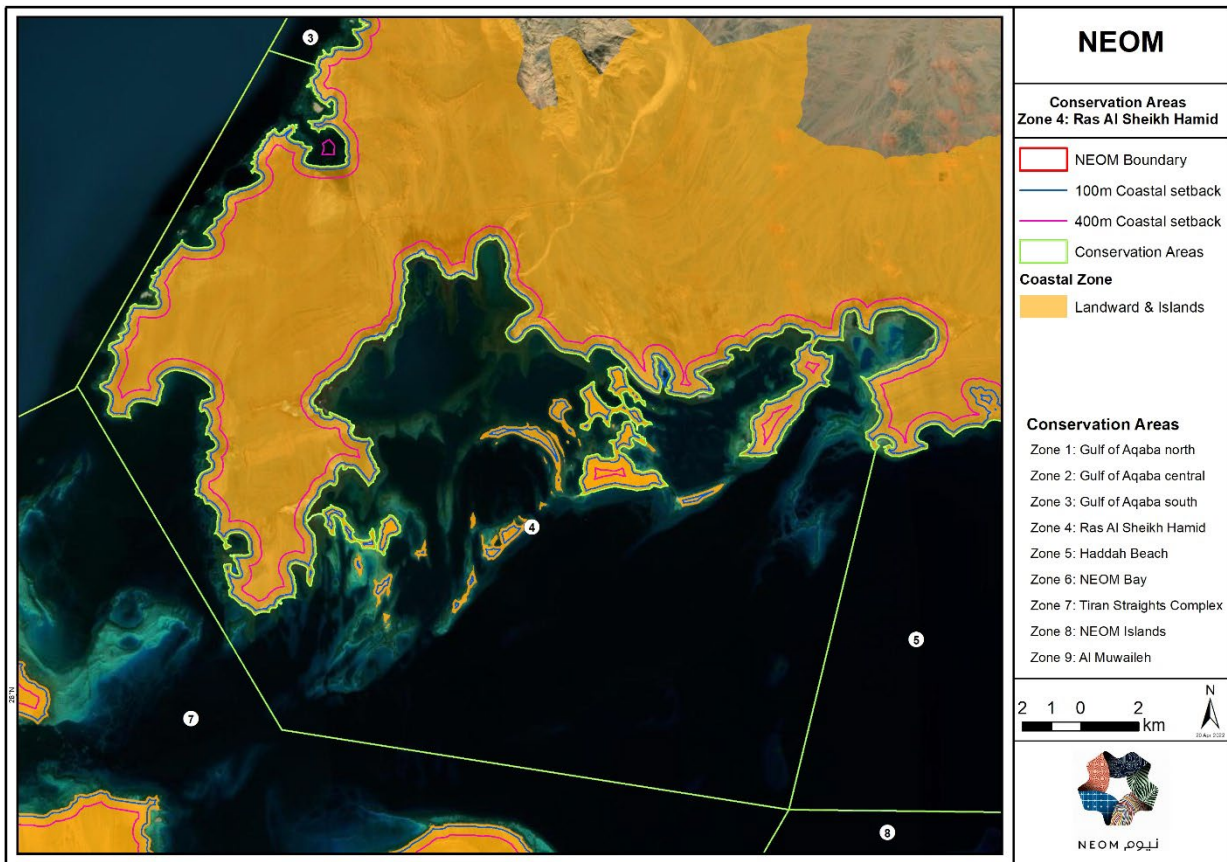


Figure 7. Ras Al Sheikh Hamid

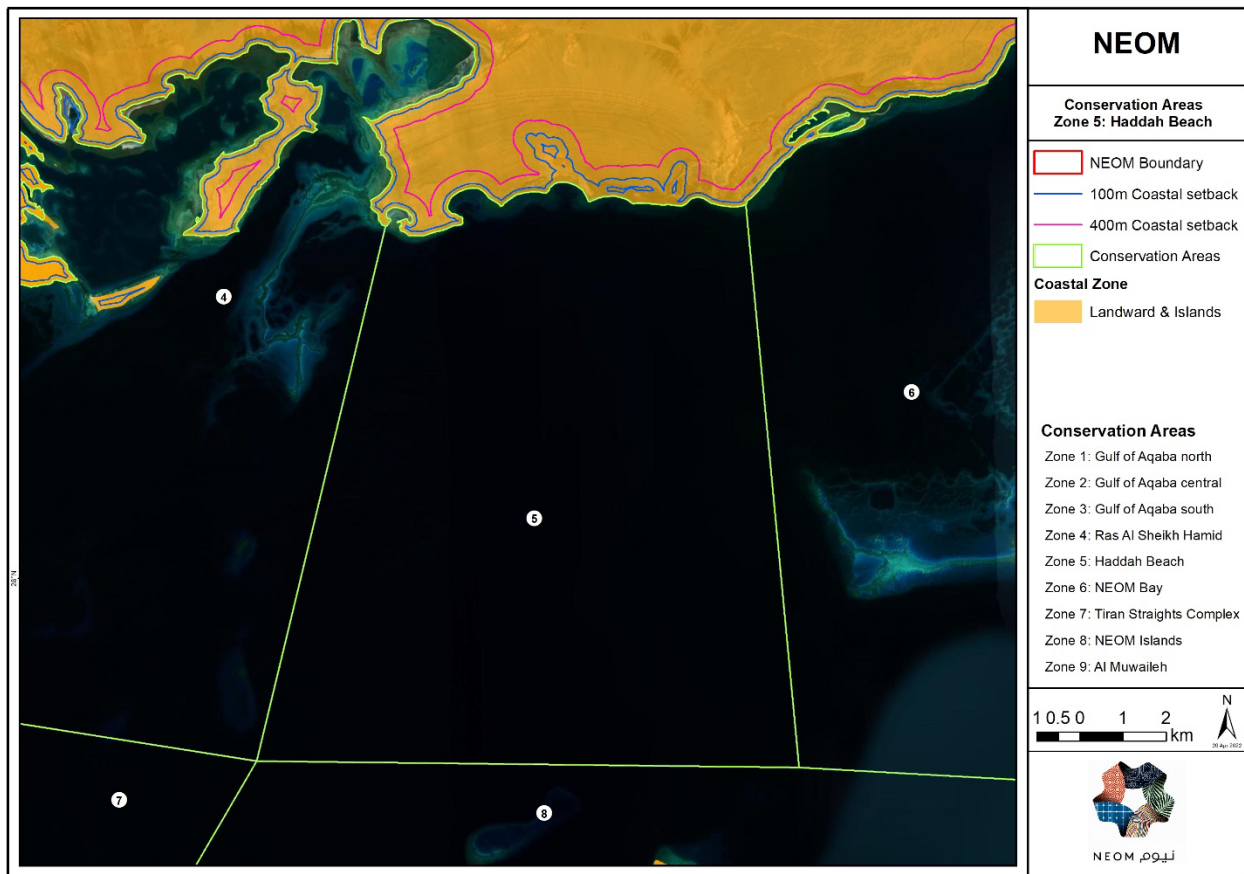


Figure 8. Haddah Beach

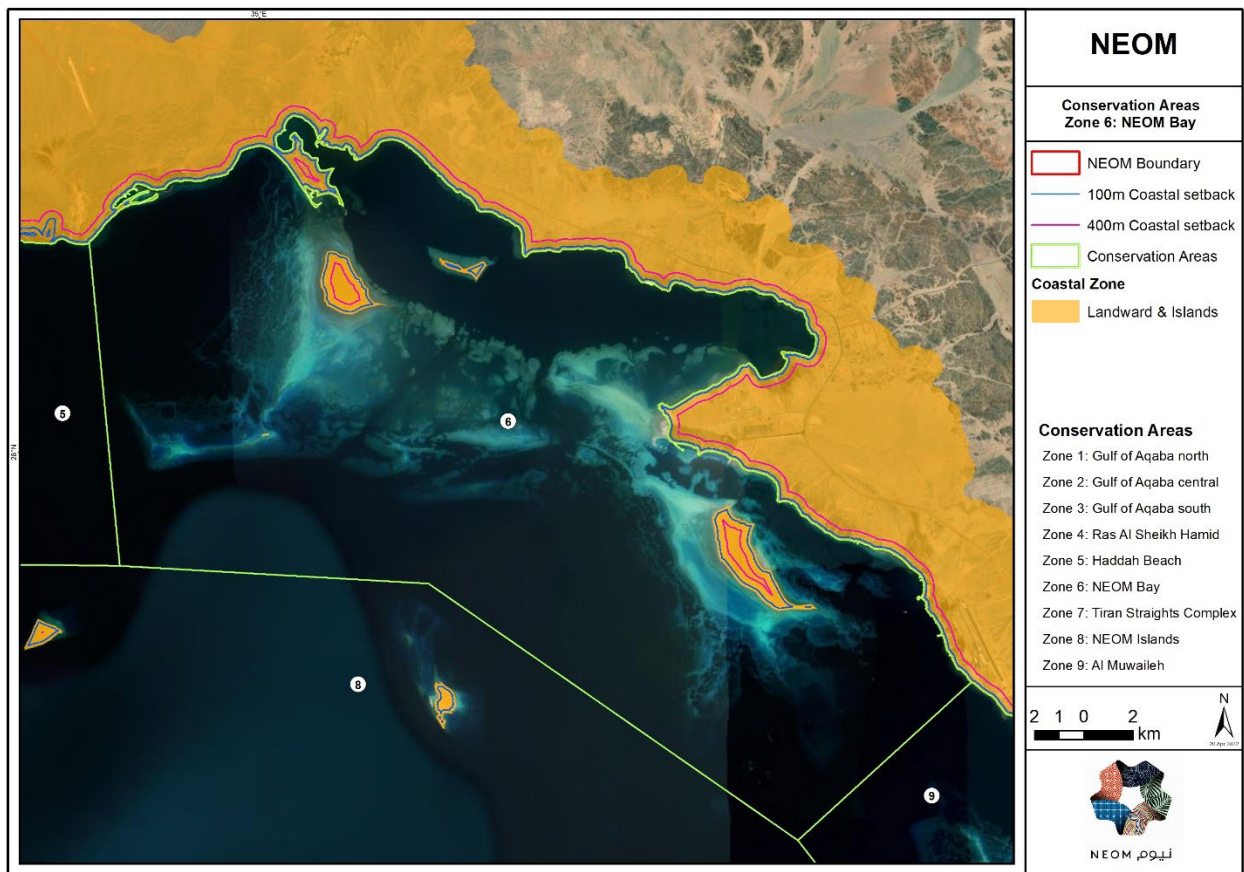


Figure 9. NEOM Bay



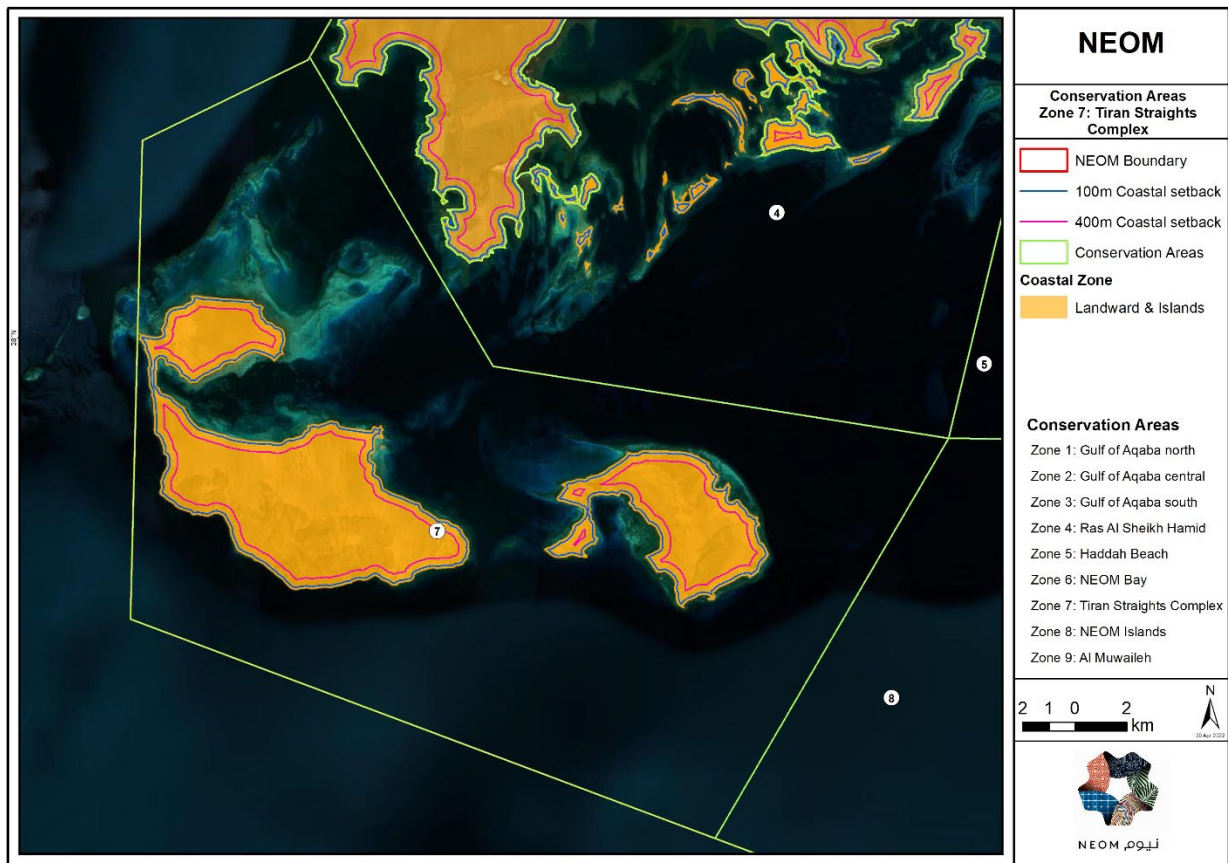


Figure 10. Tiran Straits Complex

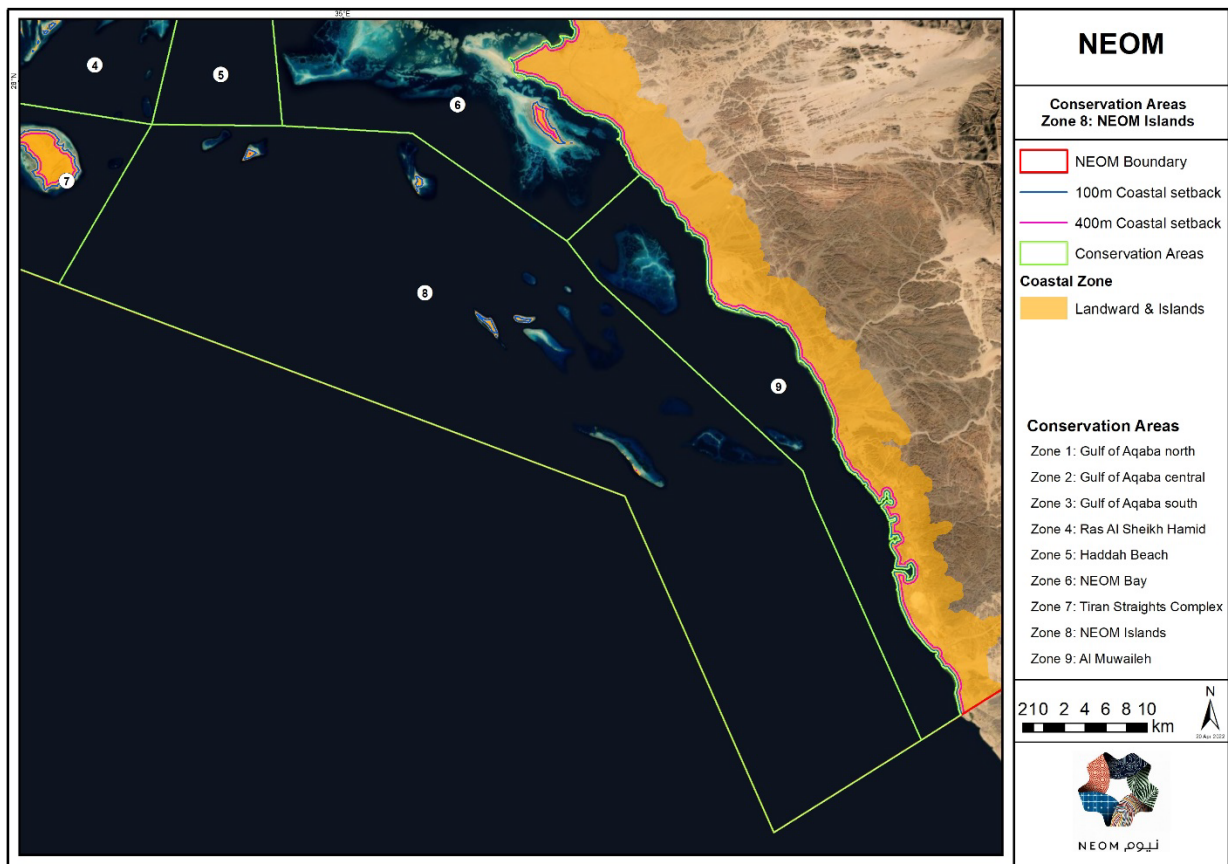


Figure 11. NEOM Islands

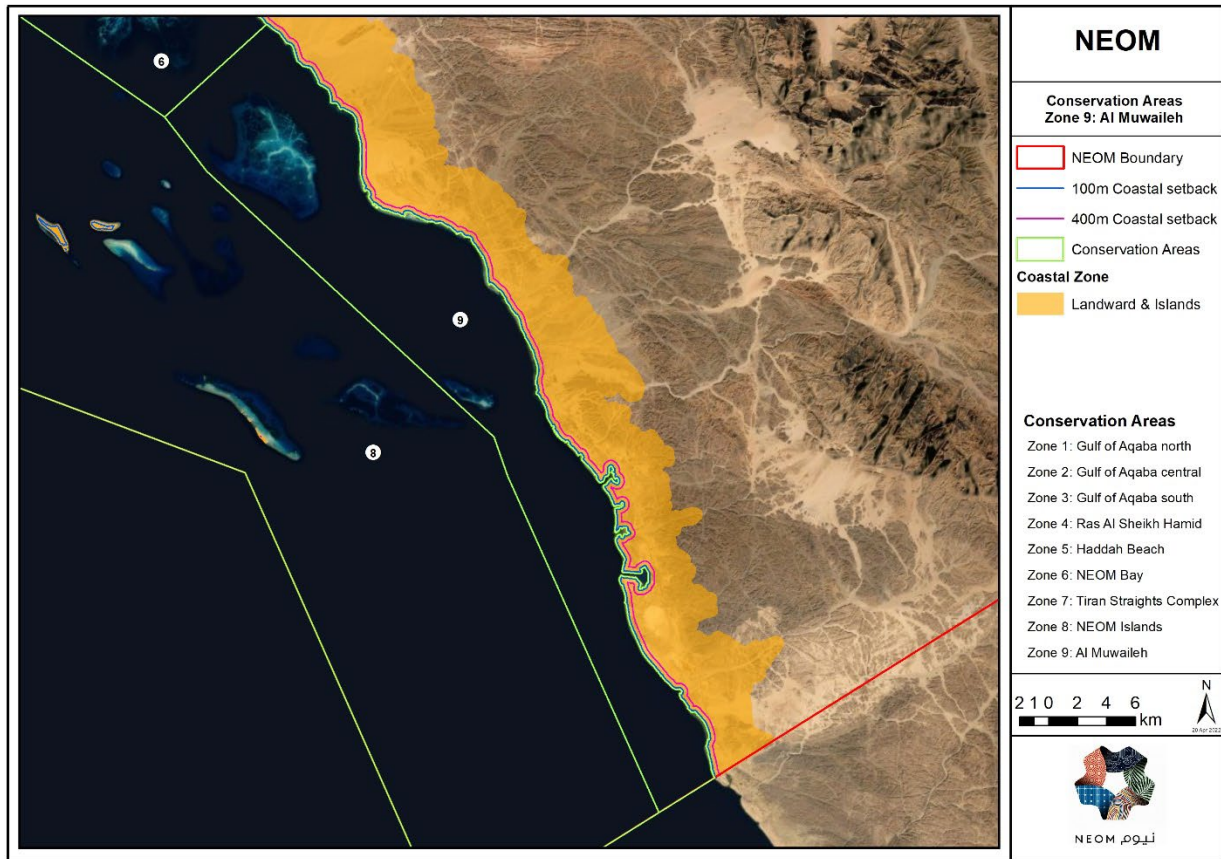


Figure 12. Al Muwaileh



### 3. DEVELOPMENT REQUIREMENTS

#### 3.1 General Considerations

Planners, designers and developers must ensure that all Laws and Regulatory Codes relevant to planning and development within the coastal zone are adhered to (e.g. protected area categories and zoning, Water Management Plans, etc.).

Environmental standards (e.g. for water quality, soil, air, noise, light and biodiversity) must be met within the coastal zone, along with any relevant industrial standards and all environmental and sustainability approvals and permitting requirements. In the event there are differences between standards and this Technical Guideline, the more stringent requirement prevails.

It is expected that planners, designers and developers plan for and apply the mitigation hierarchy throughout the lifecycle of a development, to ensure that impacts are first anticipated and avoided, then minimized, and where residual impacts remain, they are compensated or offset.

Planners, designers and developers must keep records that demonstrate the implementation of the requirements in this Technical Guideline and the extent to which each development requirement has been met. Records may include electronic or hard copy reports, drawings, schedules, inventories, and any other documentation required to demonstrate compliance with the requirements. Records must be provided to the NEOM Authority Environment Department on request.

#### 3.2 Coastal Setbacks

Coastal setbacks have been set to protect the coast (including people and infrastructure) from coastal flooding, erosion and sea level rise, support tourism and recreation, and preserve the biodiversity and natural coastal processes.

The following minimum horizontal setback requirements apply to developments within the coastal zone:

- Land that extends 100 m from the HAT must be preserved for public use. Within this area, only public amenities, recreation and public access facilities with minimal environmental impact will be permitted (e.g., public toilets, water fountains, shading structures, etc.). These facilities and structures must be setback at least 30 m from the HAT.
- Limited development will be permitted on land that extends from 100 m to 400 m of the HAT. Within this area, only residential, hospitality and food and beverage facilities (maximum two-storey) will be permitted. In addition, for detached residential housing, the building footprint shall not exceed 425 m<sup>2</sup>, and for other allowable uses, a single building footprint shall not exceed 3,750 m<sup>2</sup><sup>(1)</sup>.

To mitigate against sea level rise, two minimum vertical setback requirements must be met for developments within the coastal zone (Morphosis 2020):

- +2.6 metres finished floor level for non-essential or non-critical services or assets.
- +4.0 metres finished floor level for essential or critical services or assets.

Setback requirements may need to be more conservative in areas prone to flooding, such as wadis, and particularly where wadis intersect the coastline.

If horizontal or vertical setbacks will not be met, an exemption must be sought and will be assessed on a case-by-case basis (refer to Section 5). Exemptions may be granted, for example if it is demonstrated that structures are designed to withstand flooding, sea level rise and storm surge, based on international best practice, and as deemed acceptable by the Environment Department.

It must be noted that additional conditions regarding setbacks could be imposed as conditions to an exemption or as part of the Environmental and Social Impact Assessment (ESIA) approvals and permitting process (refer to Section 4).

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<sup>1</sup> Based on Living Community Challenge 1.2



### 3.3 Public Access

**Objective:** To maintain and enhance public access along and to the coast for current and future generations.

**Requirements:**

- Exclusive private access to the foreshore and exclusive private use of beaches shall be avoided.
- Public access must be maintained along the beach and to the beach from the development. To ensure adequate access, no private plot shall be delineated within the front row of development of a width of more than 1000 m. In addition, a public access thoroughfare shall be maintained with minimum width of 20 m within intervals of no more than 700 m.
- Land use decisions for land within the coastal zone shall not result in the loss of public access to coastal land or the foreshore or public use of these areas unless:
  - there is an overriding need in the public interest; and
  - it is to establish or support an asset that will be of direct benefit to the public.
- Development applications for environmental permits within the coastal zone must include a map showing the specific locations of existing and proposed public access to the coast.
- Beachfront should be included in the public open spaces dedicated within a masterplan, integrated in a coastal park setting, and connected with the wider open space network.

**Performance Outcomes:**

- Existing public access to the coast is protected and enhanced.
- Public access to and along the coastline is planned and provided for with new development.

### 3.4 Visual Amenity

**Objective:** To protect the landscape and seascape characteristics and visual amenity values of the coast.

**Requirements:**

- The scenic value and visual amenity of the coastal zone shall be protected from developments that would detract from the scenic qualities and values of the coast.
- Key landscape features such as coastal cliffs, beaches and shoreline areas must be protected and development must occur in a manner that protects visual amenity, including visual access to and along the coastline.

**Performance Outcomes:**

- Landscape features and characteristics such as coastal cliffs, dunes, beaches and shoreline areas are protected.
- The visual amenity values of the coastal zone are maintained and enhanced.
- Landscape and visual impacts associated with permanent developments in the coastal zone are minimized.

### 3.5 Recreation and Public Use Facilities

**Objective:** To provide for recreational activities and the sustainable public use of the coastal zone for current and future generations.

**Requirements:**

- The coastal zone setbacks in Section 3.2 must be met.
- Recreation and public use facilities such as walkways to the foreshore, drinking fountains, showers and toilets must be sited, designed, constructed and managed to avoid erosion, minimize environmental disturbance and footprint and prevent adverse impacts on coastal resources.
- Recreation and public use facilities must only be provided where:
  - there is a demonstrated community demand; or
  - there is a need to ensure public safety; and
  - the location, design and maintenance provide and enhance public recreation and access opportunities.





- Applications for environmental and sustainability permits for recreation and public use facilities in the coastal zone must include demand projections, occupancy rates and other usage statistics, and must ensure facilities are adequate to meet projected demand.
- Adequate and effective shading, compatible with public amenities, should be provided. At a minimum, shaded rest areas shall be provided every 350 m along primary walkways.
- Parking and alternative transportation to coastal recreation and public use facilities must be provided for.
- Parking facilities shall not be located within the 30 m setback from the HAT.
- Parking spaces shall be organized such that impacts on pedestrian and cycling movement is minimized.
- A single parking lot along active beachfronts may include up to seven parking spaces.

**Performance Outcomes:**

- Recreational activities and sustainable public use of the coastal zone is provided for.
- Recreation and public use facilities provided are adequate to meet demand.

### 3.6 Dune Management

**Objective:** To protect coastal dunes and to ensure that dune vegetation is maintained and enhanced.

**Requirements:**

- Dune vegetation in development areas must be protected from pedestrian trampling, vehicle use, stock grazing and invasive plants and animals<sup>2</sup>.
- Dune stability must be maintained through maintaining and enhancing the extent, species composition and natural zonation of coastal dune vegetation.
- Invasive plants present must be removed, and native vegetation restored.
- Public access should be directed away from dune habitat (e.g. by using footpaths, boardwalks, fencing and signage).
- Recreation areas must be designed and sited to avoid impacts to dune habitat.
- Works involving the alteration of dune habitats will require an environmental and sustainability permit (refer to Section 4).

**Performance Outcomes:**

- Coastal dune habitat areas are protected.
- Native dune vegetation is protected and enhanced.

### 3.7 Sensitive Habitats, Species and Communities

**Objective:** To protect, restore and enhance the marine and terrestrial ecological values of the coastal zone.

**Requirements:**

- During the design phase of development projects, site-specific ecological baseline data must be collected to characterize the ecological values of the site. The survey effort must involve adequate sampling to ensure that the data obtained are representative to address both spatial and temporal variation.
- Coastal habitats must be protected by ensuring that development is located, designed, constructed and operated such that:
  - unmodified coastal habitat within the coastal zone is protected where practicable
  - disturbance to coastal habitat with a 'high' and 'very high' sensitivity rating is avoided where practicable
  - at least 50% of coastal habitat with a 'high' and 'very high' sensitivity rating, located within a Masterplan development site is protected.
- Development in the coastal zone must maintain, enhance or establish habitat connectivity for the movement of critically endangered, endangered and vulnerable species.
- Development in the coastal zone must be located to avoid sensitive areas for critically endangered, endangered and vulnerable species (e.g. feeding, nesting or roosting sites of shorebirds, and nesting areas of turtles) and must not result in:
  - a long-term decrease in the size of a population

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<sup>2</sup> The Environment Department can be contacted regarding a list of invasive species.



- a significant reduction in the area of occupancy of a species
- fragmentation of an existing population into two or more populations
- adverse impacts to habitat critical to the survival of a species
- disruption to the breeding cycle of a species
- the introduction of disease or invasive species that could cause the species to decline.
- Buildings in the coastal zone must be designed to be 'bird-safe' (i.e. measures adopted to minimize the dangers to birds, such as collisions, where the risk exists). Where the risk of bird collisions exists, materials used on the façade of buildings in the coastal zone must have a Material Threat Factor  $\leq 30$  and the glass should be sourced from the American Bird Conservancy's glass collisions 'products and solutions database'.
- Pedestrian and vehicle access within the coastal zone must be kept to defined routes, which avoid sensitive areas (e.g. feeding, nesting or roosting sites of shorebirds and seabirds, nesting areas of turtles).
- Where development occurs near sensitive areas (e.g. feeding, nesting or roosting sites of shorebirds, nesting areas of turtles, spawning or nursery grounds, habitat restoration areas, or nearshore, shallow water seagrass or coral habitats), temporary or seasonal closures or adequate buffers based on scientific evaluation shall be instigated. The requirements of the NEOM Lighting Pollution Control Environmental Standard must be adhered to.
- The removal of mature trees from the coastal zone shall be avoided where practicable.
- Protected areas must be surrounded by land uses that contribute to the achievement of the conservation objectives of the area.
- Development in the marine environment must be conducted in a manner that sustains the biological productivity of coastal waters in the long-term and must maintain healthy populations of marine organisms suitable for commercial, recreational, scientific, and educational purposes.
- Non-native or invasive plant species<sup>3</sup> must not be planted in the coastal zone.
- Development must not result in the expansion of established invasive species or the introduction of any new invasive species.
- Where invasive species are present in a development area, monitoring and control measures must be implemented to ensure the species is fully removed or otherwise monitored and controlled.
- Natural ecosystems and habitats within areas temporarily disturbed, or where existing infrastructure has been removed, must be rehabilitated to their natural state.
- Native plant and tree species suitable to the relevant habitat type must be used for the rehabilitation of areas temporarily disturbed, or where existing infrastructure has been removed.
- The rehabilitation of areas within the coastal zone must be monitored through to completion in accordance with a Rehabilitation Monitoring Plan that is developed by a consultant registered with the NEOM Authority Environment Department.

**Performance Outcomes:**

- Marine and terrestrial coastal habitats, species and communities within the coastal zone are protected.
- Development does not result in the expansion of established invasive species or the introduction of any new invasive species.
- Disturbed coastal habitats are rehabilitated to a natural state.

**3.8 Coastal Hazards**

**Objective:** To ensure that coastal hazard risks taking account of climate change, are identified and managed to minimize potential impacts to people, property and the environment.

Coastal hazards are physical processes or phenomena that threaten people, property and the environment in coastal areas (e.g. coastal erosion, coastal flooding, storm surge, dune mobility, landslide or rockfall, sea level rise, seismic events, etc.).

**Requirements:**

- The coastal zone setbacks in Section 3.2 must be met.
- New development must not occur in hazardous coastal areas (areas prone to coastal hazards), where feasible, to reduce the risk to people and to property.

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<sup>3</sup> The Environment Department can be contacted regarding a list of invasive species.





- Substantial changes to natural landforms such as coastal cliffs, dunes, beaches and the shoreline must be avoided.
- The exposure of buildings and facilities to coastal hazards must be minimized by:
  - locating buildings and facilities outside of areas prone to coastal hazards where feasible; or
  - designing buildings and facilities for elevation, relocation or removal; or
  - locating buildings and facilities as far landward as possible and in a manner that minimizes the need for future protection works (refer to the coastal setback requirements in Section 3.2).
- Where a coastal hazard cannot be avoided, the risk shall be minimized through the design of the development (e.g. through non-armouring features such as elevation or by designing the structure for removal).
- Built assets must be designed so they are resilient to current and future dynamic climatic conditions (e.g. extreme wind loads, storm surge, flash flooding, acidification and drought).
- Where coastal hazards threaten structures, the removal or relocation of structures is the preferred solution.
- Shoreline armouring must not be used due to the adverse impacts to coastal resources (e.g. interruption of coastal processes, direct loss of habitat, restriction of public access, impacts on visual amenity, etc.).
- For Masterplan developments, a coastal hazard management plan must be prepared and included in development applications for environmental and sustainability permits if a potential threat to beaches, people or infrastructure exists.
- For Masterplan developments, disaster management capability (resources and personnel), plans and procedures must be developed and maintained to ensure that residents and infrastructure are protected and managed effectively in the event of environmental disasters along the coastline (e.g. early warning systems, evacuation routes and plans, aid supply, power and water supply). Ecosystem-based disaster risk reduction practices must be considered and prioritized where practicable.
- For all other development projects and activities, emergency management plans and procedures must be in place to manage coastal hazard risks to people, property and the environment.

**Performance Outcomes:**

- The risk to people, the environment and property from coastal hazards including sea level rise is minimized.
- Natural defences to coastal hazards (landscape features and characteristics such as coastal cliffs, dunes, beaches and shoreline areas) are protected or restored.

### 3.9 Water Quality

**Objective:** To protect and maintain the quality of coastal waters, which includes the ocean, wadis and groundwater.

**Requirements:**

- The requirements of the NEOM Authority Environment Department – Water Pollution Control Standard must be met.
- Development must be sited and designed to:
  - Minimize the transport of pollutants via surface water runoff into coastal waters.
  - Minimize changes to the site's surface water flow (i.e., volume, flow rate, timing, and duration) so that the pre-development hydrological regime is preserved.
  - Utilize infiltration, evapotranspiration, harvesting for later on-site use, detention, or retention of storm water close to the source to mimic the pre-development hydrological regime of the site.
  - Maintain and enhance on-site infiltration of surface water runoff, to reduce runoff and recharge groundwater, including maintaining and providing natural vegetation buffer zones.
  - Protect and where practicable, restore hydrologic features such as stream corridors, drainage lines and swales, topographical depressions, groundwater recharge areas and floodplains.
  - Reduce the installation of impervious surfaces and where practicable, increase the area of pervious surfaces to reduce runoff.
  - Achieve water quality benefits such as transpiration, interception of rainfall, pollutant uptake, shading and erosion control by maintaining and enhancing the presence of native vegetation.
- Alterations to wadis and natural drainage lines must be minimized and authorized in accordance with the requirements of the Environmental Protection and Sustainability Code and the Water Regulatory Code. Development in wadis must not restrict or obstruct the natural hydrology of the wadi.



- Applications for environmental and sustainability approvals and permits within the coastal zone must include flood risk analysis and a hydrology impact assessment that demonstrates the performance outcomes in this Technical Guideline will be met.

**Performance Outcomes:**

- No unpermitted discharges to the marine or terrestrial environment.
- The transport of pollutants in storm water runoff is managed in accordance with the NEOM Authority Environment Department – Water Pollution Control Standard.
- Limits within the NEOM Authority Environment Department – Water Pollution Control Standard are met.
- Alterations to site hydrology are avoided where practicable.

**3.10 Cultural Heritage**

**Objective:** To protect and enhance NEOM's rich cultural heritage along the coast for current and future generations.

**Requirements:**

- Planners and developers must consult with the NEOM Authority Heritage Department on the management of any development located within 200 m of known cultural heritage sites.
- Prior to land clearing and earthworks, a cultural heritage survey must be completed to identify any potential heritage sites not yet identified within the coastal zone.
- If cultural heritage items or potential artefacts are discovered onsite at any time, work must cease until the NEOM Authority Heritage Department is notified and a process for evaluation and mitigation is implemented (e.g. implementing buffer distances, re-siting the development, relocation of the artifact, etc.).
- The enhancement of heritage sites in close proximity to permanent developments must be considered during the design phase (e.g. providing visitor access and egress, signage, interpretive facilities, etc.) in consultation with the NEOM Authority Heritage Department.

**Performance Outcome:**

Cultural heritage sites and values are protected and enhanced.



#### 4. ASSESSMENT AND PERMITTING

Under the proposed NEOM Environmental Protection and Sustainability Regulations, developers undertaking certain development activities within NEOM require an environmental and sustainability permit. For Authority activation, the Environment Department will publish guidance on the types of activities that will trigger a permit and the levels of assessment.

All development within the NEOM coastal zone will trigger at least the minimum level of environmental and social assessment and therefore require an environmental and sustainability approval or permit.

Furthermore, whilst this list is not exhaustive, the following types of activities within the coastal zone will require the development of an Environmental and Social Impact Assessment (ESIA):

- Masterplan developments
- Industrial facilities
- Marinas and jetties and similar marine access facilities
- Dredging and spoil disposal
- Marine infilling or land reclamation
- Development involving alteration to sand dunes
- Agriculture and aquaculture facilities
- Desalination plants
- Tourism and recreation venues
- Offshore power generation
- Horizontal directional drilling.

In addition, Masterplans and assets will require a Sustainability Assessment to be completed.

ESIA and sustainability assessment documentation submitted as part of an approval or permit application for development within the coastal zone must:

- Implement the requirements in this Technical Guideline and include measures to demonstrate that the performance outcomes in this Technical Guideline will be met
- Include information on the marine and terrestrial habitats and species present at the site and measures to ensure their protection and enhancement, and a demonstration of net positive biodiversity for the development
- Demonstrate that public access along and to the coast, and recreation and public amenities have been planned and provided for as part of the development and are adequate to meet demand
- Demonstrate that the ecosystem services provided by the coast such as shoreline stability and erosion prevention, carbon sequestration and storage, nutrient cycling and fisheries will be protected
- Characterize the landscape characteristics and visual amenity values of the site and include measures to ensure they are protected
- Identify current and future coastal hazards and assess vulnerabilities to climate change, taking projected sea level rise into account
- Include information on the cultural heritage values of the site and measures to ensure their protection and enhancement.



## 5. EXEMPTIONS

Exemptions to the requirements of this Technical Guideline may be granted subject to the approval of the NEOM Authority Environment Department (e.g. for projects or activities associated with national security or defence, or infrastructure required to prevent the loss of human life). Exemptions may also be considered where a development project cannot meet a certain requirement(s), but it can be demonstrated that the development project will meet the objectives and performance outcomes in this Technical Guideline.

An exemption to the requirements contained in this Technical Guideline will require an application to be submitted to the Environment Department. This must be done as part of the application for an environmental and sustainability approval or permit. An application must include the following information as a minimum:

- Proponent/developer details
- Project description, including site plans
- Project objectives and justification for the project
- Part(s) of this Technical Guideline that the developer is seeking an exemption for
- Demonstration that the objectives and performance outcomes in this Technical Guideline will be met despite the exemption.

The Environment Department will review the application to ensure it is complete and may request further information. A site visit may be required to evaluate site conditions and the potential environmental and social impacts.

Assessment of exemption applications will be undertaken in a timely manner. The length of the assessment period will depend on the complexity and location of the development; however the Department will endeavour to complete it within 20 business days. Following assessment of the application, the Head of Environment Department will determine whether an exemption should be issued. Exemptions may include conditions limiting the nature or scale of the project or activity permitted.

## 6. REVIEW

At a minimum, the NEOM Authority Environment Department will undertake a periodic review of this Technical Guideline every three years.

## 7. REFERENCES

Cambers, G. 1997. Planning for Coastline Change: Coastal Development Setback Guidelines in Antigua and Barbuda. UNESCO, Paris, France.

Morphosis, 2020. Memorandum: NEOM Regional Plan Design-Sea Level Rise Strategy–RP 2020/05.

Post, J.C. and Lundin, C.G. 1996. Guidelines for Integrated Coastal Zone Management. Environmentally Sustainable Development Studies and Monographs Series No. 9. The World Bank, Washington, D.C.

US Commission on Marine Science, Engineering and Resources. 1969. Our Nation and the Sea. United States Government Printing Office, Washington D.C.